"Non-determinist vocabularies of coping with complex conditions for managing projects, development and change in organizations"

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Preface comments

About the book

This book is a dissertation about my work as an organisational psychologist consultant, which has been my occupation for more than 15 years.

It is also a book about organisational development and change in general, and project management in particular, which has been my speciality for more than 15 years.

The target group of the book is the professors in the Committee and for members of my community of practice organisational psychologists and consultants with social constructionist tendencies.

About reading the book

Case stories from my practice, which form the data for this dissertation, are printed in *italics* with full margin.

Reflections follow case stories under a bullet header: **Reflections**

Quotations are
> *"printed in italics with reduced margins"*
> *(Arne Vestergaard, 2004)*

Chapter 1: Introduction to the question

1.1 This Chapter

In this Chapter, the subject of the thesis is related to my prior work and to my present interests and values as an independent consultant and organizational psychologist. My relation to the thesis and the Taos-Tilburg programme can be and will be explored on several levels: Why am I a consultant in organizational psychology? Why am I interested in the subject of non-determinism? Why join a PhD programme and write a thesis? Why project organizations?

These questions, and the reflections and answers to them, are relevant to the extent that it is considered impossible to work scientifically in the world of organizing, relating and collective sensemaking and function as an objective, rational and detached observer and collector of data. These are relevant questions to the extent that in the role as researcher I am caught, and not able to escape, the role of being someone in the world, and am left to experience the world in and through my participation in it, as well as in my conversations with others or with my internalised others.

The position taken in this work is also introduced in this Chapter.

1.2. Author's Background

In 1988, I wrote my Master's thesis on cognition: Formal and informal aspects of cognition in the light of different metaphors for cognition. I discussed to what degree cognition can be viewed as a formal, rule-governed process – as computation of symbols - in contrast to an understanding of cognition as an informal, more emergent property also related to phenomena outside the individual brain, for example culture, body and life history. The leading motive for me personally was to explore the question of Artificial Intelligence (AI). In the 80s, the dominant metaphor within Cognitive Science was the personal computer as the "artificial brain". Cognition was, in the light of this metaphor, seen as an information processing device, physically sited in the brain.

Cognitive science explored human cognition by testing hypotheses about the rules of the "device" on computers. Through these tests, researchers were able to experience what cognition was not. When the models did not show the characteristics of the human cognition,

further refinement of the rules of the model was developed. This kind of research in cognition was characterised by what was called "the computational paradox" (Gardner, 1985). The paradox was, or is, that this approach of computer modelling and testing was capable of finding out what cognition was not – but not able to describe and create useful understandings of what it "really is".

This view of cognition has not proved successful in creating useful descriptions of the rules behind cognition in human beings. Outside bounded domains in laboratories and the like, computers did not prove very intelligent in comparison with humans. Rule-governed, formal devices had serious trouble in complex contexts such as everyday situations, and in situations with unpredictability and change. (Vestergaard, 1987).

Gradually, the idea of cognition as property at a rule-governed device was questioned, and other metaphors and understandings were explored. When I wrote my Master's thesis in 1987, alternative models or metaphors were those of seeing cognition as a process not governed by fixed rules but by other principles.

Metaphors for cognition

Five metaphors may illustrate these alternative principles for cognitive processes:

1) as an *emergent property* based on

a) *so-called "sub cognitive" processes* in the brain (Hofstadter, 1987). Pattern recognition is seen as the primary characteristic of human cognition and intelligence. Pattern recognition makes it possible for humans to deal with unpredicted or atypical situations that we have no knowledge about in advance. He demonstrates by the help of "Gödel, Escher and Bach" that this ability cannot be a property of a formal device.

b) *the network of adaptive, formal devices*. (This was in 1987, and before the Internet!). Parallel, distributed processing (PDP) was a new approach based on several computers connected and programmed to show the ability to adapt and "behave" according to information from the connected computers. It was demonstrated that these devices were able to "act intelligently" based on rather simple rules in the single computers.

2) the *hologram* as a metaphor, which was an attempt to understand the processes of cognition in a holistic perspective, in contrast to models of cognitions, that tries to model the basic level rules (Pribram, 1986). This metaphor is especially interesting because it is based on a device that suggests an alternative logic of representation. In a hologram, the information that can be unfolded to a three-dimensional picture is not located in a certain place – it is embedded in the pattern of the whole.

3) *Evolution*. Bateson´s systemic metaphor was that of seeing cognition as evolution, which is a metaphor that can account for the adaptability of human cognition. The strength of this metaphor is that it provides a possible understanding of how we are able to "fit" our thoughts, mental model, etc. into cross situations and into situations that are ambiguous, surprising and/or confusing (Bateson, 1980)

4) *Life itself*. By biologists and constructivists like Maturana and Varela (1986), cognition is seen as a perceived property that cannot be separated from the processes of life, and thus viewed in the light of the *living system* or *organism* as a metaphor. In this view, cognition is also inseparable from the situation and the context of culture, life history, body experiences and intelligibility.

These metaphors gave another possibility for understanding the human cognition, and especially its ability to deal with novelty, the unexpected and the ambiguous. Today, Cognitive Science looks in the direction of the network of computers, the World Wide Web. The difference in the understanding of cognition, whether you use the single computer as a metaphor or you use the Internet, is tremendous:

> *"The metaphor of the person as computer now seems limited and parochial. We can now more easily see ourselves as participants in a process of relationship that stretches toward infinity. Internet experience is like a wired womb, a constant reminder of how I am realized within a systemic swim, a process that eclipses me but which is also constituted by my participation."*
> *(Gergen, 1999, p. 217)*

The difference is that with the Internet as a metaphor, we pay more attention to the emergent properties, which requires an extra explanatory level compared to looking for cognition in the brain. Instead, we look for cognition as embedded in the "web of life" – in the processes of relations, communication and coordination we engage in. These processes play a significant role in bringing forward what we in cognitive psychology call memory, thinking, reasoning, recognition, and the like.

This distinction between explaining cognition as a property in a pre-programmed machine and as an infinite and emergent property in connected brains, bodies, cultures, things and more, was an important part of my mindset as I graduated and left University for a job as internal management training consultant in an international radio/television company, Bang & Olufsen in Denmark.

For the last 15 years, I have worked as a consultant in organizations either in the position of internal consultant/manager or from a position of external consultant. One of my themes that has been part of my work all along is developing competencies for managing projects. I have been a trainer for project managers and members, a coach for project groups and a coach (expert) for management groups in relation to making project organization work. The common thread throughout my different positions has been that of project management development.

When I started my first job as a psychologist (internal consultant) in 1988, one of my responsibilities was to develop and implement a training programme for senior project managers. I remember the feeling of "déjà vu" when I learned the mainstream approach to project management, and especially the assumptions of good project management as the careful reading (analysis) of the job to be done; a rational planning and controlling according to time, budget and specifications. A question of making the project something that could be turned into a formal device, based on prediction, planning (programming) and control through determinism.

The analogy I felt between the individualist and machine view of cognition and the deterministic view of project management made me notice a quotation of Hedberg about theories of action as vocabularies of coping:

> *"Theories of action are for organizations, what cognitive structures are for individuals…They are metalevel systems that supervise the identification of stimuli and the assembling of responses*
> *(Hedberg, 1981, quoted from Weick, 1995, p.121)*

In retrospect, it seems to me that my feeling of déjà vu was connected to the idea:, that is a plausible extension: *What cognitive science is for the study and understanding of cognition, deterministic approaches are for the practice of project management.*

However, as a novice in the world of organization and management I was not able to see any alternative to the predict-plan-control paradigm.

Over the years, my ground beliefs gradually changed from the idea of good project management as predicting, analysing, goal setting, planning, implementing and controlling to a more open, emergent, "improvising" style. Like the single computer metaphor for human intelligence was too simplistic, I regard the control paradigm of project management to be too simplistic in the world of today. In addition, if this is the case, I am curious about the possible alternative paradigms or "vocabularies of coping" that will be resources for project managers in achieving effectiveness in the world of the 21st century. Let me first turn to a short overview of the vocabularies in existing literature.

1.3. Determinism and non-determinism in literature: vocabularies of coping

Determinism has been a central doctrine within a variety of psychological theories. The doctrine is, that for every effect there is a cause and that any affect can be fully understood and explained due to the reference to a causal link to a cause. In theory, this means that determinism claims that given a complete knowledge of an individual's past and of his or her present environmental conditions, his or her behaviour could be precisely predicted. (Chaplin, 1976). Theories differ in the degree to which they ascribe behaviour to determinant factors, e.g. psychoanalysis is hard determinism, while existentialism is soft determinism, allowing for some choice based on the free will of a human being. In psychology in general, there is determinism as well as non-determinism.

In organizational psychology there are also more or less determinist models and non-determinist models. Determinism oriented theories and models are e.g. found within early forms of recruitment and assessment practices (Schein, 1988), traditional organizational development (OD), (Cooperrider, 1997) and competencies development (Vestergaard, 1997). In these three instances, the question of organizing is addressed with a problem-solving approach that starts by identifying the cause to the problem (identifying the problem, or analysing the gap). The process moves on to establishing a plan that will eliminate the cause. And the implementation of the plan for elimination will free the organization from the problem and it can continue business-as-usual. Determinist theory lies behind these approaches as it is assumed that full knowledge about the organization or person's past and

present conditions will form a basis on which deviations from a desired future can be avoided or removed in a controlled way.

Analyses of organizations of this kind focus on the question of making decisions as a key factor for effective organizations. In influential works like that of Herbert Simon, it is assumed that in principle it is possible to maximise decisions by determining what option will have the best effect. However, Simon acknowledges that managers are part of complex processes of power coalition formation that in practice makes the determination of *the* best rational decisions impossible due to rationalism being limited (bounded rationality). (Simon, 1960).

The assumption of this theory is that determinism is possible in principle, also in organizational decision making, if you had the proper access to knowledge, use rationality and calculation, and that irrational factors can be neglected. And because this is not possible, organizational decision-making is deemed to be different from computer expert systems in that managers make decisions that are workable and satisfying rather than maximal. This brief introduction to the literature on determinist and non-determinist vocabularies of coping in organizations in general is now followed by a review of literature on project management theory in particular.

Literature review: project management vocabulary of coping

Before my research in relation to writing this Chapter, I believed that contemporary literature on project management in particular and change management in general consisted of determinist oriented theories on the one hand and a few, rudimentary non-determinist theories on the other. But this is not the picture I discovered. When I began the literature review, searching for examples of pure determinist theories, they were not that easy to find. By far most of the literature published in recent years can be defined as a mixture when it comes to theoretical assumptions. The contemporary literature was not, as I had expected, either deterministic or non-deterministic. Instead, I have found a variation when it comes to the consequences that in the theories, models etc. are taken *as a result* of the fact that projects are exposed to unpredictable change and disagreements. (e.g. Graham, 1989; Briner et.al., 1990; Jakobsen, 1995; Andersen et.al. 1999; Nokes et.al. 2003)

Engwall et. al. states that contemporary project management theory is primarily practitioner driven. Looking at the schools of project management theory, the discourse has been dominated by approaches that were supposed to make it possible to control the processes through the ability to read the situation and create maximum predictability using administrative methods and formal procedures of structuring, planning, performance measuring, quality management and coordination (Engwall et.al. 2003). In this volume this is characterized as determinist approaches in organizations.

Two international organizations organize project managers and play a powerful role in the development of practice as well as theory in the field of project management. One of the organizations is PMI, Project Management Institute, based in the US. The other is IPMA, International Project Manager Association, which is the European equivalent. Together, the organizations have more than 100,000 members. PMI has defined a "body of knowledge" that project managers at different levels need, and is certifying project managers according to this

body of knowledge. IPMA has developed an International Competencies Baseline, where what is considered to be essential processes and disciplines of project management are described. Furthermore, these organizations publish handbooks, theory books and experience-based core methods, critical success factors and best practices.

The Danish national association of project managers, *Foreningen for Dansk Projektledelse*, has also developed a certification process. Based on theory and on both international organizations' body of knowledge and best practices descriptions, project managers are certified on different levels from A through D. A competencies baseline for Danish project managers is developed and currently under translation for use in other Scandinavian countries (Fangel, 2002). This baseline expresses an ambition of formulating a general competencies profile that builds on the knowledge base of the international organizations, but also fits the way of thinking about project management in DK. This is not an easy task at all, which is also acknowledged in the presentation of the tool:

> *"How do we select the most relevant competencies for assessment? And how do we take into account that the demands for leadership competencies vary from company to company, from project to project – yes from phase to phase?"*
>
> (Fangel, 2002, p.1)

Here we see the same problem with a general model for "good project management" as we saw in the problems of generating a formal model of intelligence in cognitive science. Artificial intelligence shows great potential in more generalized or in some way limited contexts but still shows problems in the varying and complex environment of everyday situations. The parallel is clear: a general model for good project management behaviour is better worked with if we reduce the variance and complexity of the organizational context:

> *"This new assessment tool contains a combination of elements and aspects within project management that can be termed a typical profile of, or average demands to project managers. The baseline focuses on competencies in **leading** in the sense of creating and maintaining conditions for an effective as well as developing implementation of the project. Competence in the sense of specific insight in the project environment or in technical content is covered only peripherally"*
>
> (Fangel, 2002, p. 2)

Determinism in project management

The questions in relation to the thesis of non-determinism are: How is the baseline content affected by the fact, that the baseline itself expresses an attempt to say something useful about "good project management" without deselecting contextual and technical aspects? What are the consequences for project managers that are not so lucky that they can ignore "environmental and technical contents"?

It can be expected that baselines of project manager competencies as a result is at risk of being rather simplistic, as a consequence of not addressing the uniqueness of a given project when it comes to its technical content and the experienced surroundings – the context. The primary focus will tend to be on the project manager as an individual, on his/her behaviour,

tools and the rules they follow. This will be in contrast to focusing on the interplay and the evolving relationships among the stakeholders in the project. As a result, it can be expected that the competencies baseline will emphasize competencies that centre on the project manager as the active, outgoing part that rationally selects the right tools from his toolbox and then causes an "effective and developing project implementation". The project manager emerges as a person apart from his/her world and controlling parts of it through the use of generic competencies; as opposed to a person who sees himself/herself as part of the world.

That is one level of determinism. Another level of determinism can be observed in the content of project manager competencies. The descriptions tend to create a picture of the successful project manager as a single individual controlling his environment by the use of tools for analysis, setting clear and unambiguous goals, planning proper actions and reducing disturbances that come in the way of carrying through the planned sequence of action. Disturbances are annoyances that must be overcome - competencies in observation, inquiry, experimentation, improvisation, sensemaking and construction of new meaning have only an inferior place in the baseline. Disturbances do not become something to be curious about and as a sign from the world that the project must be adapted, but rather something that should be eliminated in order to lead the project back on track.

The baselines, body of knowledge etc. have numerous proselytes. The effect on the discourses on project management and its impact on the communities of project managers is, not surprisingly, high. At conferences, thousands of project managers are mobilized for talking about experiences and new techniques in the discourse of the international organizations. The certification is increasingly an argument in business-to-business contracts for preferring a partner with certified project managers in favour of non-certified project managers. Increased global trade is accelerating this development. There is an indirect effect on the consultancy business as well. Consultancy firms that deliver training in project managers are tending to "package" the training in the vocabulary of PMI/IPMA so that they can document that participation in their programme contributes to the process of being certified on a still higher level.

The potential benefits of these generic and normative models are clear. A global generic methodology of project management is emerging and thus facilitating international cooperation on projects of all sorts. It is also an asset in many situations that there is some kind of "quality mark" on project managers, with whom you have no prior experience. Furthermore, competencies models are useful as resources in clarification of development needs for project managers and for organizations working in projects.

The potential costs or risks one may expect is that the universal use of the models does not ensure success and that thousands of project managers exchange their own style in favour of doing project management in the "right way", because that is what gives you credit in the certification process. The question is; what is going on when the use of the models does not give the desired and hoped-for results? Does feedback that indicates a less than perfect model result in either 1) questioning the assumptions behind the approach as such, or does it result in 2) a refining of the models and in a new version but on the basis of the same basic assumptions? There may be a risk that the models have the paradoxical quality that they at any point of time describe the latest version of what project management NOT is about, like in the computational paradox described earlier in this Chapter.

The assumptions behind this approach are that:

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Deterministic assumptions about project management

There is a causal link between the use of methods that have turned out useful in former projects, and success in future projects.

Project success depends on the skilled choice of approach and methods of the Project Manager.

It is possible to use reason to analyse the situation correctly, that you meet in the project in order to choose the right approach from the repertoire you have.

Projects can be clearly differentiated from non-project activities. Consequently, it should be possible for managers to determine what situations are project situations and what are not, and so when project disciplines etc. are the right thing to use.

Projects are fundamentally similar and share common characteristics, so that experience from one field can be generalized to other fields.

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These determinist assumptions together form a basis for the normative approach to project management that is so widespread, that project management boils down to a question of choosing from a repertoire of processes, disciplines and methods that addresses the questions of:

- How to structure and plan the activities that will lead to the goal;
- How to assure that project members prioritize and execute these activities.
  (Engwall, et.al. 2003)

The second bullet includes dealing with the unpredictability and disagreements around projects and change. As it has been argued above, the weighting on determinism results in an approach that is oriented at reducing the impact of disturbances rather than considering unpredictability and ambiguity as sources for learning and orientation.

Though dominant in the discourse of project management, there are other voices too. The determinist assumptions have been questioned by descriptive research - and let me at this point turn to a couple of examples of authors and summarize some non-determinist assumptions.

Non-determinist assumptions in project management – literature review

Most writers who question the determinist hegemony in the community of project managers and change managers focus on the level of complexity as the main characteristic that makes determinist approaches fall short. One main source of complexity in projects, as well as in organizational change, is inherent in the multiple and unpredictable quality of the relations

between the projects and their context. A context-based inquiry into projects will thus have to address this complexity.

Complexity was already in 1968 described as a characteristic of the modern western society, by Luhmann. (Luhmann, 1999). In his work from that time, he describes trust as a mechanism for reducing complexity. The complexity derives from the lack of "one-to-one-relations" between system and environment. Individuals, groups and organizations are all seen as systems that have the freedom to define themselves and their relations to the environment in innumerable ways. In this freedom the complexity is constituted, in that Alter Ego may always experience and act in other ways than I do, and vice versa. It is called double contingency by sociologist Talcott Parsons (Parsons, quoted in Luhman1999). In the modern situation of society, when tradition or religion no longer determines the way we experience and act in relations to others to the same degree, our world is more uncertain and unpredictable. In Chapter 3, I will deal with the role of trust in greater depth.

Ridderstraale and Nordstrom state in their bestselling "Funky Business" that the conditions for business in the global world are changing to a degree, which deserves comparison to a revolution. The changes derive from the combined changes in institutions, values and technology (Ridderstraale and Nordstrom, 2000). In a world of rapid societal change it is not likely that it will be possible to predict the detailed, necessary steps to a goal, and neither to define an "end of view" that is relevant despite any changes. If the funky friends are right, there is no reason to expect the world will stand still while we implement the project plan.

Gergen argues that the consequence of globalisation is that still more cooperation takes place across boundaries: disciplines, functions, organizations, languages, cultures etc. (Gergen, 1999). In determinist models for project management consensus, common goals and implementing plans are seen as an important condition for effective project work. It must be expected that consensus and common goals as well as sustainable project plans will be more difficult to maintain over time. Instead, it must be expected that the involved parties in a project will experience that other priorities will compete with their engagement in each project, and thus the project work will not follow the plans, but be continuously negotiated and socially constructed according to what needs to be adapted or changed in response to what goes on in the real worlds of participants, users, sponsors and other stakeholders.

Like the formal models of cognition in early cognitive science, order and control are obtained by defining the start conditions and the steps to be taken to reach the desired condition and thus close the gap. What the scripts and rules were for the early Artificial Intelligence theories in Cognitive Science, the objectives and the detailed project plan are for mainstream project management theory. Where the early AI met its wall when it came to formal modelling the human capacity for pattern recognition, it can be expected that our understanding of the complex context of a project builds on similar informal processes. The Santa Fe Group that is working with complexity research together with management experts states that the project context is too complex:

> "Complexity refers to the condition of the universe which is integrated and yet too rich and varied for us to understand in simple common mechanistic or linear ways. We can understand many parts of the universe in these ways but the

> *larger and more intricately related phenomena can only be understood by principles and patterns – not in detail."*

(Santa Fe Group, in: Battram, 1996)

This would suggest that missions and plans are provisory ways of expressing patterns and principles. These may rather be seen as helpful inputs and guiding images than taken too literally.

Andersson et.al. use in their introduction the term "*world of rapid and complex change*" about the conditions of 21st century organizations. They list the following emerging challenges:

- *Organizations are increasingly fragmented – through geographic expansion and the diversification of functions*

- *Information accumulates more rapidly, becomes increasingly complex, and is more rapidly outdated.*

- *The speed of change, in economic conditions, government policies, and public opinion, outpaces assimilation. Long term planning becomes increasingly ineffectual.*

- *New organizations constantly shift the terrain of competition and cooperation.*

- *Personal commitments to organizations diminish. Ties based on trust and long-term understandings are eroding*

- *The opinion climate can change at any moment, and the range of opinions to which the organization must be sensitive constantly expands.*

- *Increased demands for workplace democracy are pervasive.*

(Anderson et.al., 2001)

In the 21st century, this analysis seems relevant for the analysis of the conditions of project work in organizations to the extent that projects can be considered to be embedded in an organizational and corporate context, for example with a long list of internal and external stakeholders. This view of projects as embedded in context is advocated by the so-called Scandinavian School of Project Management:

> *And it is clear that the understanding of the manner in which a project may contribute to organizational or societal changes demands a thorough analysis of the ways in which projects stem from and relate to their context. (Sahlin-Andersson and Söderholm, 2002)*

Project management in context

Fogh Kirkeby "radicals" the stakeholder model of leadership in the analysis of the price of a good versus its value in use. The price vs. value discussion is relevant for the discussion of what a good project is as well. The price of a good (a project) is clear-cut so to speak, while

the value in use is embedded in the different stakeholders meaning of the project and the difference it makes. And we know from Luhmann, that others are free to experience and act differently than we expected and invited. So for the project, for each stakeholder with his/her own view of the project, the situation about what constitutes a good project is a bit more complex. (Fogh Kirkeby, 2003).

Briner et.al. argue in their model of "the project triangle in context" that contextual factors have become increasingly important for projects beside the traditional focus on delivering on time, on budget and with the agreed specifications for the outcome of the project. (Briner et.al. 1991) These contextual factors are:

1. Organizational politics. The question here is that of organizational and managerial support of the project. This support can be enhanced or withdrawn, it can change direction or intensity, the power situation in upper management can change in favour of other projects etc.

2. External or commercial pressures. Some projects that are moving as planned may become irrelevant because of fluctuations on the stock markets, on changes in the competition situation, in the investment climate, in public opinions and the political situation. External stakeholders will try to put pressure on the project to develop in a direction that is meaningful for them, or they will consider withdrawing as a stakeholder.

3. Personal objectives. The people involved are not fixed resource units that like rational robots are running down the activity plan. They are thinking inquisitive human beings that can be more or less motivated and the project can be more or less meaningful for each individual, which in turn will have an effect on where these people will focus their energy.

When these contextual factors are taken into consideration it turns project management more clearly into a discipline that takes place under two types of uncertainty.

Christensen and Kreiner call these two kinds of uncertainty operational and contextual uncertainty. Operational uncertainty is about whether it will be possible to obtain the operational efficiency necessary to actually produce the outcome in time, in budget and to the specified quality. Contextual uncertainty is the uncertainty whether the context of the project will change to a degree that the project outcome is worthless and meaningless, even if it is on time, on budget and on specification. (Christensen and Kreiner, 1993).

Some theorists suggest a differentiation between prejects and projects, where prejects are a term for the early phase of a project where the project is still open and where innovative processes should take place, leading the project to a stage where a clear goal will make it possible to go on like a "real project". (Darsø, 2000) This distinction is tempting, because it saves the discipline of project management from the contextual uncertainty and the ambiguity deriving from the condition of the globalized society that Gergen talks about. It is not just saying that "projects are special" but at the same time projects are created in a picture that seems simplistic or directly naïve. The distinction in the practical world will be difficult to make, because it will be impossible to find a rule for when to cross the border from preject to project. And what if a project meets dramatic change - does that mean that this should be ignored or is it suddenly a preject again?

Call for non-determinism in project management?

The arguments above, from Luhmann´s double-contingency to Christensen and Kreiner's reasoning on operational vs. contextual uncertainty suggest that complexity and non-predictability should be expected, and that the situation of project managers calls for non-determinist approaches. It is not something new, that projects are related to a wider context in constant change, but nevertheless it seems that conventional wisdom within the field of project management has to a large degree neglected this. Handbook knowledge prescribes orderly and clear-cut processes that are very rare in practice. At the same time, project management books that have the complexity of the "real" world and not an idealized one as their starting point are rare.

One exception maybe is work from the so-called Scandinavian School of Project Management (Sahlin-Andersson et.al, 2002 and Czarniawska & Sevon ((ed.) 2003). From their descriptive research, at least 4 properties of contemporary projects differ from the assumed:

1. Project boundaries are socially constructed
Defining a project is not just something out there to found. Instead, it is continuously being negotiated, reconstructed through the interactions of the involved parties from across sections, disciplines etc. Thus, there seems to be no "right" interpretation of what kind of project this is, and what it means to be called a project. As a consequence, the assumption that projects are very similar and that generic recipes are to be found is not very likely.

2. There is a natural uncertainty in project missions.
A lot of projects would end in disaster if they strictly followed the detailed project plan, without attention on the changing conditions. A mission is something that is "thrown for-ward" in time and the world will not be same at the point of time where the project ends. Sometimes the mission is kept unchanged with success - in other examples, the mission must undergo significant changes for the project to be successful. The assumption that project success is a result of having done the right planning is questioned.

3. There is a high degree of embeddedness in project organizing.
Projects are embedded in layers of other organizational forms, and embedded in the stories of the past and the future of the organization, e.g. other projects, other activities, the environ-ment and more factors. What is effective action in a project cannot be determined by looking at the single project, but will depend on the relation to what goes on at the same time in the project context. The assumption that project success is a direct result of optimal actions of the project manager/group is unlikely.

4. Expectation and mission driven patterns of project processes.
The action and coordination patterns of a given project are not solely a result of what is in the project plan. It is also a result of the involved person's interpretation of their entire situation and thus, of the expectations and opportunities, which arise and develop over time. When a project is not running as planned there are in principle two very different opportunities. The possibility of "corrective action" that will bring the process back to the planned track - or – working on changing the mission or/and the expectations of the involved people that fits the actual situation of the project. The assumption that project results are created according to project plans is a very limited picture.

You may even go as far as deeming the underlying theory of project management as obsolete, as it is presented in PMI´s PMBOK (Koskela and Howell, 2002). These authors review the underlying theories of projects and on management: planning, execution and control, and compare these theories with competing theories and evaluate the practices that follows from them, and state in their conclusion, that the traditional theory and practice in big, complex and speedy projects is simply counterproductive, and that the problems with performance are not exceptions or a result of chance, but rather follow from "serious deficiencies in the theoretical basis" (op. cit.). And you may ask, like Sahlin-Andersson and Söderholm:

> *"How often should we encounter an exception before accepting it as the normal state of affairs?"*
> *(Sahlin-Anderson and Söderholm, 2002, p. 22).*

In Chapters 4, 5 and 6, I will explore three examples of projects in details, which are from different sectors: Biotech Industry, Municipality and Building Industry. At this moment, let me shortly explain why these projects are exposed to conditions of complex change, and why it can be argued, that these are examples of projects where there is a call for an enriched understanding of non-determinist vocabularies of coping with contextual uncertainty and diversity.

1.4 Non-determinism in projects – observations from practice

In this section, I will present three examples of organizations that in different ways meet challenges that may call for non-determinist coping. All three examples build on observations and knowledge from my practice as a consultant, and all three examples will be elaborated on in later Chapters.

Non-determinism in biotech product development projects

In the biotech industry, the complexity and change derives from the fluctuations in the interest from investors and different stakeholders, as well as in the pharmaceutical market. After the collapse of the dot.com wave, investors turned to the emerging industries in biotech. So indexes went up and up. But in 2002, there were several reasons that indicated that biotech was not the inheritor of the heydays of IT. So the stocks went down. And some investors and partners in development projects suddenly withdrew, which completely changed the situation for the project manager. This kind of sudden change of situation is inherent in emerging industries. One of the case stories, which will be presented in a later Chapter, is an extreme example of this: a drug development project was closed down in the 11th hour, as the investors decided to withdraw their financial support.

Secondly, complexity and change also derive from the more general uncertainty and unpredictability inherent in all kinds of product development. Development projects are by their very nature processes that are launched with only partial knowledge, and thus are exposed to at least two kinds of uncertainty: uncertainty if the idea is practically possible within the time and financial frame. And the other uncertainty is related to the question of "predicting" the

situation in the market and in society in general at the time of termination of the project. Product development projects depend namely on 1) lack of knowledge about product technologies not yet fully developed and 2) lack of knowledge about the emerging context regarding markets and investment climate at later stages and at the moment of product launch.

Thirdly, complexity and change in this example is related to the influence of organizational politics: projects play many different kinds of roles in and between organizations. Institutional theory stresses the importance of the symbolic or signal force in the political game of the company. For example, projects can function as signs of an organization worth investing in: the more projects, the more innovation and creativity. In this way projects become part of the company's branding. In the case if this particular biotech company, the coin had two sides: on the one hand projects signal risk taking innovation and thus potential for new products that will indicate future profits. On the other hand, investors are pushing for predictability before deciding whether to invest or withdraw. "Innovate, but make it right the first time" as they said when I was employed in the sugar industry. This more irrational side of projects may contribute to the complexity as well as the unpredictability of projects.

Together, product development projects in Biotech are examples of "project triangle in context", that Briner et.al. wrote about (ibid.). It is hard to imagine how good preparation in the form of planning and organization will answer the call for dealing with complexity and change.

Non-determinism in public sector organizational change projects

In public or politically managed organizations, project work is also exposed to complexity, change and unpredictability. Unpredictability is inherent in the close connection that projects in these organizations have as their political agenda. The actual and ever-changing content of the political agenda will influence the conditions for projects according to the financing, support and visibility of the projects. Today's darling project is tomorrow's orphan in the eyes of politicians and management of civil service.

The citizens, (who happen to be voters and tax payers too, as well as clients, as well as parents or other relatives to users of public service) are from moment to moment fluctuating between expecting high quality and individually customised quality services, care and treatments, and demanding increased effectiveness and efficiency that eventually can result in tax reductions. The virtues of the permanent line organization that focuses on minimizing risk, errors and costs and maximizing control through standardization cannot be ignored. Visions of "learning organizations" and the like will have to contain an answer to the question of being both cost-effective and flexible at the same time. And it can be very unpredictable, what context will function as the upper one from time to time.

A few decades ago, many public organizations functioned as bureaucracies, providing standardized services and solutions to the masses. The way things were done was determined by the structure of the organization. Citizens had to accept that the internal division of labour in civil service organizations made it a frustrating experience to try to get in contact with the relevant persons - a bit like the caricature in Kafka´s novel "The Tower". If you wanted service, you had to adapt to the way tasks were structured – but this structure is nowhere to be seen.

The tendency these years within civil service is individualisation and transparency, where citizens and groups of citizens become active customers, and demand individualised solutions and services. Organizations like City Halls will be forced to work more in a way that is determined by the task and its context, rather than by the internal structure of the organization. A general tendency these years therefore is a call for transparent and flexible citizen-directed organization. Many public sector organizations invest time and resources in developing capabilities for working in projects, as a means for demonstrating flexibility in developing services and the way tasks in general are performed by employees in relation to citizens, politicians and other stakeholders. In particular, the projects are seen as a vehicle for creating cross-organizational cooperation.

In conclusion, projects in public organizations are part of an answer to a call for transparency and flexibility in a world of high levels of uncertainty, complexity and change at the same time as it is in its own nature to contribute to it. One of the inherent dilemmas is that this capability for non-determinism must at the same time suspend control through the old order with the risk of being seen as a less responsible caretaker of taxpayers' money - and walk into an unknown area of cross functional development work where you cannot predict the outcome or the cast-benefit relationship.

Non-determinism in building industry projects

Building projects normally involve cooperation across companies and across professional cultures. Typically, there is an owner, an advisory engineering company, and the Contractor, who makes contracts with a long list of plumbers, painters, carpenters, etc. This cooperation across boundaries often causes misunderstanding, conflicts and distrust, and the process needs to be controlled in some way. The traditionally most used approach to ensuring effective cross-organizational and cross-disciplinary project work is "good planning". This means preparing the project work in every detail, so that all parties can control their own efforts in relation to other parties, and thus conflicts can be avoided. It is assumed in this approach, that the best projects are those that are prepared to such a degree that no changes of plans will be necessary. This approach has proven that it works well in relatively stable contexts and in well-known types of tasks. In projects of this kind the planning approach will probably be the most cost-effective.

However, building projects are often exposed to a great deal of complexity, change and unpredictability, which raises the question if the planning approach is the most appropriate. The unpredictability of building projects stems from many sources, e.g. changes in owner's preferences, of political conditions, societal opinion changes, of technical and other surprises in implementations in general, and more. Owners, advisors and contractors experience conflicts and costs when the detailed project plans fail due to unpredicted problems or changes in specifications or conditions for implementing the projects. A lot of time and money is spent on sorting out who is responsible for what when project plans are to be changed. Often, the legal system is activated to generate a solution for how to share the extra expenses, as some of the parties utilize the situation, where all the details of the project plan are to be revised, to put into work that will give extra profit. The determinist approach to building projects has severe shortcomings, and there has for some years been a call for alternatives to "more of the same": more details, more contracts, more control procedures.

Therefore, a lot of work has been done in the building industry recently to find ways to cooperate that replaces some of the detailed planning with building of trust within and between organizations. The dilemma can be expressed as the dilemma of choosing between delivering the result that was defined in the contract, or delivering the result that fits the situation at the time of delivery. Financial as well as more psychological factors are introduced to support new patterns of working together, under names as Partnering and Lean Construction, all for the sake of being more able to cooperate flexibly in situations where the single best way cannot be determined. In other words, the question for the building industry is how to implement effective cooperation in a non-determinist mode.

Summary – observations from practice

Three examples of organizations are introduced, where there is focus on project approaches and a quest for non-determinist qualities in the way the projects are organised and managed. It can be argued that these examples represent similar, but also different reasons behind the focus on projects. The three examples share that projects are a temporary organizational device for cross-functional cooperation. They also share the characteristic that they represent projects with inherent dilemmas that cannot be solved but must be lived with. And they share the quest for an alternative to the determinist approach and need to implement non-determinism.

In biotech, projects function as the means to cope with the lack of knowledge and certainty in product development, and furthermore a symbolic function as a "branding" device in relation to investors. Projects thus have to bridge the quest from investors for predictability and risk minimisation with the inherent uncertainty in product development. Projects become part of a language game in the organization's dealing with this dilemma, and to succeed, the projects must contribute in a way that create more order, more focus.

In the municipality, projects have a function in tearing down functional silos and bureaucracies in the City Hall, and instead create opportunities for more citizen-directed public services and administration. But, if not addressed, this tendency will result in enormous cost, and in Western Europe, tax increases are not something that give you a new period as a mayor. Projects in this example function as a means to bridge customization with cost control and create more disorder and flexibility.

In the building industry, projects are the form of enabling cross-company cooperation. Thus, projects become part of the processes that balance intra-organizational and inter-organizational interests when projects take another route than planned. So, in all three examples there is a theme of proportion – not choice – in the simultaneity of determinism and non-determinism with allowing control as well as flexibility, but there are also differences in themes, at the above discussion clarifies.

In the table below are the conclusions of the discussion of call for non-determinist coping summarized in a figure:

	Operational uncertainty due to:	Contextual uncertainty due to:	Disagreement Dilemma inherent
Biotech projects	Technological knowledge Questions of toxicology Productability	Competing projects Market Investor climate Political regulations	Innovation and creativity vs. Predictability in bottom line
City Hall projects	Employee attitude to risk taking and change Conflict and competition Gains and losses balance	Politicians agenda Public opinions Mass media focus	Customized service vs. tandardized efficiency
Building projects	Weather Supply of materials Coordination across organizations Time estimates	Owner's financials, fashion & fads Political and societal priorities Other projects	Deliver as planned and contracted vs. Deliver what is most meaningful now

Fig. 1. Call for non-determinism: Uncertainty and disagreements in three project types

1.5 Reflections from practice: Introducing non-determinism to project managers

The raw material for my sensemaking about project management is for a large part my experience from nearly 15 years as a trainer/consultant for project managers in course situations. Firstly, in 9 years as an internal consultant and the last 7 years as an external consultant either on open course programmes or on in-company training programmes. In the following paragraphs, I will present a differentiation that I have felt validated by more than a hundred Danish project managers as a meaningful way of differentiating between project-context relationships and also about the need for non-determinist approaches. I have met project managers from all sectors, including the three branches that were used as examples in the previous section. Together with colleagues we have developed ideas and approaches that can be useful in dialogue with project managers about how to deal in practice with complexity, unpredictability and change. Participants have confirmed the view that project management practices almost all of them and are directed towards achieving control in terms of predictability, planning and control, while in the real world this opportunity is almost an exception.

This determinist logic of action simply does not mirror the experience of everyday practice. And these project managers are relieved when presented with the view that controlling projects by determinism is not the only way to be professional. That control can be obtained in different ways, that there is an alternative vocabulary of coping, for coping in a non-deterministic way with uncertainty and multiplicity. Some years ago, I was tempted to assume that non-determinist approaches would replace the outdated determinist approaches. Now, my experience tells me that there is more a quest for building a bridge between determinist approaches and non-determinist ones in an organization. A way of talking about this is to talk about different perspectives on project management, as the following case will illustrate, where I refer to very useful work on perspectives by Pernille Eskerod (Eskerod, 1997)

Case story: introducing perspectives on project management

Traditionally, projects are defined by time, cost and specification – the golden triangle of project management. The approach triumphed for several years in US military industrial complex. The triangle on the left side illustrates the project specification in isolation, which is an expression of the approach that formed project management practices for the first many years in the middle of the previous century: when these three are specified, the rest is a question of delivering through a rational production process. The methods were various planning and estimation tools like: PERT, GANTT, CPM, etc. Later, the project way of working spread to other organizations and companies by consultants, books and former employees.

When the project approach spread to other sectors of society, it was also introduced to contexts where there was less agreement about the project. The concept of stakeholders became central as it became an important issue for project managers to generate some kind of coalition among stakeholders about the task, the budget and the time available. Also, the employees working on projects were more or less committed or motivated due to their differing perspectives of other assignments in the organization. This lead to a change I focus from a question of good planning to good organization, where project stakeholders and members were coupled to the project through initial negotiations.

In the last ten years, both perspectives on project management have been questioned from a third perspective. From this perspective both the previous perspectives are criticized for their assumption about the potential of good preparation as the determinant of project success. In this third view projects are seen as a process of building networks and creating meaning throughout the project lifetime. From this perspective, the loss of meaning is the biggest threat to project success, due to inherent uncertainty and disagreements that is a result of the notion that what people regard as "the project" is context dependant and therefore permanently "under construction". These three perspectives on project management can be illustrated in the following way:

Project as plan: good projects follow from good planning and control procedures. Predicting what needs to be done and building activities into a detailed action plan that subsequently is managed

Project as a temporary organization. Good projects are a result of good organization of the participants and the stakeholders of the project. When projects are well-organised from the start – good projects will follow

Projects as social construction of meaning in emerging networks. Good projects are a result of experimenting, networking and sensemaking. Projects succeed on the edge of chaos when adaptation is made possible
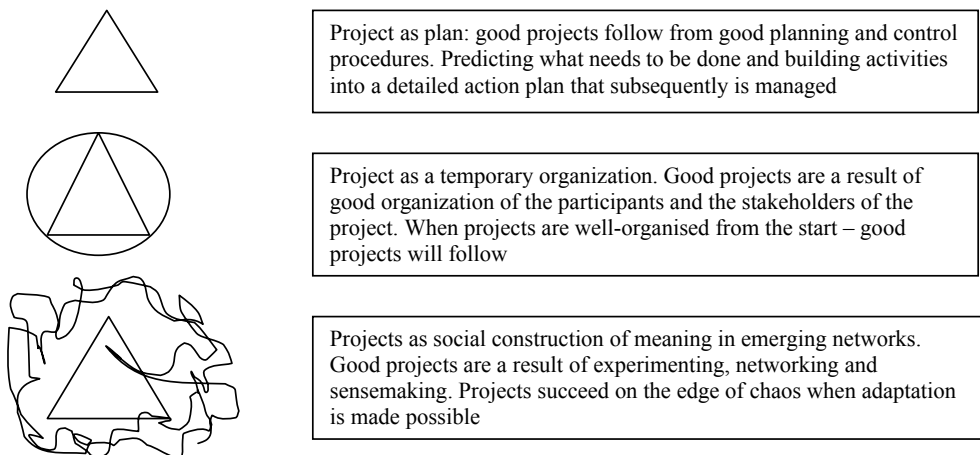
Figure 2: Three perspectives on project management (After Eskerod, 2001)

It is my experience from introducing these perspectives on project management to numerous project managers, members and line managers, that they are immediately distinguishable for practitioners. I also find that the two first perspectives are most clearly described as logics of action and vocabularies of coping. These experiences of course prove nothing, but have been important drivers for my work on this dissertation. The drive is related to curiosity concerning the construction of a language and logic of action for the third perspective.

1.6. What is the issue?

In this dissertation I will introduce theoretical perspectives on organizations in general and project management in particular that deal with the obtaining of order and control as emergent properties that are improvised forward in a coordinated multiplicity of meaning. It is my hope that new theoretical perspectives of what goes on in projects and other organisational processes will enrich the repertoire of professionals. In particular I want to examine the potential of the following sciences/disciplines:

- Social constructionism
- Complexity theory
- Postmodern psychology

I am far from the only or the first consultant that is introducing these theories into the field of project management related consultancy work. On the contrary, these ideas have been expressed for years, but the practical effect on project practices is very difficult to trace. My hypothesis is that theories of "new science", in particular chaos and complexity theory, is introduced on a superficial level, and as a "spice" added to more dry planning tools. But, the consequence is that the basic assumptions of realism, individualism and determinism are left unquestioned, and therefore, the ideas are rarely put into practice outside the classroom.

However, ideas for practically *living* happily with non-determinism may be found in today's organizations already, but as very thin stories or as "strange" exceptions. With a different mindset we may embrace these exceptions as illustrative examples of non-determinant project management. In my work as an organizational consultant working with systemic and social constructionist ideas and methods, I have experienced that development, change and learning projects can be successful by other means than the prediction/control package of methods. Cross-fertilization (some may say cross-contamination!) from these differing fields was the background for raising the question in thesis, and as well the approach: looking in the direction of organizational change for inspiration regarding the instalment and cultivation of competent non-determinant order and control in project management.

The domain of documented disciplines for this kind of management is still very rudimentary. In 2001, I presented with a colleague the paper, Project Management on the Edge of Chaos on the international symposium for project management: IPMA2001 in Stockholm (Smedegaard and Vestergaard, 2001). This thesis continues this first attempt to formulate these ideas by an attempt to capture, map and describe the knowledge or wisdom embedded in real-life, real-time project work with low or no possibility of prediction, planning and control.

There are different reasons that different organizations are behind the relevance of profession-alizing non-determinism. In some organizations, projects are there to gain control and focus in

relation to the development of something new: a product, service or concept. Often, some people are asked to work together and organise the task in a setting that is distinguished from daily operations in some way. In other organizations the project approach is chosen as a means of creating "disorder" in the sense that the line organization tends to work too slow, too inflexibly or too expensively in relation to the ever-changing context of users, stakeholders, customers and so on.

In both instances the mainstream approach is; when it comes to leading these projects effectively, a rationalist, modernist one, where you try to read the situation right, carefully engineer the system of activities and then implement. This is a deterministic description of a project, and of course it is not possible to control a project without trying to make some predictions about it and to do some planning. But, in many projects, it is not the most important part of it. In more and more projects the most important asset is to be able to adapt, reconstruct and learn throughout the project's life. These aspects are the non-deterministic processes in projects.

A manager or project manager who lives in the regime of determinist theory and thinking, who at the same time is operating in a context of complex change is, according to my experience as a trainer and coach for project managers, exposed to some of the following dilemmas:

- To create what was agreed at the time of the beginning or what fits to the present world

- To plan for activities, taking it seriously and at the same time knowing that it will end up with something else anyhow

- Different stakeholders prioritise differently, e.g. between speed, quality and spending.

- The human need for some clarity and the project's need for staying open to emerging possibilities

- Customers, investors, politicians and other stakeholders demanding certainty regarding deliverances – but those working on the project only possess a small part of that knowledge that would make certainty "realistic".

- Diversity in the project team: competition and/or collaboration.

I am interested in the practical difference that results in making these dilemmas or contradictions to the "normal condition" that has to be lived and not that can or should be solved once and for all. How can we create a safe social domain for living uncertainty?
With the success in making projects deterministic, the baby is thrown out with the waste water. This is where innovation meets efficiency, and this is dealt with in the discussion about societal innovation ability in the post-industrial era in Denmark:

> *"We may have projects on time and budget – but we have not enough innovation" (CEO, Radiometer, MM no. 4, 2004)*

1.7. The aim

The research question of this thesis is to inquire into non-determinist coping in organizations in general and in project organizations in particular.

My aim is to develop the understanding and a useful vocabulary of coping that can cultivate the abilities in the organization to live and work happily and prosperously in complex contexts of uncertainty and multiplicity.

It is my intention that the proposals are practical in the sense that they do not presuppose the existence of organizational contexts that are never to be seen in this world. But, instead, to generate understanding and approaches in a language that fits the world we experience in everyday situations. The use can be thought of in at least two senses: as an invitation to another mindset and as an invitation to another set of practices and approaches that may prove useful in contexts of uncertainty and complexity.

1.8. Why this issue?

Like in 1986, when I wrote my master thesis in psychology, I am driven by a deep dissatisfaction by the dominance of formal, determinist models of reality. In 1986, I was provoked at a lecture I attended, where the lecturer stated that Artificial Intelligence was "just around the corner". This statement was accompanied by a resistance on my part, which I must admit was more aesthetically based than anything else. I simply did not like that idea. But also, there was an ethical dimension to it: I would not like to live my life in a world where minds could be simulated on a formal programmed computer. Today, I have the same attitude when confronted with the research within genetic manipulation, chemical drugs improving various skills like concentration and creating "cyborgs".

I have a corresponding dissatisfaction with the analysis, plan and control perspective on project management that today seems almost hegemonic. Many of the recipes of "how to" schools of project management presuppose ideal conditions for projects that are indeed very seldomly seen in the real world. So many instances of project managers telling stories that demonstrate serious limitations of this methodology – and still this compulsory returning dream of being the project manager in control, with answer to any question. On courses, I have experienced participants who at one moment recognise that the determinist model of project management is of a limited value, and who the next moment tend to stamp the ground and declare that it has to work in the determinist way. The hope; that with the right technology and the best intentions and hard work, it will be possible to control the process in the one, right, best way – the modernist dream.

In the case of Artificial Intelligence, the formalist view of the mind is largely left. It simply did not work very well outside the laboratory. Too many of the books, models and tools for project management are also very effective - in an ideal world. The context of projects are multilayered, complex and unpredictable, and if projects are to be a way of working that benefits organizations, it must take the relations to multiple stakeholders and other projects in consideration when choosing the approach. What the laboratory was for Artificial Intelligence, the idealized project oriented organization is to conventional determinist project

theory. Are there shifts in thinking about project management that can be compared with that of shifting from computers to the Internet as the guiding metaphor in cognitive science? If not, would it be useful?

Personally, I think it is time for giving up the hegemony of the modernist dream of determinism in project management and organizational processes in general. Instead, the determinist toolbox should be seen as a resource that is useful in some situations and not in others. And my personal interest is in contributing to the understanding of the "other", non-determinist" approach to projects and other organizational processes.

I worked on this dissertation for two reasons:

1) To contribute to the understanding and the "vocabulary of coping" for project managers of projects in complex and unpredictable contexts – making the normal "normal", so to speak. It involves descriptions of approaches that build on the unique situation for projects in context, and not on idealised models and recipes of "the best practice". That there is not one best way does not necessarily mean that it becomes irrelevant or impossible to try to do it better. It will always be a concern, but a continuous job with the questions and dilemmas in everyday situations, and is not done solely by following the wisdom from books, guides, consultants and toolboxes. This involves a change in mindset towards accepting and coping with non-determinism, the fuzziness of contexts that people experience in today's organizations. In this way, I would be happy to contribute to a better and happier life for people involved in projects in organizations.

2) After the dissertation, I would like to work in a mixed position of part consultant and part researcher. When working with consultant colleagues, I often find myself to be more abstract and theoretic than others – and on the other hand I often find myself to the practical side when in more academic contexts. This dissertation has been written while I am still working as an independent consultant and this is a conscious attempt to place a leg in both camps, so to speak.

The mixed position may also be described as being a consultant in a certain way. In practice, this means that my work should include engaging in solving a problem or making a change as well as co-creation of knowledge in collaboration with clients and colleagues. I hope to go beyond a supplier-purchaser relation with my clients, and find alternatives to the more conventional role, where I as a consultant and expert bring the above knowledge of best practices into the organization, which pays a fee that is based on hours, days or services specified in other ways. Instead, I aim to work closely together in a more collaborative manner with the customers as partners in creating local knowledge, temporary meaning and practical approaches that fit the situation and the context at hand. Customers are in my dream also co-researchers, like I as a consultant become a participant in generating the knowledge and learning that as a path leads to a meaningful outcome.

During the work on this thesis, I have in some instances suggested this to some client organizations that I was in contact with. The people I spoke to were interested and found the idea fascinating, but when it came to the question of making a concrete cooperation agreement, their courage, unfortunately for me, fell. My interpretation of this pattern is that the idea is not strange for organizations today, but on the other hand unsettling when it comes to the

realisation of the idea. My choice is that I either drop the idea, or consider the "unsettling" response as a sign for a niche that is open because it has not yet become mainstream for the use of consultants and experts in organizations.

For the moment, I choose the latter.

1.9. How will I deal with the issue?

I will develop and demonstrate some hopefully convincing points and persuasive evidence about implementation of non-determinism in organizations. This will happen through a reflective dialogue based on a cocktail of selected case stories from my own practice and on a handful of theoretical perspectives. My hope is to suggest ways of creating cooperation and meaning together, that will help project managers and other members of my client organizations to benefit from being my clients and benefit myself in the role as their consultant.

Based on the introduced theoretical perspectives and the reflective dialogues in practice in Chapters 2 to 6, I will discuss what is considered to be the key disciplines of project management and suggest a reframed, alternative view of these disciplines as a resource for project managers and other change agents. The discussion is based on a post-modern phenomenology as the umbrella, and not primarily on rationalism/objectivism. And as such I do not intend or believe in the possibility of, for example:

- Certainty, grounded in observation
- An experience-based fundamental acknowledgement of reality
- Presenting a system of thoughts that are consistent and without self-contradiction
- Formulating a basis for human action in a set of ultimate and unambiguous values

Instead my approach is to:
- Observe, register and present case stories from my own practice as a consultant
- Reflect critically and appreciatively on these observations
- Create and present a dialogue between case reflections, selected theoretical perspectives
- Conclude by suggesting views that will be useful for clients and others interested in implementing non-determinism as a resource for improved project and change management

There is a direct line from my master thesis on cognition and Artificial Intelligence to the present work on organizational non-determinism. As intelligence in humans is integrated in the context of life history, culture and body processes, as demonstrated in my master thesis, I will in the role as a researcher be trapped in my own life, as formulated by the leadership philosopher Ole Fogh Kirkeby:

> *"The researcher cannot escape his/her own life. He can't emancipate his thought, but is caught in the body, that thinks it, and in the situation, in which it is thought"*
> (Fogh Kirkeby, 2003, p.19 (my translation))

The researcher is thus in the study of a complex and uncertain world left to fantasize, imagine and tell stories. When I do not have a direct experience of an objective world (objectivist position) I instead join the world and construct its meaning through my participation in the language games that we use to describe it with together. As a researcher, I can join the grammar of the community of project management practitioners and theorists and contribute with my "stories, fantasies and imaginations" in the form of reflections and suggestions for a language that will make it possible to improve practice in the field – in contrast to attempting to prove that certain abstractions, descriptions or predictions are ultimately true.

The intended outcome of this volume is a contribution to a more useful vocabulary of coping for leaders, project managers and others who try to deal professionally with non-determinant approaches to the uncertainties and complexities of organizational life. I use stories from my practice as ingredients in a cocktail that together with theoretical perspectives and reflection make a convincing contribution to the grammar of organization theory. A theory that is there to improve, not to prove (Doorn & Spiering, 2001)

1.10. Summary: introduction to the question

I am a "seasoned professional". I have been working as an organizational consultant – internal and external – for 15 years, and I need to think more thoroughly about what I do and how I do it as a consultant. Writing a dissertation is the way I have chosen to address this. After this dissertation I wish to work in a role that integrates research and intervention and a role that replaces the supplier-customer relationship with a learning and empirical inquiry partnership.

I am still interested in increasing my understanding of the interplay of formal and informal aspects of human life. I believe that this is an interest for life. This thesis is somehow a personal update of my master thesis from 1988, but applied to my present working area. The update is especially clear in the parallel between the exploration, then on formal and informal aspects of cognition, and the present exploration of determinism and non-determinism in organizations around projects. It is two contrasts with family resemblance in that in both instances there is on the one hand the modernist, rational and objectivist dream of gaining true and perfect knowledge about a phenomenon in a human system, and then building the professions on top of this knowledge, and on the other hand, a position based on the post-modern experience of knowledge being local, self-contradictory and incomplete.

I have met many people working with projects and similar kinds of tasks that are helped very little by the most conventional handbook knowledge about project management. I would be happy if this work could lead to another kind of knowledge that is useful for creating local, situated processes that answer the call for non-determinist coping in projects in particular and in organizational change and development processes in general.

The research question of this thesis is to inquire into non-determinist coping in organizations in general and in project organizations in particular.

My aim is to develop the understanding and a useful vocabulary of coping that can cultivate the abilities in the organization to live and work happily and prosperously in complex contexts of uncertainty and multiplicity.

My overall research design is based on practice as data, which is collected through my work as a consultant, and analysed in a context-based manner through a number of theoretical perspectives, for the purpose of providing persuasive evidence for an enriched understanding of non-determinist logic and coping. In the next Chapter I will describe the method in further detail.

Chapter 2: Research methodology

2.1. This Chapter: linking the question and methodology

In this Chapter I will present the methodological approach of the dissertation. There have been two primary concerns when it comes to the choice of research design. The first is that of finding a method that would make it possible for me to work on the research in parallel with my work as an independent consultant. This calls for an approach that simultaneously seeks to generate 1) improvement in client organizations, 2) theory and persuasive evidence 3) income in one and the same process.

This concern leads to the obvious idea of using my own work as the source of data. There is no other gathering of data than this registration of observations from my own work. Stories and cases from my work serve two purposes in the methodology. Firstly, I refer and discuss stories as demonstrations of theoretical perspectives. This makes it possible for the reader to see how I put the theories on the stage I am working on, so to speak. Secondly, I follow three stories from my work as unfolding processes of reality construction, where I continuously reflect upon these processes from the presented theoretical perspectives. This makes it possible to make a context-sensitive inquiry into projects and other organizational processes of change and development.

The second concern was that of choosing a method that would be useful in relation to the research question and the "unit of analysis". The question is that of understanding the role and process of collective sensemaking and action in relation to non-determinism in organizations, and the unit of analysis is the social processes of reality construction and sensemaking in the organization. Organizational processes have no shared definition of beginnings and ends and they have no shared definition of boundaries either - they are in eternal flux. E.g. when it comes to the inquiry of projects, it must be remembered that there are no clear boundaries between "projects" and "non-projects", and that the boundary is highly dependant on the position of the definer. What kind of inquiry, research and knowledge makes sense?

The research question is about non-determinism and a corresponding language we can use to cope with projects, change and processes in emerging and diverse, that is complex, contexts. It follows from this that the methodology should focus on emerging conditions and emerging meaning and the social processes that integrate these. And thus what counts as data cannot either be clearly cut from the start, once and for all. Stories of organizational processes with potential for demonstrating non-determinist coping from all kinds of tasks are thus relevant and are included. Also, case stories that are not successful are relevant, because if we want to

understand non-determinism we have to include stories of premature endings and fiascos as well as processes with the expected result.

So I will be looking at practice as data, practice from tasks that are related to projects, and not related to projects. I will look at practice in tasks that did lead to a happy ending and some that did not. I will look at practice from tasks that made quite new questions to the foreground and where the initial "research questions" were not sufficient as instruments for exploration. As demonstrated by Rijsman, different conclusions can follow from experiments and studies, depending on how surprising results were explained, which did not support the hypothesis (Rijsman, 1999). Therefore, for explanations to be useful in the full range of tasks that I meet cannot be based on pre-selected descriptions of "neat" examples from practice. It is not only a question of "what data counts for" but also "what counts as data". What counts as data, is thus examples from the full range of my practice, also tasks and processes with "messy properties" that cannot be easily analysed in terms of the issue of research. (Reason & Bradbury, 2001).

The approach of this dissertation can be summarized in the following way:

Setting the stage $\longrightarrow$ Research Methods $\longrightarrow$ Staging theories $\longrightarrow$ Multi-perspective $\longrightarrow$
Case exploration:

Critical reflection on discourse and construing a $\longrightarrow$ Conclusions for practitioners and myself
non-determinist vocabulary of coping
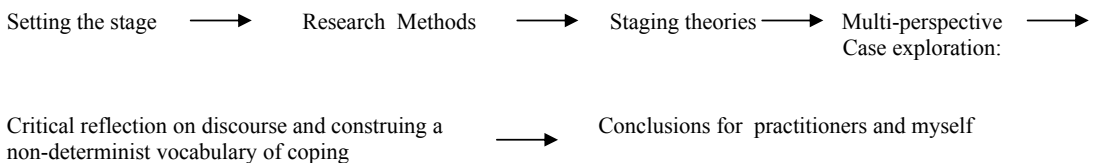
Now, let me give a short introduction to the main theoretical perspective of this thesis, namely social constructionism, in relation to the research questions.

2.2. Social constructionist perspective on methodology

I find the social constructionist view on organization very useful in my work as a consultant, and this thinking also inspires me when it comes to the choice of approach for the research of this thesis. The advantage I see in social constructionism is that it is a helpful perspective on taking into account that phenomena in organizations are interpreted and given meaning through complex interactions and that we act according to the social meaning of a given organizational phenomenon and not to what it will be possible to prove is "true" about the phenomenon.

In social constructionist approach the quest is not solely for generally true theories, but for ways of looking at and acting together in the world that is more or less useful. This means that the aim of this thesis is not to prove some abstract notions about project organizations in general. As demonstrated by Gergen, this kind of knowledge is more about fulfilling some conventions within scientific traditions about criteria's for "scientific" –ness of knowledge, than fulfilling the demand of being useful for someone in their flow of life (Gergen, 1999).

Social constructionist practices reject the notion of an individual mind that mirrors or has inner representations of the world. The processes that people engage in to coordinate their actions are at the same time constructing a reality of the world, the self and of others (Hosking

& Ramsey, 2000). Also social constructionism has traditions in relation to practice, e.g. research. There are traditionally three foci for inquiries based on social constructionism. Inquiries can focus on:

- The construction
  E.g.: What does the vocabulary sound like, that supports non-determinist approaches
- The construction process
  E.g.: What social processes of sensemaking and action were present?
- The inquiry or research process
  E.g.: How was my role as observer, participant, consultant and how did this role-taking affect the process and the constructions?

All three foci are relevant in a social constructionist view, because it is not meaningful "to separate the known from the process by which the knowledge was produced." (Hosking & Ramsey, 2000) When I collect information and call it data, my stories, examples, etc. are never solely about the other, but are also about me as an inquirer, because I had to interfere to get some answers. Therefore, reflections over practice will involve my own role and participation in the process of social construction and in generation of perspectives in the dialogue between theory and practice.

Inquiring is intervening, and vice versa. Knowledge as the product of my research is in the new practice - ways of acting and relating - that are made possible through the intervention. The stories and cases that I will use in the following are not there to prove that something is true and that something is or not is not out there. Stories can be, what Gergen calls "vivid illustrations of a perspective", that may or may not be a useful resource for people in organizations. I will use my present consultant assignments as objects for reflection, and some of them will be referred to in this volume.

This is informative when it comes to the crucial question about reliability, validity and generalization of research that is based on phenomena taking place once and only once. It is impossible to obtain scientific understanding of the social world in the classical sense by manipulating independent variables and controlling for other variables. The reason is that the social world is a world of emerging/evolving connections. Instead, the alternative is to join with the client system to understand it and open new possibilities for creative action. (Cronen, 2000, p.3). Gergen summarizes this view:

> "As I see it, a post-modern empiricism would replace the "truth game" with a search for culturally useful theories and findings with significant cultural meaning".   (Gergen, 2001)

In classical, modern science the ideals of a good inquiry are that the inquiry exposes the qualities of reliability, validity and generalization. Morgan suggests that these criteria are reframed within social constructionist and action research approaches, because these approaches have single cases that take place once and only once as their unit of analysis (Morgan, 1993) Let me suggest with Vernon Cronen some reframings of these criteria into a post-modern and social constructionist context.

Reliability in social constructionist research tradition

Reliability of "practical theories" in natural science is ideally obtained by documented repeatability. That no matter how many times you repeat the experiment, you get exactly the same response or result. Cronen suggests a "provisional convergence" as a criterion for reliability in practical theories about social systems. It means in relation to this particular thesis, that data concerning "patterns in dealing with non-determinism for the time being" also is relevant. Which could be observations and reports from different organizations, which despite important differences also may show important family resemblances; or a different story from different people in similar roles in the same organizations, where they are not "repetitions", but anyway show important convergences regarding the connections between e.g. actions and effects.

Validity in social constructionist research tradition

Validity in classical natural science is defined as the documentation of a correlation between the theoretical statements and the objective reality "out there". Cronen suggests here a pragmatic definition of validity, that valid scientific knowledge first of all shows useful in practice. Validity is in this understanding the careful attention to all steps in the knowledge production process by observing and documenting the progressing chain of events that follow actions embedding the knowledge. Data collection is thus also registering the details of the processes where the practical theory is demonstrated: observations, reflections, worries, dreams, connections to other theories, manipulations, etc.

Generalization in social constructionist research tradition

Generalization is typical about the question of whether the knowledge is valid in more than this particular single case/situation. Cronen suggests that practical theories are about principles that are guiding for 1) understanding situations and 2) which theories/models that are relevant. Guiding principles means principles, reflections and practices of the theory that are to be considered informative, but not 100% determining. Like case stories in medical journals, or case stories from law, where in both incidents the stories are read by other professionals and have the potential of influencing the practices of the community. Case stories can in this way demonstrate the way theories work when they work – but not give a recipe – but add to the reader's explicit and tacit knowledge about situations, practical theories and practices (Cronen, ibid).

Three concepts within this paradigm will be discussed in relation to the chosen approach. They are similar and it can be discussed whether they are different concepts at all, or are overlapping approaches with family resemblances. But as concepts they have different proponents and therefore I present them as three examples of bodies or methods in this tradition:

1) The reflective practitioner and practical knowledge,
2) Action research
3) Critical reflection on the discourse of organization and projects

The three methodologies will now be presented in more detail.

2.3. The reflective practitioner and practical knowledge

The concept of the reflective practitioner was introduced by Donald Schön. In his book: *The reflective practitioner* he introduces the ideas of *reflection-in-action* and *theory-in-practice* (Schön, 2001). These concepts are useful in the development of an understanding of how we in a role as professionals (for example as project managers) think and act when we work. His contribution is a valuable alternative to the understanding of the professional as a question of applying existing knowledge (PMI/IPMA Body of Knowledge) in a rational way to practical problems. Schön calls this approach technical rationality, and it is an approach building on the tendency to consider scientific knowledge as a:

> *"corps of established understandings deduced from research"*
> (Schön, 2001, p. 51).

An alternative to technical rationality is desirable, according to Schön, simply because this kind of knowledge is not very useful in that it cannot account for practical competence in diverging situations (ibid.). It is a kind of knowledge that is useful only when situations can be clearly defined and categorized, and stays that way. And, it means a very limited use when we think of organizational theory or organization psychology. Anyone with experience from organizations knows a lot of incidences where people who have been in the same situation afterwards realise that they have very differing interpretations of what the meaning of the situation was. Or, discussions revealing disagreements about "is this part of the project or not".

Reflection-in-action

Reflection-in-action is a term for the process, which according to Schön, makes it possible for us to engage in and take efficient professional action in situations that are uncertain and unstable (Schön, 2001, p. 52). It is a process of finding our way when we are not sure what kind of knowledge that will help us. When we work, from time to time, when we try to make sense of a situation where we are taken by surprise, something makes us feel uneasy or especially fascinated or interested. Reflecting over the case, we also may reflect upon the way we deal with incidents like this: What do I attend to? What are my criteria for judging? What connections do I notice/ignore? Why do I start this way? What are my normal procedures, and what others are there? What was the effect of doing it differently? How do I explain that? These questions and many more open for a consciousness about knowledge that I am normally unaware of, says Schön.

This kind of knowledge is not represented in a manual or "master plan" or otherwise formalized knowledge that we "have" and then apply. On the contrary, a lot of knowledge is *in* the action - it is embedded in the patterns of professional action. We may only know it when we are not asked to be explicit about it. This knowledge is by Schön given the term "theory-in-practice".

Theory-in-practice

Theory-in-practice is the construction in language of the knowledge that you have become aware of by reflection-in-action. It is communicable and it is possible to make experiments

and form hypothesis that can guide action and falsify or verify the theory-in-practice. It represents an attempt to translate what we know in action to a theory in language about the world and me/us in it. When the effect of our actions and words are what we expect, we do normally not pay that much attention to our theories, but when we are surprised by the effect, whether the effect is not there or is surprising, we tend to start reflecting: is there something that I do not understand? Do I have other possibilities that I did not think of? Can I repeat this effect in other, similar situations and what would they look like? So we use our theory-in-practice continuously, but only become aware of this in some situations, which we could call "sense-making occasions" (Weick, 1995). This kind of knowledge creation is another approach than the knowledge creation that proves hypothesis and formulate generalizations about the world that can be proved through testing. But, as Schön shows, this kind of knowledge may have little relevance for *im*proving the world.

The first effort to be mentioned is regarding how to gain the time and room for research in a busy day as an independent consultant and family father. The recommendation I followed was the idea of taking an hour of silent, non-directed reflection every day or so. A kind of diary containing both a resume of the activities – but also thoughts, feelings, intuitions and fantasies – even dreams (and night-mares!) that the activity gave rise to. Rijsman's useful metaphor was that of the cave-man in the stone-age, who together with his fellow hunter's drew pictures on the wall of the cave to explain, discuss or develop communal strategies for effective game hunting as a means for creating common meaning and insight and thus increased efficiency in the domain of the hunt. The representation on the wall made it easier to reflect together and have a kind of dialogue between what they think they know about hunting and the way they actually do hunt together.

This small intervention in my way of life was a sufficient challenge for the first months. And the benefit was clear to me during the discussion in Tilburg with Rijsman. During this discussion I found it possible to connect to the theories and models we discussed, thanks to my already- made reflections on the tasks and assignments I had accomplished in the period. After a while, I began to see the effect that my curiosity and interests - theoretically and practically - in relation to the PhD project is inspiring and informing almost the full range of tasks that I am currently working on and preparing. This habit of "carving" has been the first little step in the direction of living the concept of a reflective practitioner.

Now, I find two rather different bodies of knowledge, depending on where I look for it. There is the kind of knowledge represented in books, magazines and papers. And there is the kind of knowledge that is represented in the elegant actions themselves.

Example: Theory-in-action in consultancy tasks: clients as reflective practitioners

This case is a story from my consultancy business about my mayor consultant task in 2002. The client is a municipality, and the assignment was about training/developing project managers at different levels in the entire organization. In parallel, I have had meetings with the upper management group.

My consultancy business was chosen to deliver a 12-day education programme for project managers. I was told that I was chosen because my way of working and my thinking is different in terms and paradigms than almost everyone else in the field of training in project

management. They noticed that I suggested that project managers gave up the idea of being in full control because the complexity and unpredictability of today makes it impossible to be in perfect control in the traditional sense of the word. Instead, I suggested that project managers continuously co-created order through dialogue, meaning making and relational trust. Most convincing, they said, was that I had been able to communicate this view to the "technical administration" project managers at a short course earlier this year.

The 12- day education programme for project managers from the entire organisation took off and was concluded in the spring of 2003. On the final day all participants delivered written stories about how they had been able to practice some of their new insights. The programme lasted 6 months and during that time I had 3 meetings with the upper management group, where issues of conditions and effects of task-oriented organizing were discussed.

The programme ended with the creation of practical theory, which was an experiment for me. Before the last days of the programme, the participants were given a task that they should solve over a couple of months. The task was to choose and write down a story about a "difference that made a difference" action or procedure, that they themselves had experimented with, and which had relevance for project management in this particular organization. On the final day of the programme these stories were unfolded and appreciated, explored and wondered about. This process was a knowledge-creating, sense making, theory-building of a whole other kind than the conventional listen and exercise – inductive teaching methods.

The stories should be structured in the following way:

1. What is the problem/dream?
2. What is the present, not good-enough-way-anymore way of working in projects?
3. How I tried to contribute to a better way?
4. The result and what did I learn?

On the last two days of the programme, groups of participants were responsible for workshops, where the learning from the stories was explored and reflected upon. This is an example on how my role as a reflective practitioner and my clients developing theories-in-action can be interrelated.

2.4. Action research: from a scribe to a poet

Originally, the concept of action research was introduced primarily by Kurt Lewin. (Lewin, 1936). He is repeatedly quoted for the following assumptions, by which he originally introduced action research into organizational research:

> *1) There is nothing as practical as a good theory*
> *2) If you want to study an organization, try to change it*

The point of Schein is further that so-called "pure" research with control groups and controlled experimental manipulation is not something that is either useful or possible when it comes to the study and understanding of organizational phenomena (Schein, 1988).

Compared to the concept of the reflective practitioner in the former section, there are many similarities, but a difference is in the emphasis of the concept of the *intervention*. The role of the intervention is on one hand to carefully try to do something in relation to the organization that will result in a positive change (solve a problem, fulfil a purpose) and at the same time helps you validate or falsify some given theory about this particular organization. In this way intervention is a construct that unites the aim of the action researcher and the consultant within organizational psychology:

> *The model of theorizing, intervening, gathering data on the effects of the intervention, and then checking the theory prior to the intervention is the sequence of activities which describes the* **action research model**. *(Schein, 1988, p. 241)*

Gergen expresses this scientific position of the psychologist in the post-modern world as "a shift from the role as "a scribe to that of a poet" (Gergen, 2001) extending the ideas into the social constructionist paradigm. The work of a scribe is an act of registering and presentation, where the work of the poet is an act of creation.

> *"Action Research implies that it is not only about proving but also that it is about improving" (Doorn and Spierings, 2001).*

> *"… practitioners become co-researchers and researchers become co-practitioners, as each articulates what they have been "struck by" in the unfolding process." (Shotter, 2002)*

Together, these quotations, when applied to my own profession, suggest an idea about the organizational psychologist as not only as a consultant doing business with different clients, but an 1) observer, 2) documenter and 3) researching partner and 4) caring participant in collective action and sensemaking in the client system.

> *"Action research is only possible with, for and by persons and communities, ideally involving all stakeholders both in the questioning and sensemaking that informs the research, and in the action that is in focus"*
> *(Reason and Bradbury, 2001)*

I have chosen to let my approach as a consultant/researcher be inspired by this methodology. I have to emphasize the term "inspired by" because there is a lot of the ideal properties of action research, as it is most typically described, that present work does not live up to. The primary reason for being inspired is that it is a realistic approach in my situation - minimising the need for investing time in generating "empirical data". Instead, I use the assignments and tasks at hand in my consultancy business.

This means retrospective use of already accomplished as well as ongoing assignments as examples on my way of working and inquiring and as stories that can demonstrate a point through the dialogue with different theoretical perspectives about interventions and effects.
The research process that follows from this line of thought is probably more messy, emergent and developmental than more traditional empirical research that is based on testing a certain hypothesis. A key question to deal with along the process of research will be how to evaluate what you have done, as there are no fixed parameters or rules on which this evaluation can be

performed or on which decisions about actions can be made. Instead, these rules and criteria must be developed, explored and discussed continuously among all involved and in an explicit manner for the purpose of the thesis. The meaning of the actions is related to what follows from them, and the meaning that is made about what follows.

One dilemma is of course that when we study the effect of an intervention, this act of study will itself be a new intervention. The kind of theory that is the result is thus not aimed at general explanatory theory, but again, a practical theory:

> *"...is useful in a tool-like way to those involved in a situation; it enables those involved to make and to notice differences in their activities, thus affording them with opportunities to coordinate their activities with each other in an intelligible way". (Shotter, 1997).*

The action research perspective is in this way contributing to integrating theory and practice in making the cases that are discussed in this thesis to a simultaneous consulting and research. It becomes viable to see, as does McNamee: research as practice and also theory as practice (McNamee, 2000). An interesting point that follows from my participation in this programme is thus the possibility of exploring the potential and pitfalls in the dual role as a consultant and a researcher. How will the merging of research and consultancy look like in the profession of an organizational psychologist?

The positioning of oneself as a reflective co-constructing action-researching consultant is opposed to positioning oneself as an expert (management consultant), doing his "thing", and it is maybe also in contrast to the ideas of neutrality from the Milan school of systemic consultation, in that neutrality is opposed to participation and caring. This discussion has already been taken by several theorists, e.g.: Gergen (2001), Shotter (2002), McNamee (2000) and Reason & Bradbury (2001). Also, in the network of organizational, constructionist consultants that I am joining, there is a sense of paradigm shift in the understanding of a consultant's role.

In the concluding Chapter of this book I will summarize the implications for project manager competencies in a post-modern world. Today's fast-changing organizations and their ever-changing and unpredictable environments challenge project managers to find a way of gaining some control or order when this is not possible with the conventional tools of technical rationality. What do the competencies look like? The practice I will use for my reflection and investigation will be all kinds of consultancy work, not only work, where project management is an explicit theme.

2.5. Critical reflection on discourses of organizational theory on project management

In this section, I describe the use of critical reflection as a method for inquiring effects of the discourses that we in our communities consider as natural. Based on the thinking of social constructionism, discourse is a key concept to the understanding of the processes that lead to realities. According to social constructionism we construct our view of the world and of ourselves in a joint process of coordination acts. If these acts confirm the view of a certain community or culture, then the world view and the view of the people themselves will tend to

continue, and after some time we feel that it is "real" in the sense that we in our head have the reflection of the true world out there, and we no longer believe that there can be alternative ways of seeing the world and ourselves in it. The consequence is that we only have a narrow range of possible futures at our disposal.

The reason why this method is important in this thesis is that the discourse of project management wisdom is very powerful in that it seems the natural and only reasonable way of thinking about project management. As an example, I have for several years worked as a trainer of project managers. Several times I have been struck by the power of the myth of the project manager as a superman being in perfect control as a result of a superhuman ability to predict, overview, plan and implement complex processes. I will illustrate this by a story from my practice as trainer in project management:

Story from project management training

On the first day on the 4-day course, I introduced the history of project management thinking, - from that of seeing projects as plans, over seeing projects as temporary organizations, and to projects as social constructions. In the following dialogue there is a wide acceptance of the idea that the fast-changing and complex conditions of projects today, the planning paradigm is not the only relevant model. The social construction of continuous adaptations was seen as a relevant alternative model. And the planning model was acknowledged as a very limited model, if it stood alone.

But, after this discussion, when asked about their "future story" that they would like to tell a friend in 4 months, many still turned to the story of "for once in a lifetime to run a project by the book", "to have run a project where I was in control all the way," and the like.

Even when the participants by reviewing their personal high-point experiences as project manager had identified these as incidents of social construction of adaptation to change or complexity, they still dreamed of being in proper control. I began to wonder: "Why is this myth so powerful?" Why is it not more attractive to adopt a dream that fits their best experiences? Why do they cling to an abstract dream, insisting on the world as being a place you someday will learn how to get the reality about, and thus to find the one best way?

Reflections

One of the reasons may be that the setting is an open course, where participants are away from their working relations. The dialogue and exercises on the course may provoke new thoughts, but they know all the time that the conditions for future projects are constructed not here, but there, back in the organization.

This does not necessarily mean that such courses are worthless, but they are limited in their contribution to changes in the processes of meaning-making in the organizations, where the participants work. In other open programmes I have seen the effect on a second part of a two-module set-up. And very often the participants report things that they have started noticing that they have not paid attention to before, because it made no sense. But now, it may be a signal that they can make sense of, and therefore, they notice. And if they act and others

respond, a new pattern of coordinating activities together may emerge and thus create new views of the world, self and others.

As a consultant I can thus see myself as a participant in conversations that may or may not result in new ways of relating, new forms of coordination and at the same time new views of self, other and future. Intervention in this sense is the job I do as a consultant, and research is no different from that. As explained earlier, the methodology of this dissertation is one where intervention also is inquiry. Intervening in a dominant discourse about project management is therefore a resource for me in my role as both a consultant and a researcher. Intervening can be reflecting critically over the discourse:

> *"(We must).. appreciate the power of redescribing, the power of language to make new and different things possible and important – an appreciation which become possible only when one's aim becomes an expanding repertoire of alternative descriptions rather than the One Right Description".*
> *(Rorty, from Gergen, 1999).*

With the term Critical Reflection I refer to the reflexive questioning regarding this discourse: what kind of a world do we create together in this language compared to other languages? (Gergen, 1999, p.62f). Can critical reflection open for project managers a future of emancipation from limiting ways of seeing themselves and their job, and help them create "new visions and alternative futures"? (Gergen, 1999, p. 63). If so, I would find it deeply satisfying to contribute.

Let me give some examples of how I try to work this out in my practice, and follow the arguments of Gergen in relation to Discourse and Emancipation. Four forms of analyses are identified as means to show that realities are created and maintained through language and thus not a reflection of certain truths in the world "out there". These are related to the following foci for critical reflection on discourses:

- Metaphors
- Narratives
- Rhetoric of reality
- Social accounting

1) Metaphors for project management

Metaphors can be a useful focus for reflection. By the use of varying metaphors for a given phenomenon, that one wish to examine, it becomes possible to shift focus and perspective. In my master thesis I examined cognition from differing perspectives using the metaphors of a computer, a hologram and a living system. Social constructionism has pointed to the fact that there is no direct link between phenomena in the world and the language we use to describe it with, and that the meaning of a phenomenon is embedded in the way we communicate and coordinate in relation to a phenomenon, and the meaning is not a reflection of the thing itself.

Lakoff & Johnson demonstrate that use of metaphors are not solely excluded to the conscious use of certain words or of language, but are embedded in the system of constructs by which

we make sense of our worlds (Lakoff & Johnson, 1980). They consider metaphors as the foundation on which our understanding of the world is built.

A mountain can be viewed from east, west, south and north, in the morning and in the evening, and from above. It can be seen as a symbol or a lot of atoms, or the beauty of nature. It can also be seen as an obstacle, if you are in a hurry. What we choose to attend to, how we make sense of it, and what we find meaningful to do in relation to it is something we make up while talking and working together with others. Our understanding is embedded in the relations and cooperation patterns we find ourselves in (Gergen 1999). Some theorists on organizational learning emphasize the function of our "mental models" and that learning and change takes place concurrent with a change in mental models of who, why and what we are. (Senge, 1993)

Thus, we also have the freedom to learn and to change our way of seeing ourselves in our roles. If our habitual way of seeing is disturbed, we may enter relations differently and thus develop new patterns and life forms together with our colleagues and stakeholders. Metaphors have proved to be one of many ways to reflect upon the usefulness of your present, preferred understanding of your role in the world. As an example; let me give a brief example from my practice as a trainer:

Example from practice

The company where I have worked for 6 years as a trainer for project managers has chosen as picture illustrations of the catalogue presenting project management courses pictures of an eight, using this sport as a metaphor. This metaphor highlights some virtues and skills, as the ability to create a common rhythm, following the straight line from start to end, coordination through simultaneity and reduction of individual difference. In my view, it fits very well with the thinking behind many of the company's programmes.

However, the programme I was responsible for was intended to target the questions of dealing with change, diversity and uncertainty. The metaphor of the rowboat was not supporting this particular programme. I have often found it useful to contrast this metaphor with the metaphor of another sport, namely the paraglide. In this sport different skills and virtues are highlighted. The ability to adapt according to turbulences, taking a non-linear flight from here to there, choosing another goal as your view is expanded. Another contrasting metaphor is that of handball. In this game individuality, unpredictability and improvisation are highlighted.

Through work with different or alternative metaphors it may sometimes be possible to question and challenge the One Truth about project management as a question of overview, prediction, planning and control. In some metaphors like the rowboat, adaptation will be seen as a cue for "bad planning" and thus failure and guilt. In other metaphors like paragliding and handball, it will count as a cue for "competent adaptation". So, the kinds of metaphor a given project manager is loyal to affects the sense made of adaptation and thus of his willingness to change an opinion or a decision, and to tolerate deviations from the "truth" about the project. In this way, the play with metaphors may serve as an instrument for emancipation from the tyranny of "one best way of managing projects".

Metaphors and the-talk-of-the-town carry the different meanings of the organizing (Morgan, 1986). Therefore, the exploration and introduction of the different metaphors used to make sense of a particular job in an organization is interesting for the researcher in sensemaking and creation of meaning. E.g. the project manager can see himself as a "plan implementer" who should be proactively decisive and in perfect control and answerable. A project manager with this guiding metaphor will measure his success on the degree to which the project proceeds according to the original plan. For each time he is forced by unforeseen incidents to adapt the plan, he tends to experience "failure" as a project manager in lack of control or power.

Alternatively, he can guide himself by the metaphor of a paraglider for whom adaptations are signs of competence, instead of failure. The paraglider takes off with only a little knowledge and control of the actual route to the destination, but with a sense of a direction. All he has is the wind at the moment, and he has no possibility for hanging or affecting the direction of the wind. The only thing to do is to get on the wing and be ready to utilize any turbulence or wind that will carry him closer to the destination. Maybe, when on the wing, the better overview will provide an outlook which offers even more attractive destinations than the one in mind before leaving the ground! The project manager with the paraglider metaphor in mind is skilled in enacting his environment and using the responses from the world to make sense and adapt the next action to the new situation.

I have seen this on courses and in coaching, when project managers presented for e.g. the complex, adaptive systems dynamics as a metaphor, felt emancipated, almost like if they have had a pain somewhere for years, and suddenly a new doctor tells what it is all about. Emancipation from a dominant and no longer useful discourse can this way have the effect of making a project group "unstuck". (M. Gergen, 2001). Or to put it like Watzlawick: "the problem is not the problem, but the attempted solution" (Watzlawick, 1967). And in this instance, the change of metaphor was the leverage stick, and in similar ways the research in organizations can benefit from focusing on the implicit or explicit metaphors, that structure the sense and meaning making processes. The discussion of metaphors will be continued in the next Chapter on different theoretical perspectives.

2) Narratives of project management

Projects can be seen as a "construction of many stories" (Amtoft, 1994). To be able to find our way, we need to know in what stories or plays we are playing a part or at least expected to play a part. Humans tend to create meaningfulness through stories and narratives:

> *".., we identify ourselves through narration. In this sense, narrative structures set certain limits over who we can be" (Gergen, 1999, p70).*

In western society we seem to prefer certain structures to count for a "good story", and we tend to believe more in narratives following certain rules than true stories not following the structure. We tend to prefer plausible stories that fit our other stories than stories that are based on precise feedback from our environment. As a result it can be valuable for project managers to analyse the stories they take part in - how they are told by stakeholders, customers, end-users and project members. In my work as a coach, I have several times experienced that many project managers view their world in the light of a narrative about project managers

as "lonely riders" or heroes. This narrative seems very appealing for the people who become project managers. Obviously, a narrative like this is applying a role in what a project manager will use as his or her markers for success and progress.

A way I have found useful to deconstruct or to emancipate from One Story situations is an exercise called the moodograph. (Briner et.al., 1990). It is an exercise, where all the participants present, e.g. the project group, draw their "ups and downs curve" on a time line. When all individual stories are put side by side, it will be possible to see the different stories as stories, and not as truths. What for some members count as a peak experience may turn out to be a moment of despair for others. Another way to open up for seeing the narratives as what they are: stories, not truth - is to have project groups tell their way into the project as a story. The experience of differences in narratives opens for dialogue about which stories are most helpful or useful, and not which narratives are the only true one. And thus, critical reflection on narratives can be a resource for opening up for new stories that fit better to the situation and the possibilities.

One way of working with new stories is to create the stories about the project in future terms, customized to each stakeholder. In an industry, this can take the form of e.g. sales stories, production stories, management stories, research stories, quality stories etc. In Chapter 3, I will further describe this thinking of "projects as a construction of many stories (Amtoft, 1994). I have seen this done in a medico industrial company, where e.g. a sales story was a tool for meaning-making in product development projects, where patients could expect to get a better, but also more expensive, product. The sales story is a continuously reconstructed story that can be told by a project member to a patient and make sense and test the consciousness. Any change in specifications, price, time and other features affected the story that had to be re-written. This was an example of "narrative planning" or meaning planning in contrast to action planning.

3) Rhetoric of reality

Discourses of project management can obtain powerfulness in persuasive regards, by implicitly stating that this particular way of seeing project management is more real. This rhetoric is on the one hand what makes it possible for engineers to build ships, bridges and put a man on the moon. For example, would it be crucial for me that you can be trusted if we have agreed to drill a tunnel from two sides of the channel, and that I can feel sure that you have not moved your part of the hole to another place. On the other hand is the rhetoric of reality - often having the function of stopping the critical and creative thought, because it implicitly makes everyone feel that the speaker has access to an objective reality, an objective truth about what this project really is, and really need that the project manager does now. Because the technical sides are best suited by rhetoric of reality, the meaning side is not necessarily the same. Let me give an example:

In Denmark, two major bridges were recently built connecting Funen to Sealand and Sealand to Sweden. The first bridge got it all right about assessing the "real need" or the meaning of the bridge. When finished, even more traffic than expected took the trip across the water. But the techniques went all wrong, budgets were severely exceeded, and it was some years behind the time schedule. The next bridge was a success technically, compared to the first bridge, at

least when it came to being on time and not so much overspending. But the "real need", the meaning of the bridge, was severely miscalculated.

Still, much less traffic than expected crosses the bridge between Denmark and Sweden and vice versa. But after the success with more traffic than expected on the first bridge, it was not possible for the opponents (they were there, yes) to get through with their questioning the reality: that "Bridges are always resisted before, but loved afterwards" (quotation of a former conservative Danish minister of traffic and public installation, Kaj Ikast). The rhetoric of reality had obsessed the field: the lessons from the technical mistakes were learned, and the above lesson was 'made the truth' through the rhetoric of reality by the minister and supporting political parties.

This rhetoric is based on the western assumption that the mind is a mirror of the world out there, and that I am objective, if what is in my mind is "a perfect reflection of the world" – the one with the most precise inner picture of the world "as it really is" is the most realistic and objective. But according to the social constructionist view there is no way to separate the mind from the world - they are integrated parts of the same process. We can talk only about representation in the sense that what we "know" about the world is in the coordination of activity that engages us in the world. This is a view that makes me recall from my master thesis Maturana and Varela´s view of cognition as an inseparable part of life itself. (Maturana and Varela, 1986)

It is tempting to suggest that the rhetoric of reality is present in the discipline of project management today. Determinist approaches assume often that the necessary knowledge can be obtained before the project is started, and that the project is a question of implementing an objective goal and purpose. The social constructionist position will argue in contrast to this view that the act of defining a project cannot be separated from the simultaneous giving advantage to one particular world view. And, accordingly, a certain interpretation of the context of a project is at the same time a construction of a privileged way of talking about the project.

4) Conversational construction of project management

Project managers and team members participate in "multiple and broadly distributed relation-ships" (Gergen 1999). As a result, the discourse will never be fixed. Instead, from moment to moment the discourse is influenced by conversations between different ways of talking and being. As different stakeholders have different expectations when it comes to the result or product of the project, so have different communities also different realities embedded in local discourses about what good project management is. Conversations in the group will tend to make a certain "group culture" a basis for such a discourse, and some ways will feel like the way we do things in this project (Campbell, 2000), by what Bakhtin called *centripetal forces* (in Gergen 1999).

At the same time the ongoing meetings between people from different sections and subcul-tures among stakeholders will from time to time create disturbances in the coordination based on a group culture, which is called *centrifugal forces* (op. cit.). *Social accounting* is a term for the practices that take place to restore order after a disruption. Analysis of these restoring practices will make it clear that a certain world view is taken for granted as a reality through

these conversational practices. In relation to project management we may be witnessing a tendency to restore order in the relations in and around projects through practices that confirm or restate the paradigm of determinism.

Example from practice

I have worked with these issues in groups of project managers, where dialogue with stake-holders that were invited to participate for a couple of hours on the course, took place in front of a group of project managers from other organizations. In this way it was possible to have an observer's perspective on the kind of conversations that restored order. These observers expressed from their not-knowing position their surprise, wondering and reflections and questions in the reflecting team. The project manager and his stakeholders, now in the role as observers, were observing this and afterwards they expressed a deep gratefulness of the insight they had from this very special set-up.

I explain this as a result of the possibility to grasp the "taken for granted reality" that is embedded in the conversational practices of restoring order, when disturbed by questions, feedback and the like. These restoring practices constitute a conversational construction of meaning that functions as the fixed truth on which conflicts could be solved on an "objective" basis. In a world of unpredictability and change, these restoring practices may be turned into a resource in that disruptions from centripetal forces can be seen as occasions for sensemaking, as a possibility for a breakthrough to new understandings of the present situation. Disruptions may constitute to possible ways of restoring the old order, or to use the disturbance as leverage for creating a new order with re-constructed practices.

2.6. Summary and conclusions

Three sources for methodology in the research have been presented and discussed: the reflective practitioner, the action researcher and critical reflection on discourses.

For collection of data (= choice of stories from practice) the concept of the reflective practitioner is the most useful in my situation as both a consultant and a researcher. I use my work experience from my consultancy work as stories, which together form cocktails of evidence for the conclusions and suggestions of this thesis. Some of the experiences are affected by my work on the research, in that my reflections in more than one case have made it imperative for me to give suggestions or feedback to clients, and thus to take part in generating the future of the organizations in a way that I would not have done without the research angle.

Action research is another source from where my methods are inspired. Action research is undertaken as I within my client relations perform some kind of experiment that is an attempt to create new knowledge by improving understandings and the according practices. By taking part and maybe even directing in some processes in the client organization, I have the opportunity to study the effects in a particular context.

For the analysis of data the critical reflection, or discourse analysis is introduced as a method. This method involves three forms, or focus for reflection: 1) metaphors, 2) narratives and 3) conversational creation of reality (or social accounting or collective sensemaking). These ways I have in this section tried to demonstrate that critical reflection on the discourse of

project management can be highly relevant. Also; I have tried to account for the power of the "myth of the good planning project manager" as it may have been embedded in conversational and discursive practices in many communities of practices for decades. When new ways of sensemaking are taking place, new ways of working, managing and coordinating become possible.

As further resources for reflecting, analysing and generating theory, in the next section some theoretical perspectives are presented and discussed. These perspectives will later on be used as tools for reflecting and discussing stories from my experience as a consultant.

Chapter 3: Organizational psychological theory with case examples.

3.1. This Chapter

The phrase in this headline: organizational psychology calls for clarifying remarks. What is organizational psychology? It is a field defined by what is studied and the methods and ways used. In the beginning of the century, industrial psychologists were used by organizations to select among recruits to positions as managers or other key positions. Assessment tools based on psychological theory were utilized to predict the degree of success that each candidate would have in the position in the organization. The focus was in the beginning very much on the individual and on supporting management in predicting, planning and deciding on questions that were related to humans in the organization. The field includes the questions of what is going on in and between individuals, groups and organizations in contemporary society.

In the late eighties the grand old man of organizational psychology, Edgar H. Schein in the preface of the book with the same name concludes that the field is becoming mature and is different from what it was in the beginning of the century in many respects, but especially in the following three (Schein, 1988):

1. Organizational psychology is interdisciplinary
Organizational psychology is not restricted to psychological theory but also reflects the interest from e.g. sociology, anthropology, systems theory, political science. Here in 2004 the list can be extended, as social constructionism, management theory, organizational science, complexity theory, narrative theory, economy, neuroscience, cognitive science also studies the relations between individuals and in groups and organizations. Also this thesis will reflect the interdisciplinary quality of the field.

2. Organizational psychology takes multiple perspectives
Organizational psychology does not exclusively take the perspective of the individual or the organization, but includes several possible perspectives, from which the experience of phenomena can be studied. As was seen in the presentation of the cases in the first Chapter, the question of what is good project management can be answered differently depending on your position or role as an employee, a manager, an owner, a customer, an investor or a citizen.

3. Organizational psychology studies "coping with an ever-changing environment"

The view of organization and groups has developed to seeing it as complex adaptive systems that are developmental and not static entities, to which individuals should be adapted. Developmental psychological theory and complexity theory inspire organizational psychology in the efforts of assisting with useful theory to questions related to coping in general, problem solving and in creating organizations that match the society and world of the 21st. century.

In this Chapter, the theories will be used in a post-modern paradigm. Theories are not selected solely based on the theorists' ability to prove objective truth, but on the theory's potential in relation to creating convincing arguments and stories, that are useful in situations of real life and more than true in a universal sense. Of course, theories that can be proved according to the paradigm of natural science are not ignored because they are seen as "wrong", but focus is on the potential for action of different social meanings and thus use in everyday situations. (Gergen, 2001). Social constructionism will be a kind of umbrella under which different theories are explored, and where the focus is on the question of usefulness of the theories in coping with complexity and change.

Five theoretical perspectives that address non-determinist coping in organizations will be presented, discussed and illustrated in this Chapter. The theoretical perspectives are chosen as possible resources in the development of an understanding of non-determinism in organizations, and in contributing to a useful vocabulary of coping for project managers in contexts of complexity and change. The case examples will not serve primarily as some kind of proof of the truth of the theories introduced, but as demonstrations and examples of the usefulness of the theoretical perspectives in finding new meanings and thus ways of relating in productive ways.

The case examples are all from my own practice as an organizational consultant and psychologist, and are on two different levels. Some of the examples focus primarily on reflection on my position and my role and actions as a consultant cooperating with client systems. In these situations my position is viewed as situated activities that invites the clients to certain positions as well. And for this thesis the interesting question is: what does the relating look like that is capable of being productive in a context of complexity and change? Other examples focus more on the processes in the client system and the emergence of relations that are more or less capable of dealing with complexity and change.

The theoretical perspectives are useful resources in creating knowledge on the basis of practical experiences. The theoretical perspectives have proved very fruitful and are often brought into dialogue in most unpredicted ways. Dialogues between my reflective practice and the theoretical perspectives open up for new ways of entering relations at work. My conversations with my supervisor on this thesis are an example of this:

During conversations with my supervisor exchanges takes place. The most useful exchanges often take the form of the supervisor talking about theory and illustrative stories. During listening to this, some experience, or memory pops into my mind, but I am not sure why at the moment. Telling the story to my supervisor, we together create the meaning of the connection between some theory and some lived piece of action. This connection once established contains knowledge of another kind. It is an act of retrospective sensemaking where the interpretation of the situation I found my self in at the moment, and the scientific kind of

knowledge provided by supervisor, combines into the recognition of the "action knowledge" that was enacted in the episode or story (Weick, 1997).

This way of knowing is not something inside my head, but retrospectively captured as embedded in my actions and coordination with others. Theory as practice, research as relational practice – an inquiry for more and better options for coordinating in relations, instead of a competition of "who is saying it best" (McNamee, 2002).

3.2. Collective action as non-determinist approach.

In the last Chapter, I determined the social processes of coordination and meaning construction as the unit of analysis for the thesis. In this section, I will discuss theoretical perspectives of collective action, cooperation or as it in organizational life is often put simply: teamwork and in the case of collective action between organizations, as partnerships or consortiums.

Organizations are places where people work together to produce outcomes that are meaningful to customers, clients, users and other stakeholders. Collective action in this volume is to be seen as an approach in contrast to individual action, where work is done by the single individuals without interference or involvement of others. It is a perspective building on a tradition within economics where it is studied when people tent and tend not to cooperate in favour of competing. It is in a connotation of working together and not as an instrument for revolting or union organizing principles. In the latter, from a perspective of top-down-control of an organization, collective action is bad. In a social constructionist perspective, all actions that are organised, say take place in the context of an organization, are collective to some extent.

Personally, I often experience the difference between individual and collective approaches in organizational processes. It is in particular the case when I am working as an organizational consultant in difficult tasks with many layers of agendas and contexts and thus a lot of confusion and/or conflict. In these situations it is often a big advantage for us to be together with a good colleague, another external consultant. It is a different condition to be working from a "we" than it is to be working from the position of "I". Especially in stuck situations I have experienced that the "we" can perform a richer repertoire of ideas for going on than if I myself think very hard.

But on the other hand, I have also experience of less successful collective action. In some situations I have felt the "we" as a limitation, as a bond that forced me into loyalty to ideas, that I at the moment felt were inferior to my "own" ideas. In some situations this has led to a competition that did not solve, but deepen the stuckness: now not only is the task difficult, but there is now also a conflict with my colleague to take care of. So, maybe one has to expect that collective action has a great potential, but that it is not a wonder-method or magic stick for all kinds of situations and constellations.

In literature, it is widely accepted as experience-based knowledge, that complex, uncertain and changing tasks are better performed by teams as a collective work process. In the case of projects, it is almost part of the implicit definition of a project that it is done by a group of people. The project stakeholders are in many projects closely related to the project group and

the project manager. Some talk about organizational teamworking and the invisible project team (Briner et.al., 1993).

Collective action in projects can find place in internal relations and/or relations between organizations or departments. Though many aspects of collective action are similar in "within" as in "between" organizations, there are also important differences in the conditions. Building cooperation in temporary teams of members from different parts of an organization is different from building a more permanent frame for collective action in, say, a department. The term "collective action" is taken from a tradition within economic theory, where it is studied when humans voluntarily give up their individual economic optimized interest in favour of some common good. The psychological equivalent in relation to collective action is the study of how humans deal with the dilemma between staying autonomous and able to act independently on the one hand and being part of and belonging to a group or community on the other.

There are also voices that remind us of the difficulties, risks and necessary investments that often are involved when it comes to effective and meaningful teamwork or other forms that we tend to term collective action. Critical voices argue that the benefits of teamwork are overestimated and that the trouble connected to building teams is underestimated. The reason, it is argued, is that cooperation is seen as a positive value and not as functionality when the task is calling for it. That collective action in the name of teamwork actually is a positive value in many organizations can be demonstrated easily if one reviews 20 "corporate values" formulations for companies. Leaders are measured by this dimension and fall short if the department or unit does not demonstrate a high level of teamwork. In some cases, as I have seen in my consultancy practice, lack of teamwork may be seen as a problem even in a department of individually working consultants.

Collective action is often praised because it enables the contribution of diverse talents and capabilities. And this is highly relevant for many project tasks, and enables cross-functional, cross-disciplinary and cross-cultural cooperation. The question in this Chapter is to what extent and by which means can collective action be expected to be a resource for organizations in dealing with uncertainty and complexity and implement non-determinism. Can it be argued that collective action is superior in this respect compared to individually distributed work responsibilities? This question will be discussed in relation to two instances of collective action: as performed *within* organizations and *between* organizations.

Collective action within organizations: the discourse of "teams"

As the main example of collective action discourse the concept of Teams has been chosen. In this section, I will use the method of critical reflection on organizational theory as presented in Chapter 2. The concept of teams can thus be explored as a metaphor, a narrative and a conversational practice for social accounting. First, I will summarize some of the most influential authors and their contribution to the discourse of teams.

Literature review: Teams

Collective action in general in project management theory and handbooks is recommended as a means to achieving better results. It is supposed that if the project work is organised in work

groups that have established common goals, norms and routines it will be more effective in creating collective work products. Many project groups attempt to replace individual account-ability with mutual or collective accountability, and the resulting way of working of this manoeuvre is often called teamwork. According to management theory, teams with high performance have substituted individual agendas and inter-personal conflict in favour of collective goals and interests. (Adair, 1986)

One of the most influential writers and proponents of this view is Meredith Belbin, who is cited by numerous participants on courses in project management for the axiom: *"Nobody is perfect, but a team can be"* (Belbin, 1981). In this popular book, it is argued that groups of people with the right combination of interpersonal skills called team roles will perform better than any other group of people.

Tuckman is another very influential team author. He describes 4 developmental stages, of which the three first: Forming, Storming and Norming will lead a team to the level of Performance, where interpersonal conflicts are set aside or controlled, and the members of the team can focus on collective action in relation to the task and the objectives. (Tuckman, 1965).

The Management Guru Tom Peters has for many years been an advocate for teams as a way to deal with a more chaotic world:

> *"I observe that the power of teams is so great that it is often wise to violate common sense and force a team structure on almost everything" (Peters, 1982).*

In their study of so-called High-Performance Teams, "The Wisdom of Teams", the McKinsey consultants Katzenbaum and Smith, they interviewed numerous managers and employees in companies and organizations of all kinds and sizes all over the world (Katzenbaum and Smith, 1998). In their introduction they state, that:

> *"Teams outperform individuals acting alone or in larger organizational group-ings, especially when performance requires multiple skills, judgments and ex-periences"*   *(Ibid, p. 9).*

So, it seems that the idea of collective action that gives better collective results is widespread. Also from my experience as a consultant, there is a strong belief among managers and project managers in the power of teams. In fact, at times all kinds of stories about organizational problems that I was presented with in my consultancy business had the idea of teambuilding as the solution attached to it. But, it was when I listened too much to that part of the story that I had the hardest time as a consultant! I learned that the term "team" gave rise to expectations that were impossible for any organization to fulfil.

One of the things Katzenbaum and Smith learned was that high-performance teams were extremely rare, and that a lot of people told them that they had serious reservations about teamwork. The reservations reported were related to the risk of:

• being messed up in something that I have no control over
• performance becoming dependant on other's contribution

- an unclear and uncertain approach
- falling short as team member in the close cooperation with open discussions
- others get the recognition for the results
- "political factors" that at the end of the day will count more than results

And they found teamwork in organizations with a strong performance culture, and not in organizations, where teamwork was a positive value for top management, which was surprising for the authors. This suggests that teamwork as collective action is most likely to take place when it is obviously necessary for an important task. But many people are nevertheless most comfortable or most used to individual responsibility for work. And if this necessity is not perceived, most people seem to prefer individual responsibility or accountability (Katzenbaum & Smith, 1998).

Casey takes a critical stance to the universal application of teamwork, and supports the above view in that he states that many teams never will become teams, because what it takes for the members to become a team is so difficult and painful that managers won't do it before they have a very clear perception of the value of it, or that there is no other possible way forward (Casey, 1995). In general, in the view of Casey, the case is that most management groups should not even try to become a team, but should rather coordinate from the positions with individual responsibilities.

The essential question for Casey is: "Does this group need to be a team?" He argues that the answer to this question should depend on two factors: the level of uncertainty and the need to share. Only in cases of complex problems with a need to share a tough responsibility will the investment that is necessary for becoming a team pay off. Only if the group faces genuine, uncertain problems that take sharing of processes of task and feelings, is it worth going for.

Sinclair reviewed the literature about teamwork and found that much of the conventional wisdom of teams was not supported, but often rejected by the research, that is reported. Also, she demonstrates research in workgroups and teamwork that has never got its place in the practice of organizations, consultants and handbook authors. (Sinclair, 1992). She calls the trend the "tyranny of team, a Team Ideology" – that a lot of people are forced into collective action they see no point in. There is in Sinclair's view a positive expectation of the results of teamwork or collective action that has no support in the research, but is rooted in ideology: "teams are good because they are". A critical reflection on this could raise the question about the social accounting practices for restoring order, when teamwork does not fulfil its expectations. Instead of reviewing the assumptions the ideology results in prescribing "more of the same" in the form of a teambuilding experts and sessions.

The ideology is supported and maintained by a teambuilding industry that makes good business on the recipes and exercises that builds on the thinking of the simplistic team ideology. And the result is, according to Sinclair, that a lot of teams are formed, a lot of teambuilding is performed, but the only result is confusion because the ideological basis silences the essential question of the meaning with the teamwork, and thus hinders the conversation about how these people, in relation to this task and under these circumstances, will work most efficiently with the task.

Draeby & Vestergaard ask in the title of their article the question: "If Teambuilding is the Answer, what was the Question?" and reflect critically on the discourse of teambuilding and teamwork. (Draeby and Vestergaard, 1996). They argue that the question of "why" is almost never asked, and that instead it is an implicit and thus unquestioned convention that teamwork is good, and that teambuilding that increases teamwork therefore always is good: More teamwork is always better. An example of this is the 1993 HBR article: "Work Teams That Work":

> *"Teamwork can be more productive, can produce higher quality, and is more cost-efficient than solo efforts. Teamwork also tends to improve job satisfaction, motivation and employee morale"*
>
> *"Here's how to get teams up and running quickly and producing more efficient and effective results.*
> (Montebello & Buzzotta, 1993)

The combination of these two statements can be seen as an invitation to all kinds of organizations to "implement" the "high Performance Team" as a concept that is universal.

This neglects two aspects:

1) The diversity of contexts in which teams are formed, and
2) The diversity of the contexts from which the experiences the recipes build on.

Examples from practice

An example that illustrates 1) is a story from a manager in an engineering company that used team organization extensively when running projects for customers. This manager was asked to form a cross-organizational task force team that should ensure that the company developed an ability to deliver "full-range" projects with several divisions of the company involved. This would demand that departments with different success criteria gave way for certainty in relation to meeting their own objectives in favour of taking the risk of creating a common business with others.

The example of 2) is that a team concept that builds on experiences and virtues from a rowing boat, we must expect, differs substantially from the team concept building on experiences and virtues of a basketball team. Especially when it comes to the level of individual freedom and initiative expected from the members. Accordingly, different team concepts are expected to fit in different contexts like e.g. a team of accountants and a team of public relations professionals.

Instead, Draeby and Vestergaard suggest that teamwork is constructed in a dialogue based on the question "why and how should we be a team?" The authors argue that the idea of a "super team solution" that is a recipe for all kinds of teams is a chimera. Teams have become the common sense, that has a self-evident character and the most important questions are therefore being tabooed (Hey, you are not a team player now!) Under these conditions, teamwork is not miraculously emerging out of more or less creative teambuilding exercises and presenting the "best practices" of teamwork. Instead, collective action in the form of

teamwork is a result of a local negotiation or social construction of the meaning of working together in the context of the task, the circumstances and the people involved. (ibid).

Another relevant perspective comes from Uzzi, who focus on the risks of so-called "over-embeddedness" that may hinder innovative or adaptive action in favour of following the pressure for following the social norms in the group. (Uzzi, 1997). A similar point is made by Janis about the phenomenon of "Group-Think" where groups take excessive risks based on illusions of cohesion and consensus, that are based on threatening or excluding dissident members of the group, that questioned the assumptions, reasoning and conclusions of the group (Janis, 1989). Sherif´s famous experiments and theories about a so-called autokinaes-thetic effect can be argued as supporting evidence for this perspective too (Sherif, 1936).

Concluding remarks: collective action inside organizational teams

No doubt, that collective action in the form of teamwork is powerful in a lot of cases in relation to dealing with complex projects. Complex projects and tasks call for a broader range of competencies and approaches than more simple tasks. Teams can combine efficient cooperation with learning, and when they work they are superior according to individual work organization.

But in the previous Chapter I have tried to demonstrate maybe not all work products are achieved most effectively through collective action. Furthermore, it is suggested it should not be expected that more teamwork always will lead to better results. It has been argued above, that in some cases the investment is too high for the cost-benefit to be satisfying. And in other cases, too much embedding of the talk, decision and action in the story of the project team can result in a decrease in flexibility and innovation, which is the opposite of the intention.

The discourse in organizations about teams as organizational form is very strong in favour of teams as an almost universal recipe. Maintained by attractive metaphors of Dream Teams, appealing stories about extremely high performing teams, and a restoring practice that never include questioning the relevance of being a team. A situation that by some researchers is called a situation of tyranny, where the sceptical are not listened to or are not allowed to speak if he or she wants to stay in the team. An open-minded dialogue about team or not is thus very difficult. This discourse analysis indicates the need for going deeper into the question of when and how collective action is possible and relevant as a resource in project work under high complexity. We need some theory about the way individuals are able to form common business in a team, and when they prefer individual responsibility. Before this, I will turn to the other type of collective action that is to be explored here, namely collective action *between* organizations.

Collective action between organizations: e.g. consortiums, cartels, partnerships

The origin of the present focus on inter-organizational cooperation is efforts made in the field of so-called Supplier Chain Management for production companies. These efforts were made to make an end of frequent incidences where relations between a company and its suppliers were harmed by the way difference of interest was dealt with. In civil construction projects there are experiments that focus on improving cross organizational cooperation between owner, engineering and entrepreneur organisations. Cross-organizational service improve-

ment projects in public organizations and service sector organizations are another example of the present focus on creating conditions for some kind of collective action in cooperation between organisations.

Collective action in emergent conditions/relations

Many (project) managers are in a situation where the conditions of a task (e.g. a project) and even the meaning of the task, may change significantly during the life span of solving the task. Collective action is affected by this change, and the purpose of introducing this perspective is to discuss which conditions count for creating flexible collective action in an effective way. This is an issue of great importance in organizations today. Many projects will depend on cross-functional cooperation to succeed – and many projects also depend on cooperation between organizations (for example in IT projects and building projects).

Introduction to case story from practice: the A-B Game

The problems of collective action in social systems have for many years been studied by game theory, namely in particular by the game of the *Prisoner's Dilemma*. In this rather simple game, it is possible to study how people tend to act when disposed to the dilemma of deciding either to act for the common good or for your own projects. (E.g. Watzlawick 1967, Rijsman, 1987, Hardin 1982). Theoretical models of decision making often postulate that people act in their individual interests, but reality often does not reflect this theory (Hardin, 1982). In this section, I will introduce the game of prisoner's dilemma and especially I will show how I have used the game in a certain version on training courses for project managers to generate a performance that can form a basis for discussing collective action in uncertain and unpredictable conditions.

In my work as a trainer for project managers, I have adapted the principles of this game in a certain way to try to create a virtual setting that simulates some important characteristics of stakeholder relations around a project, namely the uncertainty principle or ambiguity in the relating to project members, stakeholders and other interested parties. (Battram, 1998).

Stakeholder relations are, like any relations, not a "thing" but a living system always "on its way to becoming something else". (Quotation by memory of John Shotter). Co-operation from external agents (customers, sales departments, quality departments, etc.) can never be presupposed, regardless of how rational and positive the project is in the eyes of the project manager and his group. A project manager's hope to succeed is contingent on the stakeholders continuously finding the project itself, as well as their own participation (Self-actualisation) in it - meaningful.

If this is not the case the project will sooner or later experience a backlash of some serious kind: (project members get other assignments, some necessary facilities are no longer available, resources and other immaterial kinds of support are withdrawn etc.). Consider this example from a project manager I know:

Example from practice

A project manager worked on a road safety project for increasing safe driving by drivers of company transport: trucks, buses, pick-ups etc., in a region of Denmark. The project involved a contest that was broadcast through mass media and involved the local police offices in the role as referee in the contest, giving rewards to the best and most polite drivers. Thus, support from the different police stations was crucial for the project, as they were key stakeholders. The project manager directly or indirectly worked for this support in different ways and at a certain point the campaign was launched.

Unfortunately, one single police officer was not interested and did not support the participation of the police forces. Even more, he had a personal relation to a journalist on a local radio station. This relation he used to air his resistance and his perceptions of the "silly project". This was heard by other radio stations, the national broadcasting and the printed media. There was an urgent call for damage control on behalf of the project manager, if the project should not be severely harmed – or even terminated!! 99% of the stakeholders may be supportive, but if only one is neglected, the risk may be total, almost like in the Greek myth of Achilles and the mistletoe.

Sometimes, it is said that the Effectiveness of a decision is equalled to the Quality of the decision content multiplied with the Acceptance level of the involved parties: $E = Q \times A$. If the acceptance is zero, the effectiveness will also be zero, no matter how genius the decision is, objectively. In relation to collective action in projects between organizations this is also relevant. If 1 expresses that a stakeholder experience meaning and 0 expresses no meaning, then project success probability is related to multiplication of all stakeholder meaning scores. Which means, that if just one stakeholder experiencing no purpose with the project, the result is 0 ($1 \times 1 \times 1 \times 1 \times 0 = 0$), like in the example above.

Case Story: A-B Game as an illustrative learning experience on project manager course

The game is introduced as a series of choices that have to be made in each of 4 groups simultaneously. The choices are either red or black (I never use the dichotomies of punishment/reward or cooperation/conflict to avoid that positively connoted terms may affect the choice). The instruction I give is deliberately equivocal: make decisions so that you have as many points as possible. Points are earned through decisions on behalf of yourself and a partner group.

Two groups are interrelated and two other groups are interrelated in the way the figure below shows. The setup with two pairs of interdependent parties makes anyone simultaneously an agent, a stakeholder and an observer of the other "pair".

	B: red	B: black
A : red	+300	- 100
A : black	+500	-50

Fig. 3: the score table from the perspective of A.

I put on a flip-chart the score-card, so that all 4 groups can follow the rankings. Because there are two "strings" of interrelatedness, A-B and C-D, there are, under the condition of an equivocal instruction, three possible interpretations or meanings of the game. The first is the understanding that "this is a competition between 4 groups, where the winner is the team with more points than the other teams. The second interpretation is: "This is a competition between two teams of two cooperating sub-teams". And thirdly, the game can be interpreted as an organization of 4 teams working together for the common good: as many points in total as possible. Fourthly, one should probably add: "This is one of these consultant games, that makes me feel like a donkey if I don't figure out how to act independently". At the same time as the definition of the game is chosen, the definition of self is also chosen.

The most normal way is that one group out of four chooses black and the others red. The consequence is that a comparison between the two strings is exaggerated. Two different situations or relations have emerged. After a couple of rounds I change the "organization" so that A and C (and B and D) are interrelated. My intention is to give the participants an opportunity to experience that in an organization, everything is observed and that nothing is innocent in the sense that you cannot escape the perceptions of your previous actions. As the game continues, I change the rules for earning points. A couple of times representatives for the groups can meet and talk about the future of their cooperation.

After the game, we discuss project management and developing relations. The game is not used to "prove" that cooperation is better than competition. It is neither an exercise to practice negotiations skills. These two uses have been widespread. Instead, I use it as a common experience that can be helpful for generating a dialogue about the sensemaking processes that are involved in building relational practice and collective action. I have used the game with the intention to demonstrate the following characteristics of organizing/relations and as a starting point to a dialogue with the project managers, relating this experience to their experiences from everyday projects:

1. The context and the meaning of relations are open for innumerable interpretations.
More than one interpretation is possible, and there is no "One Truth" to be found. In projects in organizations many new relations are established, and often they will have the same "open" quality: will our relation be more cooperation or competition? For example, project groups with members from more than one department will often elicit this double quality: that the relation is both at the same time. And there is no place to go for the "right answer: if you ask your line manager you risk getting one answer - and if ask your project manager, you will probably get another. (If they do not answer politically correctly). This does not necessarily mean that this is very problematic. In the game, this is explored, and I answer questions like: are we together or against each other? With: It is a game about getting as many points as possible. Which is the same as not answering - or answering like a line manager.

2. Relations are created through coordination and actions are never innocent.
Actions have consequences and cannot be "undone" – but they can change forms, there is always more than one way to go on that is possible. Maybe with the comment that it is an experience that many project people refer to, that trust can be different to get if it is not just there from the first minute. But as hard it can be to create it, it is as easy to lose it: only one step wrong may create distrust for a long period. And project managers that are not trusted cannot succeed with projects, because they are non-deterministic processes.

3. Relations are not entirely chaotic, but not entirely orderly either.
In some cases, relations show orderliness; in other cases they show signs of confusion and disorder. The process is defined by the parties themselves by their mutual actions and interpretations – and simultaneously the process construct the way they interpret their world and their own role.

4. Relations are living systems - always on its way to becoming something else. Organizations are networks of relating. Relations exist because both (all) parties act in a way so that both can maintain identity and the relation continues.(Shaw, 2002) Both sides are responsible for the relation and only the parties themselves can define the meaning of the relationship, which is part of the definition of relational responsibility (Gergen and McNamee, 1998)

5. Images of future affect present actions and decisions
The term: the shadow of the future - is introduced as an explanatory construct by Battram. (Battram, 1998) The term refers to two aspects of uncertainty at the moment of building new, coordinated relations. Firstly, the ideas of the future of the relationship affect the choices of the present, and secondly, the present choices of action (red or black) will be part of an ongoing process, by which future possibilities and limitations are constructed. When the involved parties are in a relation with uncertainty, the choice of action is dependent not only on the rationally perceived outcome, but also on the self-valuing that each possible way will include. An important theme in this situation is trust. Do I trust the other parties' assurance that we will go together and not fall back on playing safe, and "play the black card?"

6. Interpretations of present and future are mutually related.
I have discussed and refined the point over numerous discussions with participating project managers on courses. Relations in organizations nowadays are both-and in their character. Contest and cooperation co-exist between the same people and the interpretation is open, both competition and cooperation are valuable mechanisms and organizations need both qualities.

The effect of the game for the rest of the course is that "black-black" and "red-red" patterns of coordination becomes meaningful metaphors, when working with conflicts, difficult situations, negotiations and resistance.

Reflections

This particular game is very interestingly also used within very different scientific traditions. The game is used in rationalist thinking, demonstrating that we do not as human or human agents (groups) make decisions as rational machines. Even without complexity, uncertainty alone seems to count for choices that are irrational or is another rationality that the "economic man" theory prescribes.

Rijsman points to the question if there are other goals that people want to achieve in the situation where they can choose to cooperate or not to cooperate (Rijsman, 1987). There may be financial as well as non-financial factors at stake. This is demonstrated through a comparison of the behaviour of the players in a game where you are *not* aware of your interdependence with another player with the same game, but with the only difference that you know that you *are* interdependent with another person, and who this person is. In the latter case, people choose cooperation less. The reason is, according to Rijsman, that cooperation on the conscious level includes that humans are making meaning of the relation to this particular person. It becomes an issue how this relation is perceived until now, at present and how it is seen to continue. There is a symbolic interpretation that is affecting the decision whether to cooperate or not. The definition of the relationship as a contest is suddenly possible as an alternative to the definition of a relationship that is rewarded most on the rational, economic side.

The social psychological explanation of the choice of the (seemingly) irrational choice is seen as a result of human need for self-actualization. This need depends on a positive comparison with others and recognition of that. The possible risk involved in choosing to cooperate is also a risk that is both rational-economic (the other takes it all) and psychological (I will look stupid or wrong). The possible gain is also both rational-financial (we share the bigger cake) and psychological (we can trust each other in future projects):

> *"The work of people in work organizations is not just the production of economic utility, on the contrary, to the extent that people are aware of their relation with others, work become a cue of Self, and the mayor dynamic for work becomes Self-actualization. Thus, the management of work should not deny this social meaning of work, but exploit it, and make it productive instead of destructive". (Rijsman, ibid.)*

In relation to non-determinism in project management, the relevance is clear: when something changes in the situation or something unexpected happens in a project, the basis for collective action is threatened: "will the others take advantage of the new situation at my expense? This is a question of trust, as Watzlawick states in his analysis of the same game:

> *There is in the nature of human communication no way of making another person a participant in information or perceptions available exclusively to oneself. The other can at best trust or distrust, but he can never know. Watzlawick, 1967)*

Watzlawick argues further, that there is in the game conditions for a *predictive paradox*, and the argument goes like this: If A and B starts e.g. with playing the black card, both of them, they choose the safest decision. They will not "lose" compared to the other player. On the other hand they could have had much more if the other player had chosen red. Maybe after a few rounds both agree to play red and the outcome is better for both, and still no one wins over the other. The paradox is now, that this can only happen because they trust each other – they cannot know. But as soon as the red cards are played, the situation is that this is no longer the best situation for yourself: if you play the black card now and the other plays the red one – you will get maximum at the expense of the other player. And maybe you think that your counterpart thinks the same: trust creates distrust - cooperation creates competition. (Watzlawick, 1967). Maybe this is why it is very rare, even in the course situation, that two groups are able to stay in red-red (win-win).

On the other hand it can be argued, as does Czarniawska-Joerges, that it is not shared meaning, but the experience of collective action that it is crucial for collective action to occur (Czarniawska-Jorges, in Weick, 1995). Many versions of what is the meaning of a collective action can be the case, and collective action is still possible. People in organizations can actually help each other for different reasons, but all perceive that it works for all and thus is worth continuing. Patterns of actions that are aligned are as collective as shared meaning. Collective action does not presuppose shared meaning that is a very demanding quality to obtain. This is interesting in relation to conventional discourse about e.g. project management, where consensus is seen as a prerequisite for effective project cooperation. Instead, it can be expected that projects are possible on the basis of sense made in a context of aligned or coordinated multiplicity. Collective action theory may suggest a broader variation in means for efficient collective action as a non-determinist strategy for coping with complexity.

Collective action and the question of trust

Aligned or coordinated multiplicity is possible if the differences in interests and perspectives are not solely giving rise to competition but also to cooperation, which involves mutual trust. Trust can be defined as a logic that can characterize a relation: P trusts O = P thinks that O will not do anything bad to P. (Smedslund, 2004, p.145). The problem of trust comes into the picture because the complex projects in e.g. building industries cannot be foreseen, and that the best way cannot be determined beforehand. If that should be possible, the project plan had to reflect, or double up, the complexity of the project context. Instead, the project manager has to control the process on basis of success, which can only be known in retrospect. Without trust, projects would never go beyond the planning stage.

Luhman wrote already in 1965 about trust as a mechanism for reduction of social complexity (Luhman, 1965). In this analysis trust is seen as a function, and not as constituting a positive or negative value. Instead, he analyses trust as something that in some situations are functional and that mistrust is equally functional in other instances. He gives the example of traffic that is based on trust in relation to other people driving around. If there was no trust, there would not be very much movement in the traffic. The example illustrates the quality of trust as including a decision to act in a certain way, where the benefit in the case in success (no accident, less time spent on road), may be less than the cost in the case that the trust is broken (car accident, possible injury to body). Trust is therefore not the same as hope, because trust

involves a decision and action rationality where the trusting person transforms the experience of risk to indifference in relation to some of the many future possibilities. The trusting person is in other words reducing complexity through an inner certainty where some of the risks are not taken into consideration anymore.

Trust is to be controlled, though, and this is according to Luhman something that has to be based on a continuous assessment of what follows from having trusted someone, to what degree there is success in following the intention by the trust. The trusting person thus makes sense in retrospect by selecting cues (feedback from the trusted) are not indicating that the trust are violated. The trusted person enjoys certain goodwill, in that some experiences that may be seen as negative for the relation can be interpreted as positive or tolerated without the trust being withdrawn. There is in a trustful relation a threshold that has to be defined and known if it is to have the function of reducing complexity with simple means, as is the case when a lot of possibilities are left out of consideration when trust is maintained through continuous respect of the threshold. (Luhman, 1965, p. 67).

Summary:

This section has dealt with the question: How can collective action be productive as coping approach in contexts of uncertainty, complexity and change? We have in project organizations two distinct ways of working cooperation that are important factors for project success: in the project team and in the bigger team of stakeholders. The single actors in this picture choose to continue the collective action or to go for his/her own interests, depending not only on economic factors and rational self-interest, but also on how we perceive our future self-actualisation. The perception of possibilities for self-actualisation depends on the meaning given to the relationships.

The making of meaning in stakeholder relations is continuously emerging and reflexively connected to the meaningfulness and the risk perceived in collective action. A stakeholder has to have trust, because non-determinant projects never promise anything 100% - the stake-holders cannot know because often, the project manager doesn't know him or herself.

In relation to building productive relations in and around a project, the meaning of the relationship and the definition of Self it involves is a main issue for a project manager. One could expect that projects that are exposed to complex change are better off with project members and stakeholders that have been part of the social construction of meaning by doing the project, and being a part of it personally. The discussion in this Chapter suggests that the financial, rational side of working will not be sufficient for the individual who is exposed to change, re-doing work that is no longer relevant and so on. A bit of immunity against loss of engagement and faith in the project can be created in social construction of meaning processes.

Finally, it is argued, that coordination and shared meaning work well together, but that coordination also can be based on differing meanings, when the parties make sense of aligned actions. Until now we have focused on decisions of the individual, but another interesting aspect is that of the uncertainty quality of cross functional stakeholder relations, and the reflexivity between collective action and collective meaning or sensemaking.

3.3. Non-determinism by collective meaning making

This section.

In this section the question of determinism and non-determinism will be explored from the perspective of sensemaking and meaning making processes in organizations. The perspective represents the standpoint that the way people make sense and the meaning they construct with others is crucial for their ability to navigate in a world of complexity, uncertainty, diversity and constant change. The focus will be on the nature of these processes, and on the linking to the processes that structure works in for example projects. In other words sensemaking and meaning making is explored because it has potential explanatory power in relation to the question of determinism and non-determinism in organizations. Two theorists will be most in focus: Karl Weick and his work on sensemaking in organizations and Kenneth Gergen with his work on social constructionism.

Literature review: Weick and sensemaking in organizations

Sensemaking has been explored especially by Karl Weick and will be dealt with in the first section, because the points to be made later based on social constructionism and sensemaking on the collective level build on the theories of sensemaking. In the following, I will summarize the 7 properties of sensemaking as they are described by Weick (Weick, 1995, p. 17ff). Sensemaking is understood as a process that has the following characteristics:

1. Sensemaking is grounded in identity construction.

We meet situations that we make sense of, and the sense we make will be grounded in the "I" we become according to the sense we make of the situation. We are "multiple selves" in that we can define ourselves in different ways, and not only in one singular way. We define our identity in the way we interact with others and the situations we meet. When we interact differently, we change the definition of our identity at that moment. Therefore, we make sense of situations and define who we want to be in the same process: "What the situation means is defined by who I become while dealing with it or what and who I represent" (Weick, 1995, p. 24). When we work together on e.g. a project we create the economic result, but we at the same time define our identities through the communication and coordination that is project collaboration.

Case Example: previous Chapter on collective action: Rijsman´s point about the influence on deciding whether to go together or individually, of the perceived self-valuing: the person you become on the way through the project. The sense we make of a situation is connected to the self we choose from our multiple selves.

Psychologically, this is an interesting quality of sensemaking in relation to non-determinism. It adds to the uncertainty with which we necessarily meet others with e.g. when it comes to their support or resistance to our ideas: maybe, the Other will understand my suggestion rationally and agree that it is a good idea - but at the same time he/she resists because he/she does not like the person that he/she becomes while realising my idea.

2. Sensemaking is retrospective

The meaning that we define of a situation is a result of the kind of attention we put on it, as we saw in the first paragraph. We perceive things that already are past experience. We therefore must "do" to make sense: "How can I know what I think before I see what I say?" The exception from "being behind" is that we live our "stream of consciousness". As soon as we make sense and reflect upon what a situation means, we build upon a lived story that is no longer present. For attributing meaning and making sense of a situation we need to make some punctuation, and see the response on what is said or done, before we can agree on the meaning of it. We cannot tell from the beginning of a situation what the meaning will be, because we first have to wait and see how the reaction is from the others involved and then see how the situation can be made sense of in a way that is meaningful in relation to my plans, intentions and projects. The sensemaking in retrospect in this way is biased towards connecting the elements of an episode in a way that makes the end result explainable and useful. This is known as "hindsight bias": that we tend to overestimate the inevitability of the sequence of events as it turned out.

Case example: "Fake–it while you make it": an article that argues for an approach for software development, where the effect of retrospective sensemaking is emphasized as a tool for generating support and buy-in to a project.

<div align="right">(Parnas & Clement, 1985)</div>

People who know the end result tend to have this hindsight bias. Also, when a group review a process, e.g. a phase in a project - and know the outcome, let us say that they have a very good result – they will assess the process far more positively than if they have the feedback, that it was not so good. So, maybe so-called high-performance teams are not so because of a certain way of working but simply the other way around: that good results tend to make us assess our patterns far more positively.

3. Sensemaking enacts sensible environments

Sensemaking is placed in the reflexive relation between action and context. An action enacts a certain sense of a certain situation/context. This means that we in organizational life partly create the environment of our actions in and by our actions. Like what improvisational actors and legislators do: create new, future features of the environment that did not exist before. Episodes are made sense of when we enact a meaning: my daughter says: "I don't want to go to school today", the sense of what kind of context it is said in is uncertain. It is up to me to define it through my response, that will enact the meaning of the situation as e.g. 1) a moral one: school is important for your whole life or as 2) a sharing episode: I know the feeling.

The enacting property of sensemaking emphasizes that environments or contexts are not things or objects but are constantly created through our actions. Episodes and situations are performed by us, and our future constraints and opportunities are created in the same action. In relation to the subject of this dissertation: determinism and non-determinism in organizations, it is interesting to consider the term that Weick uses about the interdependency of action and context: co-determinism: our expectations to e.g. a project forms a context in which certain actions are plausible, and which again enacts the environment.

Case example: This is the mechanism of a self-fulfilling prophecy that is also seen in organizations that train employees in different cultures (Swedes are like that and Americans are like that) and which may have as its unintended side-effect that the expectations created are resulting in actions that enact a situation (scene) where the stereotyped role of the Other (Swede) as is difficult to avoid (Trompenaars, 1997)

4. Sensemaking is social

The social dimension of sensemaking is not simply the same as shared understanding and social construction. The social quality of sensemaking is not dependant on sharing but is oriented towards creating alignment – or in the words of Blumer*:*

> *"...that sensemaking is social due to making relations workable".*
> (Quoted in Weick, 1995)

Shared meaning or understanding is one possible basis, but less will do: sensemaking is also social when understanding is only partly congruent views, meanings and understandings (Weick, 1995, p. 42). Social action and cognition are as closely related as two sides of a coin. When a situation makes sense, we have found out how to go on - in the words of Wittgenstein.

Whenever we make sense of our situation and what action to take, we take the other's situation into account. It may be others that are present, but also others that are not present but who we imagine because we know that they will have some interest in what sense we make and what we decide to do. Managers can in their sensemaking roles be seen as "conversational authors, able to argue persuasively for a "landscape" of next possible actions, upon which the "positions" of all who must take part are clear" (Shotter, cited in Weick, 1995, p-41). The sense we make is never solitary, but always contingent on others – even monologues have audiences.

Case example: A senior project manager from an international pharmaceutical company that I interviewed about project manager competencies emphasized among other virtues the network of people from different parts of the organization and the environment. These internalized others functioned in this person's view as a basis for sound judgements of ambiguous and complex situations.

5. Sensemaking is ongoing

In organizations (and in life in general) we are in the middle of things that we engage ourselves in and try to make sense of by extracting cues and punctuating moments and episodes from the continuous flow of life. If we work on a project, we single out those aspects that have some relevance for the possibilities and limitations for continuing our project. In this way, sensemaking never stops or begins but is as ongoing as the life in organizations, which is in a constant flux and not suited to be interpreted into permanent boxes and categories.

Because of the constant flow, we are continuously interrupted when things take a turn we could not predict. The interruptions are the "proof" of the ongoing quality of sensemaking,

because if we only made sense in certain situations, there was nothing to interrupt. Ongoing-interruption quality is connected to the role of feelings and emotions in sensemaking, because interruptions cause arousal that lasts until the interruption has been made sense of. The arousal varies according to size: if the interruption is at a minor level or at the level of the entire project, and it varies whether it is seen as something that makes the project termination easier or more difficult.

Weick´s point is that when we are emotionally aroused in the sensemaking in relation to an interruption we ask: "What is going on here?" and we tend to use experiences that are "mood congruent". We tend to make sensemaking difficult because we recall a pattern from the past, - not because it looks the same but because it feels the same. (Weick, 1995, p. 49). All episodes are possibly retrospectively laden because of mood congruency and all episodes may have an effect on future sensemaking occasions. And on the other side, the sensemaking does not stop, because the episode stops - people may return to a sensemaking effort later on, where there is another perspective or another level of knowledge. It is in this respect that sensemaking does not have a start and an ending in a final sense, but is ongoing. Often, we forget this, as Weick also reminds us.

Case example: On a course for project managers I was to take over the role as educator/trainer in the middle of a week-long course. We had planned the handing-over to take place en the afternoon the third day when a group exercise was being performed. This group exercise was a little project where the groups should develop a beer crane, following some criteria and instructions. My colleague and I should join the process as facilitators of a review meeting in the project groups. The review meeting was scheduled to last 2 hours altogether, including an introductory presentation on review methodology. It turned out, that we (the consultants) had misunderstood the conditions, because the project groups had not been working for more than 40 minutes and had only been working on the initial specifications and setting goals. We were anxious if a review could demonstrate its value after so short a working time, but nevertheless we decided to try it out.

The review process was performed as a series of interviews of the project members about their observations, feelings and reflections during the process so far, and in the second interview round about their view of the next phase of the project. To the participants (and our) surprise, the review process revealed a rich sensemaking activity during this short first phase of the projects. During the interviews it became clear that the participants had attended to, punctuated, extracted cues, and formed (and enacted) assumptions on a broad scale of contents. And the sensemaking had been drawing on interpretative resources from the past, and had been focused on the possible consequences for the future of the project. The story demonstrates that sensemaking is ongoing, but often unnoticed if there are no major interruptions.

6. Sensemaking focuses on and is focused by extracted cues

This property of sensemaking is the one that is most closely related to non-determinism in the writing of Weick. From Shotter he has fetched the metaphor of the seed for the cue that is extracted from the world. The cue in itself is setting a direction and excluding some directions for what sense to be made, but there are still numerous ways that the meeting of the cue with

the general overall understanding of situations can be connected and thus in the range of possible meanings the sensemaking can result in.

The metaphor focuses our attention on the fact that there is a good deal of non-determinism in this process, like there is non-determinism in the processes that turns an acorn into an oak tree. The acorn ensures that there is not a coco-palm, but an oak-tree at the end of the process, but the number of branches, the actual shape and the height are a result of many factors in a complex interplay over time. In the same way the cue that is extracted is extracted dependant on the definition of the context, and the interpretation of what the cue tells is dependent on the definition of context. As a result, it can be expected in organizations that organizational norms and politics give rise to different interpretation patterns and politics in different domains of the organizations. Different cues will thus be extracted from common situations, and different interpretations will result from making sense of the same cues.

Extracted cues function as reference points that make it possible to connect different aspects of a situation in a meaningful way, and thus create a ground for action. This action is an act of faith that has as its consequence that what was assumed is now *enacted*. According to Weick, project plans and strategic plans function this way: they generate enough faith and confidence in a certain view of the situation that people start moving, and thus generating additional cues, so that the sensemaking gets a continuous stream of raw material, so that the world view can be modified if necessary (Weick, ibid.). The example of the military unit who got lost in the alps and found their way out, thanks to a map - but a map which afterwards turned out to be a map over, not the Alps, but the Pyrenees!. Faith and enactment together form something similar to a self-fulfilling prophecy in the response to perceived changes in the environment.

7. Sensemaking is driven by plausibility rather than accuracy

> *"The sensible need not be sensible, and therein lies the trouble".*
> *(Weick, 1995, p. 55).*

The study of sensemaking offers a perspective from which inaccuracy of our perceptions are not seen as an error, but as a deeply functional approach to intelligent action in a world that is open to multiple meanings. The first functional aspect is that we filter and distort what we see because we otherwise would be overwhelmed with data. We would never finish the information processing if we "took in" all stimuli that we could possibly take in and thus we would never be able to act on the basis of the accurate picture of the situation anyhow. This is similar to the "infinite regress" that was an ever-present problem of artificial intelligence in everyday situations.

Another functional aspect is that we by suspending accuracy as the only criterion make it possible to act despite the fact that all situations are open to multiple meanings and interpretations. When a cue or reference point is interpreted differently in a project group, it is a dead end in many situations to wait for further action until the one right interpretation is there. Instead, the perspective of sensemaking offers the possibility of making sense on a more provisory basis, with plausibility as the criterion, which makes it possible to start acting and then eliciting additional cues to be made sense of. Brunsson distinguishes between an action rationality that is about knowing enough to start and knowledge will follow. And decision rationality, that is about generating true and accurately based decisions and good action will

follow (Brunsson, 1985). This distinction is closely related to the distinction between determinism and non-determinism.

A further aspect is related to the need in organizations for putting speed over accuracy as a criterion for good action. It has the consequence that plausibility is given priority over accuracy as the basis for sensemaking in relation to organizations. A quick response is enacting an environment and thus affecting the environment. In contrast to an approach that postpones action until accuracy in the sensemaking is obtained. Accuracy that in organizations is highly temporary, because the world is in constant, complex change. Thus, according to Weick, accuracy is nice but not necessary for sensemaking in organizations. Instead, what is needed is something that can create plausibility and that is for example a story, a myth, metaphor, platitude, fable, epics and paradigms (Weick, 1995, p. 61).

Sensemaking and non-determinism in organizations.

In the study of determinism and non-determinism in organizations in general, and in the case of project management in particular, it is a story about the faith in the normative, rationalist model for making good decisions, and the faith in the good actions that follow. The description of the properties of sensemaking in this section is another part of the story about the basis for effective action in organizations and in projects.

The "planning" school of project management for example assumes that good projects are the result of good planning. Everything that goes well is ascribed the good planning, and what went wrong was seen as a result of poor planning. The analogy of artificial intelligence is obvious: where cognitive science talks about the computational paradox: that every new AI-model always shows what cognition is NOT, by simulating our best model. The cognitive science does not reject the idea of finding the rules inside, but keeps on refining the model, because now another hole in the cheese has been identified. In organization theory and in project management theory in particular we may talk about a planning paradox: if my planning methods do not capture everything that happens afterwards, I have learned something about where to refine my planning method. Project management books recommend so-called *reverse engineering* as a discipline at the time of finalization to conclude where the actual process deviated from what was planned. The eventual gaps are used as a starting point for learning about how to predict better in future projects.

Case story: installing non-determinism in an organization: sensemaking

This is a story from my consultancy business, where I was in the role of a consultant assisting another consultant in a process of organizational development. The goal of the process was that the organization gained the ability to develop their services and routines as an adaptive response to changes in their environment. My role was to facilitate learning for the members of the project groups on a series of meetings for all three project groups. The story illustrates the role and the quality of sensemaking in development projects.

The management had set up three development projects that from the beginning were thought of as "playgrounds" for the members of the project groups where they could learn project management competencies in practice. The project groups started out enthusiastically and with great visions for a changed organization. However, after the first meetings with the

steering group, the enthusiasm fell, namely after finding out that the steering committee (The management team) were not that ambitious.

After that, the sense that the group made of this was that they had to lower their level of ambition as one thing, and that they would change course for not only describing things and suggestion changes, but also trying some aspects of their ideas out in practice. They switched from pure decision rationality to partly action rationality.

Some of these experiments went surprisingly well and gave the groups some of their enthusiasm back despite the fact that the projects still were less ambitious than in the outset. The sense made by the project groups was that there was an OK trade off between ambition level and practical and concrete results from experiments.

But enthusiasm fell again after a meeting with the steering committee, where they were told that they were not ambitious enough, and should not act so self-inhibitingly. The project group was astonished by this feedback, because they remembered that the same committee had been very active in the outset, where the ambition level of the project group actually was high.

During my dialogue with the group about this sensemaking occasion it became clear that what they had not noticed was that the results of their experiments were noticed by management too. The sense that management made of these cues was that they became not so afraid of change to go astray. What followed was more confidence in the potential for change in the organization, more trust, and – a higher level of ambition. So, during the project lifetime, the ambition level of the project groups fell, due to sensemaking based on management feedback. And management ambition level rose, due to sense made of feedback from the organization that was instigated by the experiments of the project groups.

Finally, one last episode of sensemaking should be mentioned from this story. At the facilitation meeting this story was told and reflected upon. The reflections took off because the project group felt that they had been a fiasco and that they had been treated unfairly. The reflections made an alternative meaning: that they had been very successful in generating a potential for change, because they had provided the cases that resulted in management courage in relation to changes that almost everyone was waiting for. With this change of context, the story changed meaning completely, namely from fiasco to success. And when the story of the project until this point, which is the project past, new possibilities for going on emerge.

Reflections on the case

Intentions change as feedback is made sense of. A new project story distributes new roles of heroes and losers. Sensemaking, the ongoing social construction of reality, is continuously reconstructing the project, the goals, the plans and the approach. In organizations there are a lot of occasions that call for sensemaking and not only as it is often assumed, call for decision-making. When studying non-determinism in organizations as in this thesis, the question is as often about "where we are" (making sense) as it is about what is the right thing to do (decision making). For example, working teams and project groups exposed to surprises or complex change will often need to work collectively on making sense of the new situation in

a kind of "time – out". Some project managers install so-called project reviews in the different phases of their project to ensure that the project and the context are meaningfully related.

Social Constructionism

Social constructionism represents a way of viewing and entering the life in organizations, and thus also the thing we call project management. In this perspective, the focus is on the social meaning of actions, patterns and phenomena. Social constructionism is based on a set of assumptions about realities and relations that are an interesting metaphor when it comes to the discussion of project management practices. This thesis is an exploration of non-determinism in projects, and social constructionism is a perspective from where non-determinism can be observed, captured and described. Social constructionism as a movement has its name from the idea that our world view is not a mirror or representation in the individual mind, but one version that is residing in the patterns of coordination between people. What we experience to be "my world" is more an aspect of the language games I am part of than a picture or map inside me.

Gergen presents 4 working assumptions in social constructionism (Gergen, 2001)

1. The terms by which we understand our world and our self are neither required nor demanded by "what there is".

The way we view a phenomenon; an episode or a situation, is more a result of a conventional way of understanding and making sense than something that is dictated by the observed thing itself. We live in interpretations, with other words; in that we act in a way that we find sensible in relation to the meaning we give our situation. Because we agree that projects exist, it is not therefore necessarily so that others understand the same, nor that other terms could be meaningful, with other perspectives. We see this very often in organizations where employees are appointed as project managers, often with very few explanations about what the responsibilities, duties and affordances are. This often happens because of the misunderstanding that because we have a term or a concept, there is a corresponding reality "out there", and thus that there is One Truth about it, that it is a question of information to recognize. The misunderstanding can also be observed in situations where differing opinions about a project manager's role among stakeholders are seen as erroneous or as an attempt to take control.

As an illustration of the difference between constructionist and objectivist positions we can look at the corresponding different versions of Stimulus-Response models in behaviourism (Walker, 1975). The first S-R model was the behaviourist contingency model of stimulus and response. It all began with Pavlov and his demonstration of contingent responses. This is a level of human functioning that also could be described as "biological machines" in that it is a mechanism that once established has only one way of functioning. As long as the stimulus pattern is kept (objectivism), the response pattern is so too. Psychology at this level on the rules that govern our cognition and the cognitive science takes off by trying to model these rules in the computer and create artificial intelligence. When we learn, we change the rules that connect stimulus and response, we change the codes, but it is still "Intel inside" the operating system.

S-R model at the level of social construction is where S could stand for Staging and R for role-enacting. Staging is the invitation to enter the scene, but an invitation that is open to several interpretations, like in an improvisational theatre. Accepting the invitation is enacting a role and thus affecting and co-creating the play, instead of reading and responding to it. The meaning of the stimulus/stage is co-created through conjoint action, and is visible only after the play - not "inside" the stimulus/stage itself: these two ways of seeing the connection between situation and action represents two very different mindsets in the role as a project manager. The objectivist mindset is closer related to the idea of prediction, planning and controlling projects, while the other mindset is closer to Heisenberg's principle of uncertainty, and sees project strategy as improvisational theatre. Improvisation is dealt with in more detail in a later Chapter.

2. Our modes of description, explanation and/or representation are derived from relationship.

We co-create meanings with other people and surroundings through the coordination of activities and conversations. The context of a project is born of coordination, negotiations, clarifications, dialogues and planning sessions among people with a relation to the project. If no one has ever heard about the project, it has no meaning. In the same act, coordination (first I do this, and then you do this, so that…) and affirmation of a certain meaning or context is made relationally. Planning sessions in social constructionist perspective is a collective enactment of a certain interpretation of, and engagement in external stakeholder perspectives. To the extent that stakeholders are included in the sensemaking processes of the project, they will be invited to be co-creators of the meaning of the play/project.

This difference between individualism and social constructionism can be illustrated in the differing versions of the metaphor of AI (Artificial Intelligence) for intelligent behaviour. 17 years ago, when I wrote my master thesis, the dominant metaphor for cognition was the single computer, the PC. At that time there was hope and enthusiasm about the idea that a computer given the right programming would be able to count for the intelligence seen in human beings. The first definition of "strong AI" was that of modelling the formalisms of the brain in a computer. Disappointments with the approach led later to PDP (Parallel Distributed Processing) where several computers "cooperated" to exert the flexibility and ability to learn what characterised human intelligence.

Now, the technological metaphor is that of the World Wide Web – the Internet. This network is flexible, adaptive and complex - and now the metaphor for human intelligibility. As a result, the individual mind as the place where information is processed with extreme speed according to some rules is left behind. Instead, the texts and illustrations of the computers are not merely a mirror of reality, but are meaningful in relation to other texts on other computers. When different logics and rationalities are combined (hyperlinks) the ability of the users to coordinate and act in the world emerges. AI is today also the abbreviation for Appreciative Inquiry: the building of meaningful and life-giving relations (links). For project management, it is emphasizing the importance of seeing this as building of stakeholder relations and networks. So this brief story is about the development from AI as cognitive science to AI as social constructionism. Appreciative Organizing is the subject of a later Chapter.

3. As we describe, explain or otherwise represent, so we fashion our future.

No way of talking about the world is "innocent" in the sense that it bears consequences for the future. Action and meaning is reflexively connected, so that the language, terms and understandings we use in our coordination makes some meanings possible to think and express and others not. To change the way we describe and explain what happens is simultaneously to change the range of imaginable, thinkable and thus, possible futures. We don't pay attention to cue's that could be signals if they are about things that happen that we have not been able to believe would be possible.

This has interesting implications for project management, as the future is not something to read or adapt to only, but also something that we all are taking part in creating by our participation in conversations, correspondences, coordination and the like. Project managers don't have to wait for steering committees to transform; this can also be initiated through "generative discourses" where new understandings and meanings may emerge. For good or for worse, if we stay in the same way of understanding and describing, we head to the same future as last week – if we want another future we can affect the probability by challenging our habitual ways of seeing things. Project managers may see themselves as "poetic activists". (Gergen, ibid.)

4. Reflection on our forms of understanding is vital to our future well-being.

This assumption extends the former in that it emphasizes the desirability of critical reflection, which means to "place one´s premises into question, to suspend the "obvious", to listen to alternative framings of reality, and to grapple with the comparative outcomes of multiple standpoints" (Gergen, 1999, p50). The assumption is, that the world of today is offering competing definitions of what is a good future, and thus there is no consensus on universal answer to this: e.g.: when is this project a good project? Any definition of a good future to go for is generated within a tradition, including implicit or explicit values, and also the rejection of alternative values and views.

Social constructionism has a strong point here. I have experienced this in relation to courses in project management, where I have introduced the idea of seeing projects as social construction of meaning. I have seen a tremendous effect of simple questions like: what will be a good project in the eyes of each of your x stakeholders in your project? What observations would give them confidence, that this is going to be a meaningful project to connect to? What would they do that tells you that they see the project as meaningful? When key persons in a project group discuss these questions and the like, they immediately enter a zone of critical reflection in relation to their hitherto understandings and values. More than once, I have experienced that the next time I meet with the people they have had one or more essential stakeholder dialogues concerning "a good project" and thus making new, common ground possible.

As an illustration of these four assumptions "in action" consider the following story from my own practice:

In an interview with the HR-director of an international Pharmaceutical company, we were discussing ways of improving product development through increasing project management competencies in the project groups. At a certain moment of time the HR Director replied: "I do not really believe that this line-project conflict is the more important. But when our project managers have been on the conventional project management courses, they have learned that these conflicts are very important, and thus they see them everywhere all the time!"

Reflection on the example:

The idea of a line-project conflict did not arise in an individual mind as a reflection of what "there is", but from conversations and relating in a community of practice (the course company), where this assumption was dominating. The social construction of the "fact" that line-project conflicts are essential has a "fashioning" effect on the future of the company. The HR director complained that other conflicts and difficulties was overshadowed by this conflict and thus were not addressed. From the forth assumption, that critical reflection is critical for our future well-being, follows for this company that they might benefit from an internal inclusive dialogue for reflecting upon how different interests and approaches best can be brought to coexist within the framework of the business they are in. The ratings of various labelled conflicts are in this light less interesting. This was what I suggested to the HR director, and this is in contrast to a "realist" or objectivist based consultant, who might have offered a "neutral, scientific measurement of what conflict is the worse".

In relation to social constructionism, there is one comment I would like to make. For some years, I was puzzled about the degree to which everything in the world is socially constructed and nothing is real. It has been helpful for me to see that social constructionism is an alternative tradition, a way of seeing and understanding, that does not exclude the existence of other scientific traditions. The main focus of social constructionism is about how meaning and sense is made in relations.

Humans are also physical, chemical and biological machines. If we step out on the street in front of a bus, we die or get hurt. No social construction is helpful here. Physics, chemistry and biology are traditions of explanation with explanatory constructs and forms of reasoning. On the level of economics, we have constructs that reminds us that even though the customers experience meaning in our products, we also need to write bills and control payments to survive. On the level of cognition, some phenomena can be best explained through the traditions of reasoning and explanatory constructs of contingency, reflexes and other more linear mechanisms. Social constructionism offers a framework for analysing the level of meaning in social systems. The difference between natural science and meaning science can be illustrated by the example of a car: natural science is about how the car works, and meaning science is about where to go and why in the car. (Rijsman, from conversation)

One language game is that of the "game of truth". This game is a very fundamental and necessary game to play when practical matters have to be coordinated. Peter Lang uses the term "domain of production" as a metaphor for the context, where one truth about the world (universe) is to prefer for making complex coordination and planning possible (Lang et.al., 1990). The social constructionist perspective is thus not about eradicating or replacing objectivism, but a matter of living in more language games than this. That objectivism is also a language game, but among many others.

Case story 1: Collective Sensemaking in groups of project managers

Why this story?

This is a story that exemplifies the potential of collective sensemaking in situations where confusion arises because of the elicitation of new information from the environment. Through dialogue and reflection in a team it is at least sometimes possible to create new meaning and thus find out "how to go on", which the definition of meaning from Wittgenstein is.

The story

For 5 years I have been course leader for a project management programme in DK. As part of a training programme for project managers the participants carry through a 360° feedback inventory through questionnaires to their main cooperation partners, stakeholders and sponsors. On the course, the participants receive a circumstantial feedback report based on the responses from the respondents. It is an overwhelming experience for the single participant to meet this 40 page detailed report and over the years we have found it necessary to design a process of and collective sensemaking in a group. In other words, the situation is considered as a "sensemaking occasion" , an interruption, where something you expect to happen doesn't – or something unexpected happens. (Weick, 1997).

The groups consist of 5 project managers, who in turn present the initial sense they individually make of the information in the report in the form of:

a) what they perceive to be the message from each respondent group
b) what they are struck by and wonder about
c) the most important question they have in relation to the meaning of the report that they would like the group to join them in exploring

Afterwards, the group in Weick´s words: joins in a dialogue, that has the qualities of collective sensemaking: "...the search for contexts, within which small details fit together and make sense" (Weick, 1995, p.133). It is a process of hypothesizing, searching for hunches and alternations between small facts and figures and possible explanations. Gradually, a more and more refined "relatively stable system of discourse" (Gergen) is emerging. It is perceived as a valuable work by the project manager concerned, where a report with a lot of information, but very little usefulness or meaning is turned into some possible, new understandings of situations and contexts.

The most fascinating thing is, though, that time after time, the members report that they learned as much through the sensemaking in relation to the peers reports as the one in relation to their own report. The participants assessed the personal outcome of these sessions has been stable through 4 years between 4.3 and 4.9 on a 5-scale. This indicates that the process has been creating sense at different levels simultaneously, because if they only found their "own" case meaningful, the figures would have been much lower. The sensemaking in this case is genuinely collective or social, though more the making than the sense, the process more than the content.

Reflections

These processes are illustrations of the potentials of collective sensemaking in situations, where we feel confused and are exposed to information about our environments that we do not quite understand or that represents multiple meanings. The stakeholders of the project manager's leadership activity cannot be expected to agree on the perception of the managers' competencies, due to their different perspectives. The report itself is not very useful but becomes useful as a starting point for reflection, where the social meaning of the report is socially constructed. The result is an extra theory-in-practice that the project manager now can add to his repertoire of resources for making sense and going on. It is not the truth game, where it is determined what the true picture is, but a way to live with the multiple perspectives and meanings. The question is not who is right, but rather how can this picture make sense?

Collective sensemaking constitutes a way of finding new or alternative meanings and thus a new basis for choosing a way to go on, also in projects where sudden changes has the effect that a new meaning with the project can be desperately needed. It would therefore suggest that collective sensemaking can function as an effective resource in non-determinant coping in organizational processes like managing projects and change..

Case story 2: Collective meaning making:
From generic competence baselines to socially constructed competencies development

Why this story?

With this case story I want to demonstrate the practical difference between an approach that is based on objectivist assumptions and an approach based on the assumptions of social constructionism (collective meaning making). The case also illustrates the uncertainty and multiple perspectives inherent in organizational development and change processes and projects.

The Story

The context is a consultancy task and the client system is a centre in a Danish hospital. I was called by a project group that was put together to find another ground for developing competencies at the hospital centre. They asked me to be member of the project group as a tutor, working as a combination of a member of the group, an expert and a facilitator. I was a bit sceptical about this mixing of roles, but agreed, because I found the task very interesting and an opportunity to follow some of the ideas I had been writing about. They had found my name in a new book on organizational psychology, where I contributed with a Chapter that was a critical reflection on the work on competencies development in organizations and companies. They felt that their situation was understood in this Chapter, and that was the reason they called me in.

This is a story from my work as a consultant/advisor in competencies development. For the last 3 years I have been working together with a competencies development project group of nurses on finding a ground for more emergent, relational and practical process. The back-ground for their wish was that they had experienced one competencies development project

after the other that had lost energy and momentum before making a noteworthy difference. The conventional "way" for this kind of project is along the following lines:

1) *defining generic competencies needed now and in the future*
2) *measuring the "competencies gap" for each nurse (also monitoring errors)*
3) *planning for activities*
4) *implementing*
5) *controlling and following up.*

The project group wanted to do something different because they had seen many projects spending 1-1½ year on step one: defining generic competences now and in the future, and then collapse of fatigue or frustrations over the recognition that the descriptions are already out of time and in a bad need for an updating because of changes in strategy, quality standards, organizational priorities, political signals, new treatments and practices, organizational changes and so on.

Reflection

This approach has been and still is very common in Danish organizations. It is based on linear and deterministic assumptions about change in social systems like an organization. The linear assumption is expressed in the hope that there is a causal link between the right competencies and success in the organization. Determinism is expressed by the aspect that the perfect reading of the situation and the determination of the gap, will make it possible to control the future performance. It is the modernist dream: that given the right knowledge and the right technology, the good life and world can be created.

The approach is to measure the need for new or other competencies by subtracting the determined need of the employees for competencies in the future and the actual level of competence. When the gap was determined the employee and the superior together made an action plan for achieving the extra competencies. Implementing the action plan would thus ensure that the company and the individual both fulfilled their competencies need in the future.

It is an approach many leaders love, because of its plausibility and rationality. The only problem is that it almost never works.

My explanation is first: that the objectivist assumption that competencies now and in the future can be made into numbers so that they can be subtracted, fails. Or more precisely: to make them calculable we must use a generic standardized language, that alienates the discourse of competencies development from the discourse of work coordination. As a result, the "gap" makes no sense, does not meaning anything in relation to coordinating work.

Secondly: the individualism in the approach excludes the relational qualities in competent work behaviour, and instead suggests essentialist explanations. This reinforces the alienation.

Thirdly: The gap-thinking turned the discourse of competencies development into a language game, where no validation of self was possible, as the employees were negatively defined from the beginning: "let's identify your deficits!"

Fourthly: the changing environment of today's organizations is making regular redefinition of meaning necessary. But the deterministic approach prescribed that projects should know before they are planned, before they are implementing. However, before you start implementing, the world may be another, and you can start all over again. When the project group experience for second and third times that the detailed description of future needs are to be changed due to external and internal changes, they lost the experience of meaning. (Vestergaard, 1997)

Story continued.

Together with the project group we developed another framework, based upon social constructionism as a foundation that could better deal with the complexity and increasing change. Instead of defining the competencies, we struggled to craft processes that would support individuals, groups and departments to define for themselves the "what's and how's" of competencies development.

The work was built on three assumptions from social constructionism:

1. Competencies are not inside individuals, but embedded in the coordination and communications between people working together. Competencies are thus a more useful concept when seen as relational and in continuous progress (Campbell, 1994)

2. All stakeholders are participants in the social construction of practices, abilities and skills. Feedback loops from colleagues and supervisors, but also from patients and the bereaved family are relevant parts of the process. The development of competencies is thus intertwined with the experience of quality in the department's treatment and care.

3. Competencies are emerging or non-determinant properties of a social and thus non-linear system. Change and development take off by the active appreciation and thus reinforcement of the fluctuations that in practice shows improvement.

These assumptions made the basis for a radically different approach. From an approach for competencies development based on the filling of competencies gaps of individuals we turned to the design of a non-determinant approach based on:

1) *local conversations about the kind of department/nurses we wish to be.*
2) *appreciative inquiry: the life-giving stories of learning and of good care*
3) *initiating and exploring feedback/feedforward from significant stakeholders (colleagues, leaders, patients, relatives to patients)*
4) *all employees taking part in common processes of strategizing for the future organization*
5) *crafting conjoint actions in "first step difference" signs relationally*

The approach is in contrast to a lot of conventions regarding organizational and competencies development, for better or for worse. The approach is described and distributed as a booklet that is given to all employees. A wide range of conversational resources are set up to support the process of developing competencies. Seminars are held for superisros and

department heads. Experiments are made with mutual feedback and forward. The director has monitored the department's development goals. So the approach seems to be living, after all.

Reflection

It was difficult to formulate a new ground for competencies development - it took a lot of meetings, drafting's, dialogues, re-writings, experiments and provision of feedback. I think this is ascribed to that it was not just new concepts and tools on a practical level. It was a formulation of an entirely new mindset or paradigm, namely social constructionism and systemic thinking as a replacement for the individualism, realism and determinism in the former paradigm. The process was an example of collective meaning making, out of which definitions of new concepts, tools and processes emerged. If these resources were given by an external consultant without the change of meaning, these resources would never be put to practice. In a social constructionist perspective, the meaningfulness of this new foundation is to be determined by the destiny of the social processes, the degree to which it is lived.

We were groping in the dark together, and my role was that of facilitating, but also that of "holding" the anxiety that was elicited by staying "on the edge of chaos". Gradually the level of confusion diminished, and more and more episodes of recognition and appreciation were increasing. Some ideas stayed in the text and some were left on the wayside.

At a certain point of time, the group was satisfied, enough for the first version of the booklet. They were looking forward to show the work to the world and get feedback. This was entrance to the second phase in the work, where all managers and employees were to start the journey of making meaning of a new way of seeing and acting competencies development in the centre. The thinking, the concepts and the tools are now put into practice, but it was necessary to work a lot on the meaning level on seminars, department meetings and so on.

I was on several occasions also nervous myself if we were going anywhere. I asked them more than once if they preferred to stop our cooperation but each time they answered that they felt on their way and in "good hands". In retrospect, I am convinced that this process of groping in uncertainty was a necessary step on the way to finding a new understanding together. We left the previous way of thinking about competencies behind without having found the alternative - just a starting point. It is a process of creating a new discourse, new narratives, new metaphors and ways of putting things:

> *"Accounts of our world that challenge the taken for granted conventions of understanding, and simultaneously invite us into new worlds of understanding and action"* (Gergen 1999, 116).

> *"We use the language readily available and change is thus minimal. For more significant change we must break significantly with the conventions"* (Gergen, 1999)

The case demonstrates that social constructionist approaches can be effective in creating development and change in a social system that in a realist, individualist and determinist approach ends up in an analysis-paralysis situation. It is a demonstration of non-determinism in action.

The story continued

Let me just mention two other initiatives that have rolled out at the hospital, challenging the above approach based on social constructionism:

1. A new salary system based on individual performance and competencies
2. Accreditations by quality standards
3. Evidence-based treatment and care

These initiatives are based on individualistic, objectivist and foundational assumptions, and we are at the moment working on how to bridge two different logics at the hospital. This difference in logic is ever-present in the cooperation between doctoral and nursery staff, and finding a way to integrate the logics is a must if hospitals are to be efficient and satisfying places to work in the future.

Reflection

In the beginning the group and I tended to consider these initiatives as hindrances, as degenerated attempts to control the organization in "wrong" ways. As a result, the energy was directed towards finding ways of protecting the competencies work (on social constructionist premises) from being infected by the objectivist and rationalist based approaches to improving quality in the health services. Afterwards, I believe that we experienced an example of what Uzzi called "overembeddedness"(Chapter on collective action) that we enjoyed the membership of the group so much that we ignored information that would make us break the peace in the group. The belonging to the group and the warm feelings were embedded in a certain ideology or way of thinking about the project and about people outside the group.

At the outset of this story, the social constructionist view of competencies development was introduced to meet the shortcomings of the modernist, determinist model (GAP-thinking). But now this view was challenged by new initiatives from the "old" paradigm. We were still foundationalists, but now on behalf of social construction as the right way. Two observations, however, were helpful in opening our eyes.

Firstly, the problem of introduction programmes for new nurses. These newly educated nurses needed something for their introduction that the circular logics of social constructionism (at least in our version of it) could not account for. A complaint was formulated like: "..they can speak for hours about dialogue and reflection and feedback loops - but they are not good enough in the basics of nursing care!".

Secondly, new knowledge about new nursery practices that was evidence-based as better, was not always used. Instead, old procedures were preferred. We needed to inquire again into our version of social constructionist competencies development and critically reflect upon: where is the "mechanism" that ensures that we critically inquire and reflect upon the rationale of our present practice, and compares that with the evidence we have for a potential, new practice?

Story continued

In the light of these challenges we discussed again the "linear attack" on our neat platform. Is there any possibility for us to reframe these attacks as leverages? Can we construct an alternative meaning of these initiatives, so they are not eroding the benefits of the social constructionist view?
This resulted in new ideas:

1) The salary system is there, and the question was how can the salary system support and reinforce those practices that are needed for staying competent?

2) The evidence-base project can be reformulated as a giant learning opportunity in critical and reflection upon the knowledge basis behind present practices. How can serious work with descriptions of good practices enhance learning and competencies development? Under what conditions can narratives count as evidence?

3) The accreditation may be seen as an opportunity for all to get involved in generating a knowledge basis for their own practice and to collectively create new meaning and standards for treatment.

Reflections

Social constructionism was in this case introduced as a framework for competencies development that is more flexible, client-oriented and relevant for the people involved. But on the other hand the lack of linear control mechanisms seemed to open up for the interpretation that each employee could choose her own way based on her own preferences. But acknowledging that there is no eternal sole best way is not the same as saying that things cannot be better!. There seems to be a need for being specific about the control mechanism in the non-deterministic approach.

This is a lesson that may be relevant in relation to implementing non-determinism in general. The question of control and order that is necessary for any institution that wishes to work in an organised manner. What do the details of control look like? Here the metaphor of calibration enters as a possibility. In non-determinist approaches the control is decentralised, so to speak. In the above case example, the control (how do we know that we are responsible in our spending of taxpayer's money and nursery hours?) is continuously gained through reflective practice by posing certain questions to relevant stakeholders. The non-determinist approach to accreditation, for example, is thus to attempt to turn accreditation to a process of social construction of effective and economically responsible abilities, practices and procedures. A never-ending story of continuous calibration by observing effects, reflecting on explanations, curiously and critically analysing discourses: how do we know this and that is better?

Concluding remarks on collective meaning making

Collective meaning making has in this section been introduced as a resource for implementing non-determinist coping in organizations. The idea of collective sensemaking from Weick and social constructionism by Gergen is introduced before demonstrating the effect of these ideas in two case stories. In the first case, it was demonstrated that organizational processes can be

coped with from a position of maintaining multiple perspectives trough collective sensemaking processes, where differences are viewed as input to a meaning making dialogue and not an error or dysfunction that should be eliminated. Collective meaning making can be viewed as a tool, not for creating certainty, but for creating enough orientation to start acting in a world of many voices and lack of knowledge. The resulting coordination of multiple perspectives may represent an alternative to base cooperation on consensus, which often is regarded as a prerequisite for collective action.

In the second case about competencies development it was demonstrated, that alternatives to determinism in this field can be imagined and acted. Instead of pre-installed rules and instructions as a base for competent action, it is suggested that competency is ensured through continuous relational calibration. Calibration is a metaphor that contextualizes the approach of the reflective practitioner as a means to maintaining control in situations where predictability and agreement are not viable. Calibration is the responsible and continuous inquiry and reflection by individuals and teams on the question of: what kind of a situation are we in at the moment? How can I eventually understand it in different ways? And what does the situation call for from me that I am able to deliver in a responsible way. In that way the alternative to determinism is not absence of control, but what can be termed a decentralised control.

As a conclusion, the theoretical perspective of collective meaning making represents a resource for project and change managers. In the previous perspective, the focus was on collective action: what we do together. Collective meaning making is a resource in focusing on questions of orientation: how we understand where we are in a complex world. The project process is controlled, but not in the ordinary, determinist sense. The non-determinist coping is a result of avoiding getting trapped by the tyranny of action, and on a continuous basis to ask: what sense or meaning do we make of this situation? But the interpretation of non-determinism as "no control" is widespread and one that professionals in the field should be very aware of.

3.4. Appreciative organizing as a non-determinist strategy for coping

This section

In this section is presented organizational psychological theory that is based on the thinking of Appreciative Inquiry. This thinking is an extension of the ideas of social constructionism, and in particular it is an alternative philosophy and methodology to problem-solving and deficit-oriented approaches. Appreciative organizing is presented as part of a base for non-determinist coping in complex projects and change processes. Appreciative organization focuses on the quality of the bond, the relation or the psychological contract between parties that are somehow in-it-together in relation to a project or change process. Especially the question of trust or non-trust is discussed in a descriptive and not normative perspective, where trust is seen as functionality and not a general moral value. The purpose of the section is to explore the potentials in relation to a general, non-determinist coping.

Problems with the problem focus

The world of projects is a global world in that it involves cross-disciplinary, cross-functional, cross-organizational and cross-cultural cooperation. Numerous logics are at stake concerning the why's, what's and how's of the future of the project and the organization. The success of a project or a change effort will depend on the ability of the involved people to

> *"...navigate within the multiple and ever-changing sea of realities – inside and outside.." the project. (Gergen, 1999).*

Many approaches take a realist point of departure for dealing with the conflicts and problems arising from disagreements due to different views of "how to go on" and "how to work together". These approaches involve analyzing the problem, identifying the cause, setting up plans to remove the cause and implementation. This approach may also be termed determinist coping in projects and change efforts, because the underlying assumption is that the sufficient knowledge about the present problem situation and the causing factors, together with the right technology will determine a desired outcome. Promoters of this view emphasize the possibility of describing and utilizing best practices and on using experience from previous similar processes. Also, this approach is better at determining e.g. activities and costs.

Appreciative inquiry is an alternative approach to projects and change. Promoters of this view are often stating that the above approach (problem solving approach) together with its advantages has some in-built disadvantages.

Problems with the problem solving approach

1. By focusing on problems, conflicts and deficits, we create more pictures of problems and overwhelm the group or organization with images and stories of what is wrong, and thus draining the system for the energy, they need to change. (Watkins & Mohr, 2001). The assumption in appreciative inquiry is that what we study, we create more of. And this again suggests that focus on achievements, results and values are mobilizing more force among the involved people than the problem oriented approach. In relation to projects, this would suggest that project managers should spend more time on exploring the value added to the

world by a successful project or change, and less on the problem and obstacles to be removed along the way.

2. The focus on problems seems to initiate a search among the involved persons and stakeholders of who is to blame for the unproductive situation. It is argued that the language game initiated by "problem talk" or "deficit talk" almost inevitably leads to a "blame game" where the avoidance of responsibility becomes the obsession of the members. The people who end up being set in a position as "guilty" or otherwise negatively defined are not likely to take responsibility and join the efforts of solving the problems, but will tend to resist any programme that is connected with him or her being defined in a way that does not provide self-actualisation. (Rijsman, 1997). The dilemma may be: if I accept the definition of the problem, I am guilty. If I do not accept the definition of the problem I stand outside the circle of those taking charge – and is guilty anyway because of my non-cooperation.

3. Even though we truly become experts on the problem and its causes, we may still not be especially clever when it comes to finding a way out. This assumption is the absolute negation of the determinism assumption. In many problems, there is no causal or linear connection between the problem and a solution that will be good enough.

> *"There is no need to understand the lock in order to build an effective key when a skeleton key may work as well" (de Shazer, quoted from Langslet, 2000).*

In many project management handbooks it is assumed that risk analysis is crucial for success. The idea is that identifying and addressing possible problems and risks related to implementing the plan and preventing these from becoming too serious, project success will be ensured by making determinism work, so to speak. Appreciative Inquiry is an alternative approach to working with and in organizations that are built on the assumptions of constructionism that are already presented in the previous Chapter.

Appreciative Inquiry assumptions

Furthermore, Appreciative Inquiry is built on the following assumptions:

1) The principle of *simultaneity*: in social systems analysis and implementing cannot be separated. It is not possible to inquire without intervening. If I change my attention, I will notice other feedback and I will be connected to others in another way. Even my hesitation will work as an intervention, because it will be interpreted. I can't analyse or understand anything before I have acted and received feedback: "How can I know what I mean before I see what I say?" (Weick, 1995). My sensemaking may be retrospective, but inquiry and intervention is simultaneous. The context of projects and change efforts cannot be analysed in a useful way without at the same time changing it. The conventional project manager tool of "stakeholder analysis" should, in this light, be replaced by "engaging in stakeholder relations".

2) The principle of *anticipation*: one of the most powerful tools to generate solutions of problems and conflicts is to collectively generate pictures of the future, when the problem is no longer a problem. This principle tells us that images of the future we wish and believe in have the effect that we start noticing cues of that future and consequently choose actions that

support the emergence of that future. Appreciative Inquiry suggest that humans and human systems function has heliotropic qualities. Heliotropism is an orienting movement of the body towards a source of light (Chaplin, 1975). We act like "heliotropic" beings, when we see the light in the form of a future image of what we wish to create in the project or with the change effort.

3) The *poetic* principle is about organizations as books that are continuously open to readers and co-writers. The relations in and around a project is partly something each person reads and partly something that we write. It is poetic also in the sense that like good poetry the meaning is in the eye of the beholder. Many meanings can be read into a social system, but it is at any point of time in progress, it is re-written everyday. Clearly, this represents a perspective that acknowledges the sources of non-determinism in the situations of project managers. The poetic aspect of organizational processes cannot be eliminated, so, maybe project managers should engage themselves in the poetic and storytelling circles, not just for listening, but also for exploiting.

4) The Principle of *positivity* is about the fact that when we engage in organizational life we can always choose to look for and go for the best - or for repairing the worst: "Behind any problem there is a frustrated dream" as Peter Lang is often quoted for. This principle includes the assumption that what we study, tend to grow in force. We can choose in our approaches to look for the deficit or we can choose to look for the dream. What are project managers and teams looking for when they review projects?

Together these four principles form a basis for understanding the dynamics of non-linearity in processes of change and projects in general. A picture of a process rather different than conventional project management processes emerge: instead of the sequence of gathering and analysing information and knowledge about the problem, then selecting solution, then developing a plan that subsequently is implemented we see a process of a collapsed phase model, where it all takes place throughout the process: the knowledge, the dream, the activities are all under continuous construction in a process of extending and reinforcing the best of what is found on the way.

These principles are central in the thinking of Appreciative Inquiry as an approach to organizational change. In the following section it will be further elaborated how these principles are conceptualised when it comes to management and organization.

Bridging: Appreciative Organizing

The reason why this headline is included is best expressed in the following:

> *Emerging conditions calls for continuous creation and sharing of meaning, so that engagement and thus efficacy can be maintained over time.*
> *(Anderson et.al. 2001).*

Emerging conditions call for approaches that prevent in-action or loss of meaning. Projects in emerging conditions are challenged by continuous change and thus by a series of re-orientation and re-understanding of what the project can do or count for in these new conditions. Social constructionism offers a perspective on the processes by which the people

involved in projects (or other processes in emerging conditions) create meaning together by coordinating and communicating. Appreciative Organizing combines the idea of socially constructed meaning with the focus on the best of what is a key to what we want to create together. In a thesis on non-determinism as a coping strategy in complex conditions, the social constructionist variant of Appreciative Organizing and leadership is essential, as the above quotation indicates. Let me review some of the basic assumptions and findings in appreciative organizing that takes the previous Chapter discussion of social constructionism a bit further (Anderson et.al. 2001).

Meaning is born in the act of appreciation. It is the appreciating act of employees that makes a leader. It is the appreciative act of the leader that makes an employee follow. It is appreciative acts that are the beginning of building a relationship to a customer or stakeholder. Appreciation is more informative than rejection in the sense that appreciation tells you what works, but rejection tells you only that this was one of the many things that do not work, but you do not necessarily know what to put instead. Two parties that know what each other appreciate in the cooperation will have a basis for developing trust and thus abilities for cooperation despite emerging conditions.

Appreciative organizing is to be understood in three senses: (with examples from the project world):

1. **As awareness of potentials for different interpretations**. To stay open to other's views and try to understand the perspective of others and listen for something valuable. In projects this can be cultivated through dialogues about or with stakeholder perspectives. One result of this kind of dialogue is what Trompenaars calls "awareness of own bias": that we need to be aware of the contingency of our own views and models of the world (Trompenaars, 1997)

2. **As affirmation of meaning**. Actively saying yes to what you can appreciate. This is about showing that you want to relate and bond, and that you can reach out. Engaging in stakeholder perspectives by adapting the project so it also supports other agendas. This sense of appreciation is more active than the first sense about awareness. Affirmation includes the act of showing respect for the alternative views, by adapting your approach so that it takes some consideration for the interests of stakeholders and others with differing ideas and views. In the words of Trompenaars, the second level of cross-cultural competence is "showing respect". (ibid.)

3. **As adding to the value and meaning**. Taking the things you affirm a bit further and actively creating opportunities for the Other. At this point the appreciation is to go further in the direction that was made possible by the other's action that you appreciated and thus building up "interlocking routines", in the terms of Weick (Weick, 1995). Trompenaars, in his concept of cross-cultural competence, is also working with a third component, and this third component he calls "creating conciliation", making it possible to go on together despite differences in world views. The chain of active production of mutual possibilities generates on the one hand some relational practices and on the other hand collective sensemaking. Both aspects of organizing result in building trust between the parties involved. Trust, and the maintenance of trust results in some order and predictability and can be seen as "control, but on another level".

It can be argued, and even expected, that Appreciative Organizing in these three senses are potential non-determinist approaches to the question of organizing around a project or a change effort. The organizing is emerging as an adaptive response to emerging conditions. In contrast to determinist organizing that is based on analysis and design of the best possible organization that then is implemented. The development of trust (conciliation) in relations characterized by differences of interest is replacing control as principle.

In a familiar line of argument, the term of "Relational Responsibility" is introduced by Gergen and McNamee. The main focus here is that of replacing individualist ideas of responsibility with relational responsibility implying both that the relation carries the responsibility for the output, or the task, but also that the involved people are responsible and expected to care for the relation to continue to exist (Gergen and McNamee, 1999).

Appreciation is an important part of the micro-social processes of trust. In many organizations this is seen as a possible way out of some of the unintended side-effects of determinist approaches to project and change management, namely the creation of a language game that working like a "contract of mistrust". Especially within the building industry there is a search for alternative approaches to the determinist and planning approach that for many years has been the natural and only way to work accountably with building projects. The example of "partnering" in the engineering and entrepreneurial business is an attempt to create an alternative to the "contract of mistrust" relationship.

Currently, much debate is taking place in the Danish community of project managers and the building industry about the concept of partnering. The latest volume of the project management quarterly in DK had "partnering" as its special theme. In a later section I will go deeper into this discussion.

The principle of appreciation in organizing is illustrated in the following case story that shows that new relations can be created in a process that is non-deterministic. This will demonstrate that appreciative organizing is a resource, not only for creating trustful relations, but also organizing adaptively.

Case story: Appreciatively constructed improvement of working climate

Why this case and what is in focus?

I tell this story because it demonstrates that development and improvement of the way things work can take place using non-deterministic dynamics. It demonstrates that action plans are not always necessary, neither is a clearly, agreed upon specified end result. I will focus on the details of what I view as the factors making change possible, namely the socially constructed mindset of the persons involved that made it possible to grasp and respond to the emergent patterns of potentials for the future.

I will also demonstrate with this case the difference between a "deficit" approach and an "appreciative" approach and compare what seem to be different outcomes of the two kinds of

entering an organizational system. My approach is to a large extent informed by methods, that is described by Langslet as part of her solution-focused approach. (Langslet, 2000).

Story

This is a story from my work as an external consultant for an IT-company. I was chosen as a consultant to facilitate a process in a department that recently had done a climate survey based on anonymous questionnaires. The report "showed" severe problems in the department, I was told - "the worse result in the company's history". Until then, the succeeding work had been problem-focused and an internal consultant had assisted the department in trying to find causes big enough to account for the poor performance on the survey report, but without finding any such severe causes or problems. As a result, they began to feel "sick" or "strange" as I wrote in my notes at the time in the fall of 2001.

The 2 other bidding consultancy companies suggested a problem-focused approached: define the problems, analyse the causes, action plan for removing the causes etc. The approach was based on the assumption that a cause must be identified to solve the problem. The other assumption was that a big effect must have a big cause. The third assumption was that identifying and removing the cause was the way to remove the problem. This problem solving approach to organization represented more of the same approach that until then had not been helpful.

I suggested turning away from more problem definition and turning to communal explorations of potentials and solutions along the lines of Appreciative Inquiry, solution focused therapy and narrative thinking. The manager and the two employees in the committee to select the consultant chose to work with me. They said that they had found it relieving that there was a way of working for a better climate that did not include "digging deeper into the problematic". They also had found it eye-opening that the cause to problems and its solution were not necessarily linearly connected.

Reflection

I think that they chose my ideas because they had lost confidence in the idea that they could identify one certain cause to the (apparent) huge problems. From a social constructionist point of view it is also only one possible story that is told through anonymous climate surveys, and that a rationalist view only would literally regard the result as a true characteristic of the department. In this case more true than the experience of the employees who could not account for the bad figures, and as a result a blame game was started: "You put an average of 2 here, now you must tell us WHY". The expectable effect of this is that everyone focuses his or her attention to cues that could account for "bad climate" scores. A collective search for the dysfunctional starts, and if it is not successful in finding the explanations, a more refined method must be included (interviews, external consultants etc.). It is not difficult to agree with Karl Tomm, when he argues that one of the effects of linear questioning (what is the reason for low grades) is that the situation is confirmed, reinforced and even more difficult to change (Tomm, 1989).

Another story and different interpretation could be that the result of such a survey should be understood in the context of the ongoing conversation among all people in the department. I

have before seen that apparently low results did not count for bad climate, but more for a leader, who is difficult to get to listen, and thus "low grades" is a reinforcer of, or "call for" communication. In this department it may have been a way of telling the manager that he was too busy. And when confronted with the figures resulting from anonymously given ratings, they of course cannot answer. Appreciation in the first sense: as an awareness of the potentials in other interpretations of the survey made it possible to take another path than the problem solving approach.

Story continued

We agreed on a process of:

1) *group interviews based on appreciative questioning*
2) *a brief meeting with my feedback on the "life-giving themes" from the interviews*
3) *3 all-day meetings with 6 weeks interval.*

Between the meetings the employees were asked to observe and write down stories of "climate episodes" that they would like to happen again or more often. The following meeting was a process of exchanging these stories and dwelling on the kinds of joint action that counted for a good working and social climate in the department.

Very soon it became clear to me that this approach was a great relief for the department. Also it showed that they had become experts in problem talk and at the same time had lost grasp of what they actually wanted and desired and hoped for concerning the working climate. When asked: What should you see happen for making the word XX a little bit more meaningful than today?" many of them took a long time to answer. They simply had forgotten the language of hope and appreciation. At the first meetings at the group interviews we explored the details of action and communication that they experienced as being accountable for a good working climate. No problems, causes or complaints.

Reflection

These interviews were approaching the second sense of appreciation: the affirmation of examples of what each employee would say "yes" to in the cooperation with others. In the context of bridging/relating this kind of conversation can be understood as invitations like: "this is how I would like to dance with you". Appreciation in this sense is not the same as feedback but more like affirmative feedforward and works as a bridging principle. It is trust building in that the employees were asked to take the affirmed actions a bit further (third sense of appreciation: adding value).

Story continued

At the meeting 6 weeks later, they had gained some new hope for the future and optimism gradually had come back. I asked them to rate with hand rising how they now perceived the climate on a scale from 1 to 10, where 1 was the situation when I entered the system, and 10 would be "all problems solved". Of course there was differing views but average was around 3. This was a moment of choice or bifurcation: we could focus on the gap from 3 to 10 (the deviation) or from 1 to 3 (the improvements). I had them interviewing each other in small

groups for stories about actions, episodes and patterns that they had observed and would like to see more of. We only focused on improvements and signs of "a better climate". After all the stories we had a dialogue about the competencies they as a group had showed in improving so fast.

I also asked them to raise hands for taking a stand on what would be a satisfactory level to reach, that would be a point at which it would be OK to stop the special project about climate. At first they said "what else than 10 can possibly be the answer?" I answered that climate and teamwork as far as I knew not was their key business, but means to the end. After some discussion the hands rose. Again differing views: some felt that the goal was already reached; others felt that there still was a long way to go. We agreed upon some average around 6-7. I asked them to work in small groups again to create stories about "nearly good enough episodes". The signs of nearly good enough situation were documented. Lastly, they took some decisions regarding social arrangements, common training days and a system for time planning vs. common arrangements.

Reflections

Before the meeting I was excited about what the answer would be to the scaling question. What should I say if they all said 0 or 1? In retrospective, this is a crucial anxiety, because this anxiety is part of what forces us into traps. If we do not ask these kind of questions, we of course avoid the risk of getting bad news, but we also avoid the opportunity for appreciating something that has improved. This may have been the feeling that was experienced by many in the department: with so low scores, nothing can be all right - so why risk asking? So the act of asking is also an act of believing or of trust: To see it when I believe it – not to see it before I believe it.

If all say 0 or 1, this does still not necessarily mean that nothing good has happened. Things may have improved while everything else has fallen apart. Maybe the scale has altered its meaning when it comes to the definition of a "1". But by insisting on asking the question of what has become better, this can be brought forward and serve as a basis for future action.

The second scale question about what would be enough was an instance of critical reflection upon central assumptions. The assumption was that "no less than 10 is acceptable" and this assumption was reflected upon and this resulted in it becoming visible that a diversity regarding the level of ambition was present. The diversity on this question functions as a deconstruction of the realist view of the working climate as a thing "out there". Instead was created awareness of different interpretations (different views on status and level of ambition). And when there is no "right" answer (10 on the scale) out there, the responsibility is to be taken by the relations.

Story continued

5 months later, I interviewed the manager again. He was not sure about the need for having the follow-up meeting in the department about the climate right now. We decided that I should have a brief interview with all employees at work that day. Based on this "mini-survey" we decided to cancel the third meeting because there was not a reason to pay special attention to the climate anymore. The general opinion was that the climate and the productivity were all

right, and that they would prefer to work that day and to follow up after the summer holidays. We agreed upon a brief follow-up two months later.

Reflection

I was struck to hear one employee after the other taking the view that the working climate was all right and that it was no longer a problem working productively. When comparing with the two other approaches that were among the alternatives a lot of energy, time and money are saved. The other approaches were based on in-depth interviews into the problems, analysis of causes and strategies for removing causes and action planning for implementation. Of course you could argue that this investment may have improved the climate in the department even more, and indeed that is possible. But also, it may have caused more of the same - namely an intense search for huge problems (causes) that may have given rise to feelings of guilt and blame games. When humans are in positions of blame and guilt, they tend to withdraw from engaging in relations for change.

Story continued

At the follow up meeting I asked the employees to draw a "teamograph" as a curve over their feeling of teamwork against time. Each was asked to tell a story about their graph to give opportunity to learn from the process of improving the climate in the department. The meeting was "end of story" of my assignment. After this process I was asked to introduce this way of thinking about climate improvement to the management group. The HR department has subsequently revised their climate survey methods along the lines of this experience.

The last story about climate development was for me a surprisingly powerful demonstration of the significant difference deriving from the choice of approach - and also, the difference between a modernistic and a post-modern methodology. (Gergen, 2001). Of course, a lot of factors besides choice of approach have to be taken into consideration in the analysis of what followed from appreciative methods.

Reflection

This difference is represented in replacing truth as the criteria for choosing the right action to putting in usefulness as the criteria for choice of different actions. This shift also constitutes logic, where multiplicity in actions is a part, in contrast to "truth-based" search that is often leading to a logic of determining "one best way forward".

It is also an illustrative case of the contrast between two approaches to creation of a desired future. On the one hand is the appreciative, social construction of the future climate and on the other creating a desired future by removing errors and deviations by analysis in problems and removing the causes. (Cooperrider and Srivastra, 1987). The role of the sharing of positive images of the future is demonstrated as resources for realising the images. The images of the positive outcome can be reinforced through actions (this is the way we will be doing it when the day comes) or through change of mindset (when I believe in the future image I will see it).

Furthermore, it showed like the first story that change can take place in an orderly manner without prediction, action plans and control. The careful planning gave way for the approach of gaining control through continuous appreciation of the processes that give energy, life and joy. Changing focus from what should be eliminated or corrected to what were cues for a better future another control mechanism was introduced.

Concluding remarks: Appreciative Organizing and non-determinism

Bridging, or building relationships, shows a potential for implementing non-determinism in project organizations through the three senses of appreciation: 1. creating awareness of the potential of different interpretations, 2. inviting future relating through imagination and affirmation of examples, and 3. as adding value of the good stories by reinforcing the kind of action that is made possible through the good example. I have in the case story demonstrated that all three senses are resources for people who need working together on projects in emerging contexts.

The role of feelings of blame and guilt vs. mutual trust is also in play in the case. The "truth" language game is closely related to competition between different world views, where deviations from the view of the winning party is seen as errors or sabotage. When blamed and accused of this, people tend to withdraw from taking part in dialogues and processes of creating solutions. The alternative in appreciative organizing is represented by establishing a language game of mutual support and interest. The three senses of bridging by appreciation mentioned above represent the potential resource for project managers who need to build trustful cooperation as a way of non-determinist coping with complex and emerging conditions.

In a later chapter, I will take this craft of bridging and trust-building a bit further with examples and observations from the building industry.

3.5. Self-organizing complex adaptive systems as metaphor for non-determinism

In this section, I will present complexity theory as a perspective that goes with organizational psychology as a resource for people working together in organizations characterized by complex change. This perspective addresses the themes of operational and contextual uncertainty that were analysed in Chapter 2 about public sector organisational development, biotech product development and building projects. Managing projects in today's organizations involves management of change, unpredictability and complexity. Nevertheless, many project managers and consultants call for a firm and controlling approach from the project manager. Classic project wisdom recommends e.g. that the project at an early stage is defined thoroughly and unambiguously, to a degree that excludes different interpretations and understandings of the means and ends of the project. This is often done by setting a clear purpose, objectives and criteria for success. One could say that project managers and change managers are asked to manage processes like machines.

These days, complexity and unpredictability increases, it is said in numerous introductions to different articles and books. What is meant by complexity and what is meant by unpredictability? Let me first briefly review what the complexity perspective is in contrast to - to what question or what call is complexity an answer or alternative? The complexity perspective has a potential for directing the attention in different directions than the perspective of classical management models. Therefore, I will short summarize some of the central features of a metaphor, which is in contrast to complex adaptive systems as a metaphor, namely the metaphor of the machine.

Complexity theory and complex, adaptive systems is a metaphor I am "strangely attracted to" (Rijsman phrase) as a resource for understanding non-determinism in organizations. A metaphor that is strange to a lot of people and groups in business life. Constructs like: non-linear properties, far-from-equilibrium states, butterfly-effects, strange attractors, creative tension, self-organization will be introduced and explored for their explanatory power and potential for action. A story illustrates how the actions of the project manager influence the emergence of a project culture. Any project culture manifests certain limitations and possibilities with respect to the response to complexity and change. Some cultures support innovation while in other cultures, innovation and creativity are troublesome and decisiveness based on initial plans is seen as a higher value.

Metaphors for Organization: Determinism and non-determinism

Authors within management and organization theory have for years been preoccupied by the concept of metaphors. In Chapter 3, I presented the social constructionist view of Gergen on metaphors as one of three entrance points for critical reflection on the discourse. Another prominent example is Morgan, who describes different metaphors that dominate our thinking about organizations. For each metaphor, there is a way of describing, a set of practices and approaches that appear more natural and sensible than others. Morgan's point is that if we have different metaphors as a resource, we will have a greater flexibility in our understanding of situations and thus also in our choice of action or approach. If we live with only one metaphor for organization, we also hold the same image of ourselves as managers or consult-

ants and of what we are here to do, and thus we will tend to approach any situation the same way and be stuck with repeating the same procedure over and over:

> *"Ideas about organization are always based on implicit images or metaphors that persuade us to see, understand, and manage situations in a particular way……The challenge facing modern managers is to become accomplished in the art of using metaphors to find new ways of seeing, understanding, and shaping their actions".* **(Morgan, 1993)**

In the analysis of determinism and non-determinism in organizations we can expect that what is appreciated as "good management" of projects and change depends on the dominant metaphor(s). An important question is: Which roads open when we shift our metaphor from that of organizing as a question of designing a well-oiled machine to navigating within complex, adaptive and self-organizing systems?

The Machine metaphor

> *"Of course you have to experiment, but: Be sure to do it right the first time!"*
> *(quotation: VP in Sugar Industry)*

One metaphor that historically has had a particular big influence about the thinking in relation to projects and change efforts is the metaphor of the machine. The machine as a metaphor turns the focus on the virtues of the machine: precision, speed, clarity, regularity, reliability, effectiveness. Machines are good at repeating things in a rational way. Machines are designed for a certain kind of operation and work in a certain way from the moment where the last part is installed and the machine is tested. When a machine does not work optimally, it can be modified by changing parts. Machines can be understood by dismantling the parts and analyzing the parts without any losses in understanding and knowledge. Analysing the parts will at the same time provide an understanding of the functioning of the machine as a whole. (Wheatley, 1992)

Mechanical principles are often used as explanatory constructs in the understanding of organizations. Scientific Management and Classical Administration Theory are early examples, and a more recent example is Management by Objectives (MBO) (Morgan 1988). It is assumed that the optimal organization can be designed rather independent of contextual factors. It is assumed that the "one best way of organizing" can be found and therefore creativity and ambiguity can and must be limited and kept under control. Here are some of the characteristic assumptions about good organizations that are related to the use of the machine as a metaphor:

- *"Determine goals for yourself and try to reach them"*
- *"Organize rationally, effective and clear"*
- *"Specify every detail so that everyone is clear about the tasks they have"*
- *"Plan, organize, and control, control, control!"*

(Morgan, 1988, p. 34)

For many years, the dominant thinking about effective project management is that projects should be run like well-oiled machines that take you from "here" to "there" in a straight line.

The basic assumption is that the better the rational analysis, planning and control, the greater probability for success. Like a machine, the best organization is the one that is designed the right way and that functions according to the specifications from day 1. A machine should be sturdy and not modify itself because of use and meeting the environment. That is supposed to have been taken care of in the design phase.

The effective project in the context of the machine metaphor is ensured by applying the best ways, best practices and best techniques. Project models, handbooks and toolboxes are examples of efforts for optimizing project management based on this thinking. Managers are supposed to use these prescriptions, and it is assumed that this will ensure efficient projects and change processes because these methods have proven their usefulness in previous projects. Generic models, based on empirical analysis and on experience based reports are the manager's resources in dealing with the complexity of projects. Project managers are certified in the knowledge and the practices and disciplines that are seen as the best across organization and type. This constitutes an example of implemented determinism: "Use this and it will go as good as it possibly can". Success is determined by the right choice of approach on the level of management process.

When it comes to the level of the content of a particular project, the use of the machine metaphor thinking is seen in the general assumption that effective project management is *first* effective preparation (setting clear goals, developing action plans) and *then* decisive implementation of plans, as it was demonstrated in Chapter 2.

Of course this way of thinking about organizing projects and change has strengths and weaknesses. The strength of an organization that works like a machine is effective when it works - which means that the situation is stable, the conditions are clear and people behave rationally. The weakness is in contexts, where none of these assumptions are present, and that ambiguity, meaning, uncertainty and change – or in other words: complexity, characterizes the situation of the organization. The wisdom in machine metaphor thinking about project management has for many years been questioned, but until now only few have developed alternatives that were radically different and have had a practical impact on the way things are actually done. In this Chapter, a very different metaphor for organization is explored, namely the metaphor of the complex, adaptive system in nature.

The complexity metaphor

Where the machine metaphor represents the determinist view of organization, the non-determinist view is well represented by the metaphor of the complex, adaptive system. The reason why this metaphor has entered the world of organization theory is that it embraces some important features of what "really" takes place in organizations, where it is no longer possible to predict, plan and control. All of these are features that are easily neglected in the light of the machine metaphor.

Christensen and Kreiner state that the world in which projects take place is less than perfect and largely unpredictable, in contradiction to the presupposition of classic project management axioms. (Christensen and Kreiner, 1996) Uncertainties relating to the environment and the future stress the importance of flexibility and learning, and thus precise goals and objective and detailed action plans and control systems may rather block than facilitate a good

project result (if they are taken too seriously). To be able to deal with the uncertainty, projects must therefore temporarily leave the zone of predictability and adopt a more inquiring, experimental and learning approach.

In recent years, many theorists and writers have turned to complexity and chaos theory to find inspiration for new metaphors, house-paradigms and leadership principles for managing projects on the edge of uncertainty (Goldstein 1994, Stacey 1996, Wheatley 1992 and 1997, Battram 1998). In particular, when it comes to projects, it has been emphasized that uncertainty on the one hand and disagreements on the other together form very complex contexts for project managers and others, who get paid to be rational and be in control. Stacey's model has been graphically presented this way:
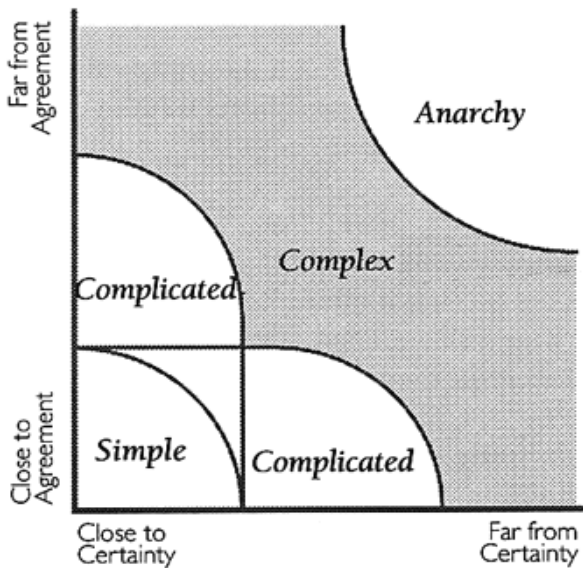
Figure 5 "Ralph Stacey's Agreement and Certainty Matrix (Zimmermann, 2001)

1. Close to Agreement, Close to certainty: Simple context
2. Far from agreement, close to certainty: Complicated
3. Close to agreement, Far from certainty: Complicated
4. Anarchy: Far from certainty, far from agreement: Anarchy
5. The edge of chaos: Zone of complexity

Like all other authors who are using complexity/chaos theory as an analogy or metaphor, that helps understanding organizations, Zimmerman identifies the "edge of chaos" as an area of particular interest, which in the figure is found in the blue area (ibid.) On the edge of chaos non-determinist dynamics become part of a systems approach to adapting emerging conditions. On the edge of chaos the old order or equilibrium is disturbed to an extent that is no longer a vital resource for the system's coping, but a new order is not present yet. Some organizing activity is taking place, but the next state cannot be entirely predicted by observing

the present behaviour. On the other hand, the state is not entirely chaos or anarchy, where no kind of order is to be observed.

One of Zimmerman's general points is that managers can use this metaphor as a resource when they have to choose their approach to a task or a project. The model is presented as helpful in avoiding complex approaches to simple tasks and vice versa.

 She comments the model:

> *"As a Professor in a business school, I am aware that we spend much of our time teaching how to manage in areas (1), (2) and (3). In these regions, we can present models which extrapolate from past experience and thereby can be used to forecast the future. This is the hallmark of good science in the traditional mode. When we teach approaches, techniques and even merely a perspective in area (4) the models seem "soft" and the lack of prediction seem problematic. We need to reinforce that managers and leaders of organizations need to have a diversity of approaches to deal with the diversity of contexts"*
> *(Brenda Zimmermann, 2001)*

This is an example of the usefulness of the complexity metaphor in relation to coping with complexity by implementing non-determinism in organizations. In the following, a choice of key concepts from chaos and complexity theory is presented and their potential in relation to the thesis is discussed and exemplified.

Complexity metaphor: review of key concepts enriching psychology

In this section, I will explore key concepts from complexity theory and their potential as enriching resources for organizational psychology. For each concept I will reflect on my experience and try to illustrate with examples, how the metaphor can help make sense of situations and processes with relation to non-determinism.

Non-linearity

Non-linearity is defined by a dynamic without a one-to-one causality between different parts of systems. Instead, in non-linear systems one occurrence can have effects several other places. Furthermore, there is not necessarily a correlation between the "size" of an effort and the size of the effect. Because organizations are living systems, the parts are continuously and simultaneously observers as well as observed. Therefore, it is never possible to tell exactly where the effect of an utterance, an act or episode has limited its effects, and what the effect will be. We cannot predict exactly how another human being will react and respond to our actions and communications. Neither is it possible to predict and control the sense being made of situations and episodes. At a meeting in the project group, it is only possible to predict and control the first few moments. After that time, what we have prepared in the form of pure information and facts may be interpreted in an unexpected way by some of the project members with a chance/risk for heated disputes.

Another aspect of non-linearity is that causality in social systems is circular, which means that it is not possible to identify one part in a situation as the part causing another part to act in a

certain way. Rather, people act and react to one another in loops of mutual affecting. For a system to be adaptive and flexible, the parts need to observe feedback that tells something about how the condition for the system how my relations to the others fits to the situation that is emerging. Non-linear systems are always on their way to becoming something else in a continuous effort to adapt to emerging conditions. "The best way" in systems with non-linear properties is therefore always interpreted in the context of the goals and survival of the whole system. It is not the fittest, but what fits the present condition, that survives.

In contrast to machines, complex adaptive systems do not work according to a master plan, and as a metaphor for organization processes, unpredictability is no longer seen as something to be avoided, but something to appreciate as a necessary adaptation to emerging conditions.

Equilibrium and non-equilibrium: the edge of chaos

Non-linear systems, and projects, shift between orderly and more random states, which in chaos theory is termed states of equilibrium and states of far-from-equilibrium. Most project management theory, tools and models tend to regard equilibrium as the natural and desirable state for an organization in general and for project manager in particular. In this state prediction, planning and controlling leads to the defined outcome – linear processes predominate. In many organizations and in many heads of project managers, this kind of control over the project is the right form of control. When things go according to plan we have a low operational uncertainty.

However, nowadays the equilibrium state is frequently interrupted by fluctuations in market, competitor, technological, societal or organizational factors. We cannot be sure that following the plans will make satisfied customers, users and stakeholders. When there is uncertainty and maybe also disagreements among stakeholders in relation to what is a meaningful project we have a high contextual uncertainty. This uncertainty is about whether there is a world waiting for the project as it is presently defined.

Complex projects shift between maintaining order and operational efficiency on the one side, and adapting to new situations on the other. In periods where order is maintained are the project purpose, idea, meaning and plans are not questioned more than on a very superficial level. In these periods a lot of work progress can take place. A project group that enacts their situation this way is choosing to stay in the state of equilibrium for a while.

A project group may also choose to let go of the equilibrium state, and this is where complex adaptive systems as a metaphor make a difference. New order, new understanding, new directions can emerge without being prescribed in advance. Complex adaptive systems adapt to new conditions by entering a zone of complexity, of "the edge of chaos" and in a far from equilibrium state. Self-organization is the natural mechanism of reorganizing information, relations and that counts for adapting the system to the emerging new situation. And in the light of complexity and chaos theory, none of the states should be considered more "natural" or generally desirable than the other (Goldstein 1994).

The Butterfly effect

In the transition phase between order and disorder and on the edge of chaos, the actions of the project manager can have a "butterfly effect" on the project culture. One example is the very early stage of a project's lifetime. There is neither total chaos nor established order. As we saw in the video projects, small differences in actions and bias may have a large effect on the emerging culture of the project. During a project, the manager may be most influential through actions on the edge of chaos, reinforcing or interrupting the project culture or "house paradigm". Indirectly, the project manager thereby affects the abilities of the project group for adapting to emerging conditions. Small incidents can result in large repercussions – and big interventions (e.g. pep talks) can give nearly no effect or undesired consequences.

Strange attractors

The concept of attractors is central to complexity theory. Especially on the edge of chaos, when it comes to explaining the dynamics of systems that are far-from-equilibrium. Attraction is about the shape that is found in chaotic states, which only were made visible by the help of computer imaging. Attractors are in chaos theory the area that a system in a chaotic state is drawn towards, almost magnetically – making the shape visible. Attraction is an emerging order, and thus the concept of attraction points to the property of "order without predictability". Therefore, the attractors are labelled "strange" as they cannot be deducted on basis of experience and is in a different logic than in the previous order/equilibrium state.

I think that the experience of an attractor is not that strange to people. If we look at everyday language, we sometimes talk about "breakthroughs", instances in group processes or inner dialogues where we were "groping in the dark", suddenly we saw the light, the experience of "Eureka!". The experience of starting a meeting very clearly but then suddenly becoming very confused and anxious for some time. If you do not fly, suddenly, unexpectedly without warning, sometimes a solution or a new way of seeing things is there with emerging clarity, and a way forward opens up. The power of the metaphor may be expected to rest in the confidence that "this confusion and anxiety is not wrong, just unpleasant for the moment". The consequence that can be expected is that the group of people does not retreat to the old idea and oppress the new information, but stays in the "far-from-equilibrium state" for enough time so that a new attractor can emerge.

Goldstein proposes that in human systems, an attractor is analogue to *context* or frame for meaning-making (Goldstein, 1994). The definition of the context sets the frames for what can meaningfully take place, what we find meaningful to do and what it is possible for us to understand. Order means that we live with stable context definitions where the sensemaking is stable and goes on unnoticed. When the system is disturbed sufficiently by contradictory information a process of dissolving the order is instigated. The context definition is questioned and a self-organised, emergent search process of a new meaning or context is started. The result is construction of a new meaning, so we can make sense of the different information and observations that were previously nonsense.

Bifurcation points and the state of paradox

In complexity theory there is a notion of certain points in processes, where two or more possibilities of continuation are present and true at the same time. The assumption in complexity theory is that no matter how efficient computers and other devices that are brought in, it cannot be predicted to what side the system/network will turn, so to speak. It is a question of chance, and does not follow single causal mechanisms. So before the point of bifurcation, complexity science regards all possibilities as equally true, and must wait and see what is true after the point is passed.

In the human condition some points of uncertainty also come to mind when this metaphor is applied. When I am at a meeting with a potential customer, there are a lot of points in the process, where there is something analogue to a bifurcation point. I may for example say to the client: "I don't feel comfortable with this task, something is not "right" – so I am not sure if I am the right consultant for you". In this case I can't in advance know what the response will be from the client. I have in some instances experienced that this was followed by an improved relation, and in others it was followed by termination of the relation. It is small speech acts in episodes that can affect the definition of the entire context. The main point of interest for this dissertation is the notion of bifurcation points as moments in a process, where the future is determined, or defined, in a way that is more a result of coincidence and chance, than as a result of causality and the possibility of calculated prediction.

Self-organization as adaptation principle

Non-linear systems possess an innate ability to develop new adaptations and coordination at the edge of chaos through spontaneous self-organization. These adaptations take place in the transition between orderly states and more disordered, random states. Self-organization is a spontaneous and radical response to a far-from-equilibrium challenge. Goldstein describes the process in this way, drawing on observations of the Bernard liquid:

> *"This change is accomplished not by a hierarchically imposed mandate on the system, nor by any other method of overcoming the system's resistance, but by self-organizing change. This change is self-directed, self-generated, and self-guided as the system reconfigures its own resources in the face of a far-from-equilibrium challenge, which in this particular case, is heat"*
>
> *(Goldstein, 1994, p.37)*

"Refiguring the resources" sounds like a key phrase, as the principle of self-organization is a central element in the complexity metaphor. In a project group, e.g., the resources are the persons, the relationships, the information and knowledge, the budget, the time allocated, the visions, goals, ideas, plans, the handbooks etc. All these elements may hang together or be connected in numerous ways, and when a pattern is established there is an equilibrium state. In a group, equilibrium seeking behaviour is attempts made by members to save and preserve the existing pattern or order represented by a configuration of resources. Equilibrium challenging behaviour will accordingly be behaviour that questions or challenges this order, and eventually creating a condition of far-from-equilibrium, so that spontaneous self-organizing processes are initiated.

In the light of the machine metaphor we tend to look for the organizing principle, or rules that govern a system that we observe and attribute as "organised". When the behaviour is complex, we make very complex models and explanations. We tend to assume that there is an agent that leads and overviews the process, and checks that the rules and principles are followed for the system to show efficiency. When thinking machine metaphor, we also tend to think that someone has to take responsibility for and control the change of operating, when necessary.

Complexity and chaos theory proposes an alternative view: that this may be an illusion: that there is control on the level of the entire system that we observe. Complexity theory explains order as something that emerges without anyone in command or in control, but as a result of many agents following the same few rules or tendencies for behaviour. An example from nature is flocks of birds. When we look at a flock, our habitual way of reasoning leads to the idea that the bird in front is leading the rest of the birds. But it has been demonstrated by observation and by simulation on computers that flocks of birds find their way without a leader bird knowing and controlling the direction (Kelly, 1994).

Instead, it seems that a few rules on the level of the individual birds can account for flock behaviour. If we try to make explanations and models of flocks of birds on the level of the flock as the unit of description, we may be looking in the wrong place. The flock finds the direction and avoids collisions and predators without a master plan. Like in the case of human cognition, where the hypothesis of Hofstadter was that cognition is informal – but what looks rule-governed is an emergent property that is based on rule-governed, but sub-cognitive body/brain processes (see Chapter 1). Complex behaviour does not necessarily have a complex explanation – leadership may be seen as the emergent behaviour of the whole system in focus. In this perspective, it is almost a bizarre idea to write the "best practice" handbook of project managers, and it is not surprising that the lists of disciplines, practices and competencies have become long and are still growing.

One significant characteristic of the complex adaptive system is the way it affects our thinking about problems, deviations, errors, unexpected and random events and other out-of-the-norm events. In the thinking from organizations as machines, all these events call for initiatives to eliminate the discrepancies from the equilibrium state from the right way of running things. In the light of self-organization as a mean for adapting to emerging conditions, deviations are potentials that should be looked at as candidates for "better ways" to deal with issues in the environment. A parallel to Appreciative Inquiry is seen here: a shift from attention directed towards problems that need to be solved to attention towards life-giving patterns that need to be supported and reinforced as part of a continuous reorganization.

Bounded tension as a source of creativity

Most projects run into many contradictions, dilemmas and paradoxes. For instance, different stakeholders pulling in opposite directions with some advocating for continuity, and some for radically new solutions. Planning and control vs. flexible adaptation and learning is another polarity. Balancing time, budget and quality constraints a third. When living in the machine metaphor, this disorder should be dealt with and the contradictions and conflicts solved before going on with the project. Clear and unambiguous goals are seen as a must for an effective project, that runs like a well-oiled machine and the project group will operate in a stable zone

and avoid the anxiety that comes along with conflict, disorientation, confusion and disintegration.

Organization theory with inspiration in complexity theory advocates for holding the anxiety, for two reasons. Firstly, many of these dilemmas cannot be solved once and for all - they have to be lived with if the project is to be continued. Secondly, in the light of the complexity metaphor, contradictions, conflicting views and dilemmas can be productive as sources for creativity and learning, not only a source for discomfort. If the project manager suppresses the anxiety, possibilities for new insight are blocked too. Now, what does this rather theoretical idea mean on the practical level?

The psychoanalyst C.G. Jung describes the dynamics in the solution of "collision of duties". The situation, where human beings experience that two or more loyalties apparently cannot all be fulfilled – on the contrary, fulfilling one of them is simultaneously violating the other:

> *"Far from all collisions of duties, if any at all, can be truly "solved" even if you discussed them to the end of time. Some beautiful day it is suddenly there, apparently as the result of a shortcut."*   *(Jung, 1998).*

Dilemmas here are seen as a source and driver for development. Only by maintaining both sides of the dilemma and keeping on moving there is a chance for finding or "living into" local, temporary solutions. The temptation to try to eliminate or deny the existence of one of the sides must be avoided in projects where flexible responses to situations of complex uncertainty are important.

Creative responses and adaptations from individuals as well as groups are dependent on the existence of tensions. Tensions can exist on the individual level as intrapersonal tensions and in-group tensions in the form of paradoxes, dilemmas between different positions (Stacey, 1996). Here, there is an assumption about the power of tensions, or of cognitive dissonance that works in the direction of a change of the situation or the meaning of the situation (Festinger, 1957). Containing different positions is essential for innovative groups - not consensus or harmony as the agenda. One big challenge for the project manager is to help the project group to hold the anxiety that is connected to dilemmas and having to let go some beliefs and "truths". Avoiding anxiety is also avoiding positioning the project at the edge of chaos - and avoiding creativity and innovation.

Complex adaptive systems metaphor – summary of key concepts

The shift of metaphor from the machine to the complex adaptive system constitutes a potential dramatic change in what are viewed as the important themes to attend to as a project manager or in the role as a consultant. If non-determinism is to be viewed as normal as predictability and the possibility of determining your way from the beginning, I see this metaphor as very useful in generating ideas for coping with the unexpected and when there are tensions between diverse meanings.

Non-linearity: Organizations are networks of relations between people. People act according to the meaning of the events, not on the thing itself. The meaning of something is not caused by anything but is composed of what follows from it. There is no means by which the future

actions of people can be caused. Non-linearity is the lack of proportion between the intentional effort and the resulting activity. Small effects may follow big efforts and vice versa.

The edge of chaos: People in groups and organizations may at times try to maintain order and equilibrium, and may at other times resist or try to alter the existing order. The edge of chaos is a state, where an old order is left and a new order is emerging, but still not established. This state, how unpleasant and anxiety provoking as it may be, is also productive in the sense that self-organization is possible in this state. Self-organised change can follow small changes of the rules or behavioural tendencies of the members.

Strange attractors: Emerging forms in natural systems that in human systems are analogue to context and frame of meaning making. The attractors are functional in disturbed and confused times, where an attractor may emerge – not entirely out of the blue, but on the other hand not as something that is designed and determined through calculation. A new frame of understanding may follow from a period on "the edge of chaos", where all elements may be connected in new ways, so that order, control and effective project management can continue on an entirely different ground.

Self-organization: On the edge of chaos there are spontaneous self-organising processes that are not controlled on the level of the whole, but where the outcome is a result of simple rules applied on "micro-level". The idea of self-organisation may suggest that managers in some situations accept that even if they are in charge of a project or a change process, they are not in control and should sometimes not try too hard to become completely in control.

Bounded tension: Complexity theory suggests that contradictions, paradoxes, dilemmas and conflicts are not always something that we should try to get rid of for the purpose of being effective managers and consultants. In some instances we are more productive if we recognize that some of the dilemmas can't or should not be solved once and for all, but be something we have to live with. Tensions that are bounded in time and space may be a driving force for innovation and creativity.

Reflection

In organizational consultancy theory something similar has been elaborated – though not explicitly talking about improvisation - from another angle in the so-called Solution Focused Approach (Langslet, 2000). This approach that is developed in Norway is an approach that combines basic ideas from Appreciative Inquiry, Solution Focused Therapy and Narrative Therapy within a social constructionist frame. In this approach the change is seen to derive from the client (the Actor). The client is seen by the therapist as a skilled problem solver that acts when confronted with a problem or a desire for change. The therapist thus encourages the client to experiment, to try out different ways and watch carefully for the effect and compare with other ways. The attempt with the most desirable effect is seen as the key to change. The work of the consultant is that of creating a mindset that is capable of identifying and thus reinforcing the "solutogenetic forces".

A project manager with this metaphor in mind will probably tend to see herself as more than an action plan implementer. This means that identifying desired effect markers from relevant stakeholders and colleagues is more important than following an action list 100%. It consti-

tutes a change from actions to signs, from what to do to how to know, leaving the question of action open and letting the world response determine what a good action was. And in this way it falls into line with the retrospective sensemaking that Weick writes about.

The following cases illustrate processes with non-determinant qualities that can be made sense of using the complexity metaphor. What seems to be a failure in the perspective of the machine metaphor can also be viewed as competent dealing with complexity, if that metaphor is used instead. Let me examine a case story that will illuminate this difference.

Case story: Self-organization: emerging meaning in meetings

This is a story from a process consultation job in a department in a mobile telephone company. The story is an illustration of emerging processes of sensemaking.

I was hired as a consultant to facilitate the dialogues concerning competencies development in a situation where reorganization had taken place. The story I want to tell is from a ½ day meeting that was the third time I met with the group.

During the meeting, the group and I were exploring the new context from different perspectives. One perspective was that of the environment and the stakeholders of the department: what did the situation call for from the department? Another perspective was that of appreciative inquiry in relation to the stories of competencies that each member of the department had experienced. A third perspective was a dialogue about how the potentials and competencies demonstrated by the employees could contribute to the department being more broadly answerable to the quests of the stakeholders and environment. This was a different approach to competencies than the one they had previously taken. Before, they had worked on defining the list of necessary competencies for members in general. One might call this a One Right Profile-solution approach. The shift to the approach taken on this meeting was that of building up complexity: the diverse stakeholder perspectives and the different ways of being competent.

The ½ day meeting was constructive in clarifying and creating a mission and a purpose for the team in the newly changed organizational context. At the end of the meeting a couple of the employees remarked: "This meeting was all right (due to the result) - but next time I would like a firm agenda beforehand!" This comment was the interesting detail that I want to put the attention on in this case.

Reflections:

Like most meetings - the meeting took turns that no one could have predicted. The question is if a more fixed and firmly held agenda in this case may have been useful or counterproductive. Namely, because sticking to the agenda may have hindered the breakthrough of a theme that was not foreseen to come up - unplanned but not unthinkable. Or, did things become more complicated than they needed to – like Zimmerman worries about? Is this a situation in a domain that is characterized by complexity – or simplicity? And as a consequence: what would it make sense to start with as an approach?

Reflecting upon the story, it became clear to me that the meaning of the remark can be made in at least two different ways. It will be related to ideas about what "good meetings" count for. Is a good meeting seen as a well prepared, planned and controlled process? In that case can the meaning of the expression be made as a disconfirmation of the efficiency or utility of the meeting?

Or, is a good meeting one where the participating people engage in conversation, exploring, testing, and listening with an open mind as to what the conclusion is to be? If that is the case, the remark can be seen as a confirmation of the value of the emergent sensemaking, and that the remark is a way of saying: Hey, this was useful - how can we make this happen "on purpose" some other time - what's the secret receipt? Instead of seeing the remark solely as a critique, it could also be useful to see it as en expression of a wish: Teach me to install or cultivate processes with emergent properties of sensemaking.

In relation to the present exploration of the machine metaphor and the complex adaptive system as metaphor the two interpretations represent each of these metaphors. The machine metaphor, when used as the frame of reference for a good meeting is related to meetings that have a prepared form, almost like an algorithm, and by this means the planned output is produced: a decision. The use of complexity as the metaphor is related to meetings that allow diversity and contain the tensions that follow, allows lack of certainty and clarity and let contexts (attractors) emerge in unpredictable ways.

Story continued

Some time later I was invited to a meeting with the managers of the department. And because I had the above reflections I engaged in the meeting in a certain way that resulted in the idea that I could work with the department about finding ways to run their meetings more flexibly, depending on the purpose of meeting: divergent/ convergent purposes, or open vs. closed agenda conversations. This illustrates the way sensemaking or reflective process that the consultant takes part in informs the proceeding route of consultation. But, it did not ensure success in the sense of new tasks as a consultant. The clients said that the idea was good and that they would think about it, but I have not been back to the company. Unfortunately (at least for the sake of my business) this idea was never realised. Probably, the reason for this is that the idea was too strange for some of the employees after all. Or, maybe it is because my role as their consultant was primarily the idea of the boss, who shortly after was posted to a Far East Office. New managers, new consultants, maybe.

Reflections:

Client-consultant/psychologist relationships emerge in a co-constructive way and have an uncertainty quality. The complexity construct of far-from-equilibrium makes sense here: because there is not an inherited order in the relation between us, it is highly non-linear and can be affected with a big effect with small means. Relations with ambiguity can be influenced by the way I engage myself into them. I can "enact" a certain part for myself in the play, and thus invite the client into a part that fits. In this case the "recipe-giving" role gave way to the role of a co-constructor of emergent conditions at meetings. I found this to be nice and useful for us all, but as the story showed, not all felt the same at the time.

When we make sense of meetings, projects and other processes, we do this in retrospect. We tend to underestimate the experienced disorder, confusion and chaos. In the retrospective, we know the result or the end of the process, what we did not know when we were actually in the process. At the same time we create the expectation that overestimates the future possibilities for prediction and control in future, similar, but never identical, projects and processes (Weick, 1997). The difference is that the meaning of the meeting is not clear before it ends, so only looking back can we see our experience in the light of the meaning of the meeting. At the moment we actually feel confusion, the meaning is still not clear. The "attractor" in the form of a new meaning or context for working together, was in emerging.

The group were at times in a condition that maybe best can be characterised as being on the "edge of chaos" with confusion, disagreements and uncertainty. The old approach was not as attractive and a new attractor was not yet in sight. This may have elicited what in the language of complexity theory would be termed "self-organizing" where connections and understandings are redefined in a spontaneous process. To the extent that the members of the group organised it themselves, they maybe in retrospect did not see very clearly what the contribution of the consultant was: we did it ourselves anyhow. So: consultant, how about contributing next time?

Or, that they in retrospect could recognize the process, but not that they had to suffer much on the way. As a consultant the concept of being on "the edge of chaos" where new meaning emerges and learning takes place is nice as a resource that helps "trusting the process" and resists the pressure for taking control in a conventional way as an expert. But, in this case it seems that it may have been even more helpful if the consultant had been able to share this understanding with the client or client system.

There may be a dilemma here. Uncertainty calls for an emergent process, but on the other hand we get anxious if we cannot foresee what will happen in a context where we are exposed to the view of others, and maybe competition.

Consultants, project managers and change agents can draw on the resource of complexity as a metaphor, but it is crucial that ways are found to hold the anxiety that often are connected to uncertain processes in business contexts. On the other hand, if the uncertainty is removed by the consultant by inserting an expert model, probably nothing new is learned.

Case story 2: "Butterfly Effect" in project management

This is a case story from my own practice as a trainer on project management courses. I have been a course leader for these open 4-days courses for 6 years, and the story in this case is from the latter part of these 6 years, as the activity has emerged through the more than 20 courses. Meanwhile, in this story I will focus on the first time, where the story constituted a particular, distinctive occasion for sensemaking.

Why this case?

I present this story to demonstrate how different mindsets towards project work seem to directly affect the ability of the project group to adapt the project processes to complex

change in the context. Especially, the case is told in this place, because it is a story that suggests that the metaphor of complex adaptive systems may lead to a more flexible approach and a vocabulary of coping in relation to non-determinism. The story demonstrates how the complexity metaphor can be integrated in training sessions for project managers and how reflection in practice can be supported by using this metaphor.

I call the case story "butterfly effect" in project management, because it is an illustration of non-linearity, where a small difference in initial conditions (a swing of a wing of a butterfly in South America) may lead to dramatic changes later in another place (a thunder storm in North America.

The story

On a training course for project managers we launched three development projects lasting approximately 3 hours. Within that timeframe, the three project groups are asked to develop, produce and present a video film about project management in future organizations. The groups are formed randomly. We, as course leaders, played the role of top management. During the 3 hours, we tried to expose the projects to different changes and disturbances from the environment: specifications changes (time, quality), staffing (reorganizing, appointing new manager) and cross-project task forces (interview survey). Top management represents in this way the dynamic environment in general and the stakeholder perspective in particular. The projects were intended to be an exercise or experiment that gave the participating project managers an experience from dealing with change and unpredictability while developing the project during a project lifetime.

In the fall of 1999, we got an idea for a slight change in the set-up. Until then all three groups had the same first encounter with top management, namely that they were asked within 10 minutes to present their goals and plans for the project. The change consisted of introducing small variations in the character of this initial bias from top management. The initial bias was given after a few minutes and distributed randomly among the three projects. The choice of variations in initial bias was inspired by the three perspectives on project management that was presented in depth in Chapter 2.

Reflection and recapitulation of perspectives

1) The perspective of projects as developing and implementing a plan.
This perspective was dominant from project management and introduced as a discipline in the late fifties to the late sixties. This perspective on project management is focused on operational control and on structuring of activities. The organizing is seen as a question of installing a bureaucracy that will ensure effectiveness and efficiency, at least in the relatively stable organizations, where project management was first introduced. Tools like Gantt chats, CPM and PERT are central in designing a rational chain of activities, which is seen as the critical factor in managing projects successfully (e.g. Evans, 1993).

2) The perspective of projects as temporary organizations.
From the late sixties the planning perspective was criticised for several reasons, but first of all for neglecting the questions of creating conditions for project member motivation and stakeholder support. More focus on these sides of project management led to import of ideas

from Human Resources Management. Methods of planning were supplemented by principles of participation and involvement of stakeholders. Still, the basic assumptions were modernist in that it was assumed that the project as a temporary organization is something to be read and with the right technology and skill can be made manageable (Turner, 1999 and Turner, J. R. & Müller, R. 2003).

3) The perspective of projects as continuous social constructions of meaning.
From this perspective projects fail because it is neglected that projects are interpreted differently and have different meanings, and that the meanings of a project are in a continuous flux – whatever the plan says. This perspective is thus post-modern in that the idea is left of finding the truth about a project, and using this understanding as the basis for an optimal planned project process. Instead, focus is placed on the coordination and management of multiple interpretations, expectations and meanings of the project, and as a result the project is "under construction" throughout its lifetime. This is a perspective that is relevant in dealing with the dilemmas for project managers in a position where they are expected to manage something that is complex and unpredictable (e.g. Christensen and Kreiner, 1997).

Story continued

The first project group was after a few minutes asked to prepare and present for top management a clear goal, objectives and a schedule for project implementation. The second group was asked to identify and present for top management some considerations about ensuring motivation, and about organization and utilisation of the human resources. The third group was asked to develop and present a shared dream or vision for the fulfilment of the project. The groups had 20 minutes to prepare themselves and, after their presentations, we introduced no further intentional differences between the three groups.

A striking difference emerged in the reactions from the three groups to changes from the surroundings (read: us). We had expected some difference due to the small differences in the initial conditions, but the extent was dramatic.

The first group, who had worked on clear goals and schedules, reacted to changes with a great deal of frustration and anger, and their work almost stopped.

The second group, who worked with motivational and organizational considerations, reacted with somewhat less frustration and there was a moderate decline in progress. This group, however, handled individual frustrations, doubts and anger differently. The project manager and the members were attentive to the effects of the changes on each individual, and addressing these effects (crisis help) made reorganization and adaptation to the new situation possible.

The third group, who had developed a shared vision or dream, reacted to changes not with anger and resistance, but with increased creativity and inspiration: "Now I have a brilliant idea for how we can reinvent the project".

Reflections:

The story illustrates some of the characteristics of complex adaptive systems. After repeating the exercise a number of times we must admit that we have witnessed regularities as well as variances in what followed our interventions. Of course, these exercises cannot be compared to psychological laboratory experiments, and can of course not count for general psychological generalisations. After discussing the exercise with the participating project managers, I find that the case is an interesting story that demonstrates some aspects of organization as a complex adaptive system:

How can we explain that groups develop so differently only because of a small difference in task? The complexity metaphor contributes with the idea of an adaptive system that is not in equilibrium. Small influences in the form of feedback in the early stages of a project may lead to great differences in the emerging culture in the project. We were struck by the difference that resulted from rather small differences in kinds of "disturbances" in the beginning of the group's life. In the early stages of the life of a group there is not an established group culture or approach. Thus, it is an example of a system far-from-equilibrium, simply because it has not had the time to develop a way of working. And in these stages, non-linearity is at its highest, where small influences can have high impact.

However, one could argue that the effect of the "intervention" was an effect of the fact that it was an authority, namely a course leader playing the role as a CEO. Both in and outside the exercise, I was in a kind of hierarchical relation to the participants. But, if that was the case, one should not expect that the participants reacted with rebellion, and almost refused to go on.

In the case story, there seems to be a connection between the culture and management approach in the project on the one hand, and the level of flexibility in response to change on the other. When exposed to change and put in a situation where they needed to invent a new way of going on, it seemed difficult for groups with an expectation of being in control of the world. When you are loyal to the idea that you should be in control you are less able to be flexible.

The more a group focuses on clarity and unequivocality in goals and objectives, and in plans and time schedules, the greater the tendency to reject, resist or ignore change from outside. Feelings of frustration and loss of purpose seem to hinder the group's ability to enter a space of learning and adaptation to the new situation.

The more focus on shared dreams and on visions concerning the impact of the project on the world, the greater the tendency to react with creativity and innovation to change. A minimum of restrictions, limitations and rules seems to support the project group's ability to enter a zone of creativity and innovation.

The more focus on the "human side", the better the handling of individual dilemmas.

The case is an illustration of the utility of the complexity metaphor. It makes a difference, which mindset a project manager meets the world with. During a project's life, there will be periods with varying relevance for the 3 perspectives. But none of them can be totally ignored. The project manager must therefore accommodate all perspectives and not exclude

any of them as less "true" or as false. Instead, the focus could be on exploring from moment to moment which perspective will ensure a sound balance between planning, organizing and the weaving of dreams and visions.

Concluding remarks: Complex adaptive systems as a metaphor

In this section, I have argued for the utility of the metaphor of complex adaptive systems in the understanding of how non-determinist coping can be implemented in organizations organizing projects and change. The metaphor is not at all new, it has been around organization and management theory for more than a decade and was especially "hot" in the middle of the nineties. Now, it has a status of being "accepted" as a metaphor, though it still is far from being the mainstream metaphor for what goes on in organizations that try to organise development and change. Especially in the case of project management literature and the dominating discourse, it must be said that the penetration of the ideas has been scarce. It is the reason why I introduce the perspective here, and hope to contribute to making the metaphor an even more practical resource. Thus, some of the potential I intuitively feel is there may at last be realised for practitioners like me and for project managers and change agents.

The metaphor's primary strength is that it gives food for thought in relation to non-determinist coping with unpredictable change. Depending on your preferred metaphor, changing your plan can be seen as corrective action that should be avoided or prevented by good preparation in combination with proactive decisiveness. Or, it can be seen as what follows from the project being in a state of re-orientation for the purpose of ensuring experience of meaning with the project among stakeholders, users, owners, authorities, etc. The edge of chaos is where influence is possible for agents in the environment. The edge of chaos is a metaphor for that state of mind, atmosphere, or whatever it is, where entirely new meaning can emerge in and among the members of the project.

3.6. Improvisation as a mindset for non-determinist approaches

In projects and changes in organizations there are usually plans for what is going to happen. There is also more or less articulated knowledge among many project managers and change agents that things are not going to happen as planned. One main reason for this is that plans are developed at a time, where there is very limited knowledge about all the aspects and patterns to be addressed in the process, high uncertainty about technological issues and because the project is still only in the minds of people, the real attitude to the project among stakeholders in the broad sense is yet to be assessed.

Therefore, in many situations, the project manager or change agent will have to act without a plan, namely to improvise (Im proviso: without plan) for the sake of adapting the process of the project to circumstances that were not anticipated. Can we say something useful about how to be prepared and able to do this? In this section, I will present some theories, where improvisation in music and theatre are used as metaphors for enriching the understanding of organizational psychological phenomena. First some examples will be introduced and discussed, and afterwards two case stories will be told and discussed in the perspective of improvisation as a mindset.

When a plan for the project is developed under these conditions, one could say that a maximum of decisions are made at a point of time, where knowledge is minimal. Still, this is conventionally seen to be rational, because: how can we work rationally without having decided what is the right thing to do? Brunsson calls this kind of rationality decision rationality: the belief that good decisions ensure good actions. He identifies another rationality called action rationality which takes the opposite point of departure: that we can only know what we are dealing with if we start acting and thereby elicit feedback from the relevant environment (Brunsson, 1982). Earlier, we have discussed the point made by Weick about plans as constructions that have the primary function of eliciting a collective will to act, and not necessarily to work as the prediction of the process.

Performative Psychology

Performative psychology is a tradition based on Vygotsky´s theories on learning and development, in which performance is seen as the key factor in learning, development and social adaptation (Vygotsky, 1978). We develop, learn and adapt to emerging conditions by performing "beyond ourselves" or in other words by being "a head taller than we are" and in that performance incorporate others in the situation (stage) and create new levels of coordination. Performance is viewed as a natural process that can be observed very easily, especially in younger children learning language. And it is assumed that as long as we go on performing in relation to situations and others we develop throughout life a still richer repertoire for improvisation. In contrast to this, we will freeze in repetition and predictability if we stop performing anew in situations where we do not have the knowledge or plan that tells us how to go on:

> *"In environments that expect adults to do only what they already know how to do (as well as environments that demand that we do what we don't know how to do but provide no way to learn it), we are not likely to take risks to perform as*

other than who we think we are. Instead, we tend to repeat our well-learned patterns and passively play out the roles we have already learned. "
(Holzman, 2001)

In relation to implementing non-determinism in organizations, this view may be interesting because it suggesting, that non-determinist coping can be obtained by seeing situations as stages, and adaptations and developments as performative acts into someone we have not yet been. This act creates membership of a new language game that again constitutes a new level of coordinating work.

Jazz and theatre metaphor for improvisation: literature review

Weick is a musician as well as a professor in organizational psychology, and he has explored improvisation in jazz bands, and suggest that it takes a certain mindset to act without a preconceived plan that can be compared to the mindset of musicians who play their instruments without a written tune when they play a solo or participate in a so-called "jam" in jazz music (Weick, 1998). The necessary change of mindset can be supported and the capability to improvise is thus not a question of spontaneity alone, but also something that can be cultivated. He underlines the balance between proactivity and reactivity, which interestingly is supported by a CEO from a mayor Danish telecommunication industry who is quoted for this statement:

"I don't believe in being proactive anymore - I now have come to believe in being reactive – but to be it fast!"

The question that can also be of great relevance to project managers and others in organizations is how the ability to act effectively without a plan can be supported and cultivated. In other words, how is the ability to react competently developed? Weick suggests the following characteristics for groups that are able to improvise (Weick, 1998, p. 552):

1. Willingness to forego planning and rehearsing in favour of acting in real time;
2. Well developed understanding of internal resources and the materials that are at hand;
3. Proficient without blueprint and diagnosis;
4. Able to identify or agree on minimal structures for embellishing;
5. Open to reassembly of and departures from routines;
6. Rich and meaningful set of themes, fragments or phrases on which to draw for ongoing lines of action;
7. Predisposed to recognize partial relevance of previous experience to present novelty;
8. High confidence in skill to deal with non-routine events;
9. Presence of associates similarly committed to and competent at impromptu making to;
10. Skilful at paying attention to performance of others and building on it in order to keep the interaction going and to set up interesting possibilities for another;
11. Able to maintain the pace and tempo at which others are extemporizing;
12. Focused on coordination here and now and not distracted by memories or anticipation;
13. Preference for and comfort with process rather than structure, which makes it easier to work with ongoing development, restructuring, and realization of outcomes, and easier to postpone the question, what will it have amounted to?

Barret is another organizational theorist who draws from his experience as a jazz musician. He puts the following list of features: (Barrett, 1998)

1. Provocative competence: deliberate efforts to interrupt habit patterns
2. Embracing errors as a source of learning
3. Shared orientation toward minimal structures that allow maximum flexibility
4. Distributed task: continual negotiation and dialogue toward dynamic synchronisation
5. Reliance on retrospective sensemaking
6. "Hanging out": membership in a community of practice
7. Taking turns soloing and supporting

Kirkeby is a Danish philosopher that uses the music ensemble as a metaphor for the project group and discusses the language that is used in organizations in the efforts of structuring the process. (Kirkeby, 2003). He is occupied with the question of finding a language for project management that does not constitute the members of the projects as "means", human resources or resource units and suggests new words like: "emotional logistics" and "projects as art works". He suggests the following translation of competencies in the ensemble to competencies in project work of the above characteristics:

1. Loyalty to the Spirit of the Piece
2. Improvisory loyalty
3. Generous loyalty
4. Case-bound loyalty

As the central competency he suggests *humanist educatedness and authority:*

1. Being critical towards any authorities, theories and information
2. Being able to empathize
3. Being in harmony with oneself

In relation to improvisation he argues:

> *"Educatedness gives the opportunity to transfer experiences from one domain to another. Thus, educatedness gives the presupposition to deal with the unpredicted, because you can draw on a big reservoir of analogies in dealing with unfamiliar situations. Educatedness gives a sense for contexts"*
> *(Kirkeby, 2003)*

Moss Kanter asks the question: "What distinguishes the pacesetters from the laggards?" in relation to the differences between different companies in their ability to make opportunities out of radical changes due to the emergence of new technologies. (Moss Kanter, 2002). The bottom line in her research was that the pace setters:

> *"..did not wait to act until they had a perfectly conceived plan; instead, they created the plan by acting. In short, they improvised" (Ibid. p.77).*

This research took off to explore strategic thinking and work, but the relevance for other ways of working together towards an intention, like project management, is obvious:

> *"Compare the improvisational model of strategy development with the more traditional scripted model. In the latter, the company seeks to craft the best possible plan so that it can be handed off for a predetermined course of execution involving a predictable set of events and a specific final goal…….The improvisational model throws out the script, brings in the audience, and trusts the actors to be unpredictable – that is, to innovate"* (Moss-Kanter, 2002, p. 76)

Moss Kanter explores thus the idea of improvisation based on its use in theatre. The metaphor is accordingly that of seeing the world of a project manager as a theatre, with a stage, roles, actors and audience. Acting without the feeling of certainty that results from having developed a plan or script takes courage. But also, as it is pointed out, it takes rapid feedback from the audience. (Moss Kanter, 2003, p.81).

In comparison to the metaphor of jazz improvisation, the theatre metaphor takes one step further in the more direct involvement of continuous feedback from the audience, which in projects will correspond to customers and other stakeholders. For theory on project work, this suggests a continuous flow of signs or markers from the environment. The environment being stakeholders, customers, sponsors, top-management, employees, quality department etc., are equally or even maybe more important for guiding actions than long term visions. This is so at least when it comes to projects where strict prediction and planning is impossible or not desirable.

To summarize the thinking of Moss Kanter on improvisation in business organizations, let us follow her six elements that count as necessary ingredients:

1. Themes: improvisation is just confusion if it is not under a clear "topic, headline or direction".

2. Theatres: improvisation cannot take place in a structure that is maintained for the purpose of repeating the past or in implementing scripts (project plans). Some kind of delimitation from line organizational logic is necessary. The choice of themes that cut across departments and organizations can support this.

3. Actors: improvisation takes people that are ready to perform under pressure and in unfamiliar roles. They must be able to attune to others and build on their ideas, always looking for what they can appreciate and say yes to, and thus take it further. For example, project ideas must be "sold" to each and every stakeholder in different terms and languages that attune to their particular situation.

4. Audiences: involving audiences is a key feature of improvisational theatre. The involvement of the audience is much more interactive than in conventional theatre. In project management, improvisational processes will be supported by involving stakeholders as "partners", whose input and engagement is crucial.

5. Suspense: "The biggest difference between the scripted model and the improvisational model is the need to allow action without knowing where it will lead" (Ibid. p. 80). In projects this means tolerance to act without being sure that it will look sensible after-

wards. It means that project managers and project members can choose to improvise the goal forward, and first in the end, when all contributions and the situation are to be seen together, accepting that "everything can look like a failure in the middle" (ibid.). For employees working this way, courage and trust are necessary ingredients.

6. Successive versions: The maxim of the Internet era (e.g. Clue Train Manifesto) suggests rapid learning cycles, meaning that when nobody yet knows what the standards of quality will look like, the best is to experiment, present a prototype early, and have customer and stakeholder feedback, so that you can change and learn from the very early stages.

Concluding remarks on literature review on improvisation

This was altogether a list of 33 competencies or qualities. It is striking, at least for me, that the lists are so different, especially when it comes to the two jazz musicians. This kind of list is not particularly useful in a literal sense, but together they may form a feeling for - or intuition regarding - the mindset, that will be helpful in times where improvisation is asked for. Here are some of the ideas that are most complementary in relation to the ideas already presented in the previous perspectives:

- Minimum of structures and rules allow maximum flexibility
- Reassembly of fragments, phrases
- Pattern recognition: partly relevant experience
- Here – and - now coordination
- Provocative competence
- Hanging out –networking
- Loyalty
- Audience feedback
- Successive versions - iterations

What kind of consultant, project manager or change agent emerges when using these ideas, and what kinds not? Let me try with the latter question first. It is a professional who does not base his or her professionalism on following a fixed set of rules. And it is not a professional who relies solely on his or her divine inspiration. Instead, it is a professional that uses all his knowledge and other resources in creative ways to inquire what the present, complex, unique tasks at hand are calling for, and thus reassembling whatever possibilities are available to make a contribution to the better in a broad sense. It can be experiences, theories, logics and tools from all range of life experiences.

Levy-Strauss called this being like a *bricoleur* (Levi-Strauss, 1966). *Assemblage* is another relevant term for this, as it is a term for artistic performance that is based on putting things from normally separated parts of the world together in a new context. The bricoleur or "assembleur" is then to test it on an audience, get feedback and create new versions. Of course there is no improvisation that is worth looking at or listening to - without practice. In fact, Weick suggests the formulation that improvisation as a mindset for organizational change is related to being good at practicing - that improvisation is practicing (Weick, 1998).

We have now analysed what improvisation as a mindset means and does not mean in relation to be a manager, consultant or agent working with projects or change in an organization. Three possible positions are identified: being a professional by the book, following instructions, handbook knowledge and politics. This logic of action optimizes action on the basis of already existing knowledge. In the model below this is called the corner of order.

The second position is that of an autonomous agent without loyalty to any other agenda than one's own preferences. This logic of action praises freedom and maximum flexibility as means to acting effectively. In the model this position is called the corner of chaos (or chance or maybe hope?).

The third position is that of being responsible or responsive. This logic of action combines pre-existing knowledge and generates new fits, on which action is based. This position is that of complexity and it is where improvisation and bricolage comes into the picture.
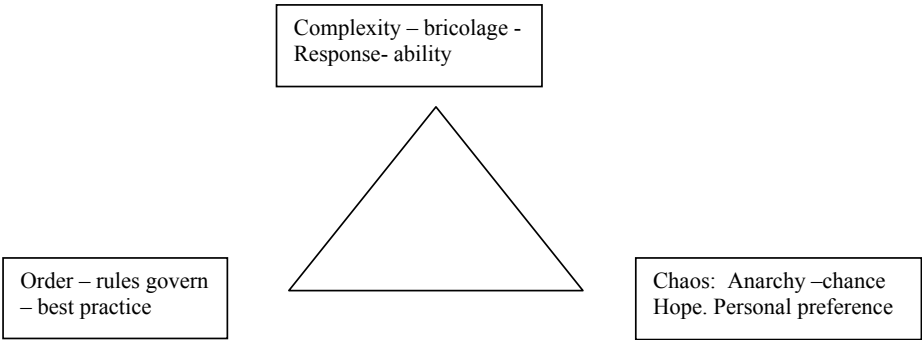

Figure 4: Professional positions of coping with uncertainty and change

These three positions of the professional dealing with complex change and projects combine the perspective of self-organizing and improvisation as resources for agents coping with complexity. During my work on this thesis I have also worked as a consultant, and this model is a result of co-construction with my colleagues in sales dialogues with customers in relation to project manager training that expresses an ambition of taking complexity seriously.

It is my experience that the model makes it possible to discuss different logics behind attempts to improve organizational abilities to manage projects and change. Most of all, it has been useful in the sense of starting a dialogue that can lead to co-constructed roles of consultants and clients.

Improvisational theatre in training: a case story.

Introductory remarks

This case is a story from my practice as a trainer in project management. For a couple of years I have worked with professional actors as resource persons in the training context. The actors are resources for generating improvised role-plays of difficult situations for project managers,

for instance engagement in conflict and conflict resolution. I recount the story in this section because I have been very surprised to experience how the participants appraised this way of learning about dealing with differences of interest and other conflicts in organizations.

It can be argued that this kind of training is training in improvisation. And for some, this is not training project management, because project management is about prediction, planning and control. Others may complain that this is not training because there are no tools and very little theory. But my experience is that the sceptical participants are only sceptic until we got started.

Improvisation is a radically different way to engage course participants in reflections on everyday situations than what earlier was the most normal way for me before: namely presenting generic models for categorizing different types of e.g. conflicts and for "5 steps for solving conflicts" and training the participants in performing the model. No doubt - this is the kind of words that you need to put in the catalogue if you want participants for your course. It fits the dominant discourse of determinism: it is a question of having the right analysis of the need, and then it is a question of implementing the right solution in the form of a management tool. So, in order to get rich on selling courses you have to mirror the dominant, determinist discourse of project and change management. The problem is that a manager needs a tool and a "reading" or understanding of the situation before you can get any value from the tool and act professionally. It is my experience that the neatest tools are often the most popular on the courses and used least.

In many dialogues, project managers have confirmed that it is not always lack of tools that makes it difficult to choose action. You may have loads of tools and still not be able to determine first, what kind of situation that you are engaged in, and thus are not able to interpret what you need to contribute with and with what means. In improvisational training the actors make it possible to act to understand, to improvise forth the tool that is co-constructed in the process.

This is in contrast to the rationalist way: make the right interpretation of your situation, and then choose the tool accordingly. Or re-assemble some fragments that seem to fit the moment. Training is about categorizing situations and learning "tools". This presupposes that situations are objects "out there" to be categorized and that this ensures effective action. An alternative is to start acting without a final definition of the situation, and then work your way through, so to speak. This case is a story about how I work with training project managers in improvising their way through difficult situations.

The story

Groups of participants of project managers are asked to create a short role play that shows a situation that is somehow typical and difficult, but not hopeless, and that calls for some kind of action from the project manager. The play ends when the dilemma for the project manager is obvious, and they do not need a solution.

These role-plays are used for exploration by the whole group of participants. After the first group has shown their play all groups are asked to discuss: what do we see as the dilemma for the project manager? Given that this is the dilemma, what does the situation call for on

behalf of the project manager? And how would you suggest that he/she come about it? The groups are all interviewed, one after the other, and very often there are small or more substantial differences in the interpretation of the situation. The same is the case with the next two questions.

Reflection:

This is learning on the first level: namely that situations are open to multiple interpretations and that there probably is not one true story. This is different from the inductive learning model: first tell how and then train recipe. Instead, I intend to focus on the participant's ability to recognise patterns on partly relevance to experiences from their own life. The situation they observe may or may not resonance with their own stories. If, or if not, they are asked to do their best in specifying how they interpret what is going on, and what there is called for from the project manager. By discussing this in groups, they experience that the situation can be interpreted in different ways. The rationalist assumption of situations as objects that can be read in the right way is questioned.

Still, this is not improvisation, but it is some of the skills that according to theory on improvisation are necessary:

1. To recognize patterns based on partly relevant experiences and
2. To re-assemble something potentially useful and responsible to start with

Story continued

When the ideas for action have been shared among the groups, some of the ideas are explored in practice through continuation of the role play. At this point every participant is told that they can take or be asked to play the role of the project manager in the play. The actors are instructed in taking some of the central roles in the play. The crucial competence of the professional actors is their ability is to "give back what you are exposed to". If the person playing the role as a project manager is acting insultingly – the actor responds by playing insulted. The effects of the different ideas are discussed, and the question of how to go on from here is investigated.

Reflection:

The learning on this level is about non-determinism, that it is impossible to predict what the response will be from the other participants in the act, and that it is impossible to play the situation back (rewind) or to step outside it as you have to go on with what actually happened. As a project manager you are in a game that you cannot either control or escape. What you can do is to try to change the meaning of the situation, which may open new possibilities for the future. This change can only take place through communication, where the people involved begin to coordinate differently.

Story continued

The actors play the roles of counterparts to the project manager's part in the scenes. All participants can now enter the play in the role of the project manager in the attempt to

change the meaning of the situation in a direction that is more fruitful. They exchange by patting the "project manager" on the shoulder, as a signal that he/she wants to exchange position. The professional actors act as authentically as possible, in the sense that they react to what they meet.

Reflection: Improvisation in training

As I started mentioning, I was surprised by the enthusiasm of the participants about these plays as learning devices. Of course I did not expect it would be disastrous, in that case I would have done something else. My expectation was that it was an idea that at best would give me some experience that would make it possible to develop the approach. But the participants liked it from the first time, and my impression was that they learned a lot that was useful and relevant. How can I explain this?

Firstly, it is hard to argue against the enthusiasm being due to a feeling of relevance for them of what took place in the room. There must have been some recognition of the scenes or of the kind of dilemma or of the call for improvisation in situations where you don't have a chance to find certainty in a model or best practice. I think that recognizing this was an opener to other discourses of project management than the determinist one. First of all, they intuitively or immediately recognised as closer to their own experience and that made them feel peaceful because now they could see the relevance of all experiences from their lives.

Secondly, the participants still call it "tools", what they learn from these experiences. I understand this as a way of saying that this exercise shows them something very practical, namely to look at what happens instead of primarily looking in the PM book. They still do that of course, all they have learned and got in resources are resources or fragments for being an improviser or bricoleur project manager.

Thirdly, I think that the character of here-and-now coordination in front of an audience that gives feedback was something that they could recognize from their jobs. This means that you have to live with the response that follows your actions. And that what the situation means is not in your hands to decide, but is composed by the interpretation and sense made of it by all parties that are directly or indirectly involved.

For the present thesis on non-determinist coping, I think it can be argued that the recognition of the project managers of the "improviser's condition" of organizational life confirms the view that improvisation as a mindset is a resource for project managers in coping with change, uncertainty and disagreements, that is: complexity, in the context of their project.

Concluding remarks: improvisation as a mindset

Different theories have been briefly presented: that of Karl Weick, Frank Barrett, Kirkeby and Moss-Kanter. These theories are all recognized broadly but nevertheless they present rather different conceptions of what improvisation is about. This could indicate that it is a matter not easily captured in general descriptions. Maybe a general description of improvisation is a self-contradiction? On the other hand, for the present purpose, the focus is on what the improvisation as a mindset can contribute to the discussion of non-determinist coping with complexity in projects and change. So I have selectively picked the aspects that I found most complemen-

tary in relation to the first four perspectives in this Chapter. One case story has been presented that demonstrates the quality of the mindset of improvisation and that suggests that some of the concepts are immediately resonant to project manager experiences:

- Look for patterns, that can be (partly) recognized
- Be a bricoleur or assembleur
- Coordinate in here-and-now: don't think, don't plan
- Use audience feedback for successive versions

3.7. Overview and conclusions: Five theoretical perspectives as resources for discourse analysis.

Five theoretical perspectives have been presented, and illustrated through case stories from my own practice. The five theoretical perspectives presented in this Chapter do not serve as "truths", but rather as ways of seeing things that can be helpful in the research as instruments or devices for reflecting upon the meaning making and sensemaking processes in the organizational cases.

Collective action perspective:

Social psychological theory and economic theory about collective action give important insights into the factors to focus on for collective action to be possible in a context of unpredictability and complexity. Collective action is supported by each party to put aside the temptation to act according to short sighted individual interests. This is possible to the extent that complexity and unpredictability are met with mutual trust and/or interlocking routines or aligned activity patterns. Furthermore, we know that trust involves both financial and psychological factors, in what the parties perceive as mutual benefits. It was also argued that collective action does not necessarily presuppose collective meaning making, but only that actions fit together.

Collective sensemaking/meaning making perspective:

Theories of sensemaking and of social constructionism offer a perspective where diversity is not seen as something to be removed for obtaining consensus. The perspective here suggests that instead of that, diversity is being dealt with as a question of coordinating multiplicity. And this will be a continuous search for and construction of contexts where the different views are connected and hang together. Control in this perspective is not only obtained by predicting and checking, but can also be a result of "management by meaning", that the involved parties coordinate directly to relevant others, which were expressed by the metaphor of relational calibration. Finally, collective meaning and sensemaking offer a perspective where focus on controlling and organizing individual action can be balanced with orientation in turbulent times: to change focus from "who does what" to "where we are".

Appreciative organizing perspective:

Theory about appreciative inquiry and appreciative organizing offers a perspective where relations across borders are built by means of communication of positive images of future cooperation, and appreciation and reinforcing the best of "what is". Appreciative organizing builds on a language game of mutual support of diverse interests, in favour of "error-correcting or problem-solving language games that easily gets the character of being a "blame game". These bridging processes can emerge without being prescribed and are in this way a resource for the project manager who needs to cope with complex and emerging conditions.

Self-organizing in complex adaptive systems perspective:

Complexity theory of self-organization offers a perspective where complex phenomena do not necessarily have complex explanations. Non-linear properties of human systems far-from-

equilibrium include the possibility of adapting to changes and new directions by allowing self-organizing to occur. Self-organizing includes generating new connections between elements of information, knowledge, relations, etc. New contexts emerge, and the shape gradually takes form as a new attractor that is unplanned, unpredicted, but (if the manager knows about complex adaptive systems) not unexpected. Bounded tensions and periods of confusion are not signposts for the lousy project manager, but may turn out as functional in generating the conditions for self-organised adaptation to occur.

Improvisation as a mindset perspective:

Theory about improvisation and about bricolage offers a perspective, that may prove helpful for professionals that are to cope with complex situations that cannot be analysed and planned, but where immediate engagement and here-and-now coordination is necessary. The image of the project manager as a bricoleur is suggested. This would involve the project manager utilizing his or her ability to recognize patterns in situations they meet, and find partly relevant material from their resource pool of experiences, thoughts, ideas, logics, manuals, handbooks, everything, and assemble these to something that might work. It also involves early and frequent expositions to the audience, in organizational projects and change this is the stakeholders, for being able to see if it gives meaning.

This was the Chapter on five theoretical perspectives enriching organizational psychology in understanding non-determinist coping with uncertainty and disagreement in organizational change and projects. The Chapter is intended as a demonstration in itself of some perspectives by case examples from practice. But the intention is also to establish a framework that will serve as tools in analyses of processes in the next Chapters. In the next Chapters three more elaborated cases are presented and discussed in the terms just summarized. The vocabulary of coping will be tested, so to speak, for its potential in reflective action, in action research and in critical reflection on the discourse.

Chapter 4. Implementing non-determinism in an organization

4.1. This Chapter

The headline of this Chapter is identical with the very first draft proposal for this dissertation. Of course, the sentence is a potential self-contradiction, as the term implementation is from the determinist vocabulary and thus a way of thinking that is opposed to the thinking that is represented by the second term: non-determinism. "Implementation" presupposes indirectly that there is some plan or concept that is known, and which now is to be "rolled out" into the organization. Non-determinism on the other hand represents a more evolutionary and dynamic view of the process ahead, where the concepts and plans are developed throughout the process, as knowledge is increased and the concepts and plans are adapted to the emerging conditions and contexts.

But I have kept the sentence as a headline for this Chapter, because the sentence contains also the paradoxes that made the consultant's assignment very difficult at times. In the role as a consultant I am asked to convince that I will be able to help the client becoming better in working non-deterministically (innovation, flexibility and citizen orientation in services), but on the other hand I will not be able to help implement anything if I am not in a working relationship, where it is possible to develop, adapt and learn during the process.

One could argue that in the role as a consultant I am exposed to the same paradox as the employees and teams in the organization are going to be: "In management, we are determined to be more non-deterministic". So we have a paradox similar to the old: "Be spontaneous - now" – paradox: if I am spontaneous because I am told to be, I am not spontaneous, and if I don't, I am refusing orders. Thus the conundrums that I describe in this Chapter about my emerging role as a consultant are representative for some of the themes that are activated when an organization wishes to "implement non-determinism".

This is a Chapter with a more in-depth discussion and reflection on the experiences from one of my consultant assignments in 2003. The assignment was at the same time one of my first attempts to create a role for myself, where I could work as a researcher-consultant taking part in the sense-making processes about improving project work in an organization. I use the case to illustrate the struggle in the job, and not to demonstrate a success. The Chapter will differ from the previous ones in that it describes the case more in depth, and the theoretical perspectives presented in the former Chapter are used as a "cocktail" of resources to the analysis and reflection upon the story as it unfolds.

4.2. Why this case, what is the focus?

The case has been chosen for more than one reason. The first reason is pure practicality as it was a new assignment that came at the time I was looking for relevant case material for this

thesis. Secondly, it turned out that it was a client that accepted the idea of having the research perspective on the assignment, even though it was not specified what it actually meant. At the time I did not know, and therefore it had to be created along the way. My research has also been non-deterministic as it has been action research as I have described in Chapter 2. Thirdly, the theme of the assignment suited my interest, as it was part of an attempt on behalf of the organization to improve its abilities to work in projects with development of new services.

The client is a Municipality and in particular one of the administrations in the City Hall. The question to be addressed was expressed by the manager about how to create good organizational conditions for cross-functional, cross administrative, cross-disciplinary project work. The reason why this was important for the municipality was that the political level demanded a more individualized service to the single citizen, and a more integrated deliverance of service across the different sectors that the administration was divided into. This demanded a capability of the employees to work in temporary task groups or projects across existing parts of the organization, and even with people outside the organization, e.g. groups of citizens, clubs and NGOs. In short, it was decided to try to move from structure to task as the primary organizing principle. This would include moving away from fixed procedures and processes to organizing according to the needs of the task and the context and conditions of this task.

The case story illustrates and documents important difficulties and practices of introducing non-determinism in organizations that are used to the virtues and values of bureaucracy and operations. This is a situation that most public organizations find themselves in today. This is expressed in one of the most well-reputed think-tank news-letters in Denmark under the headline: "Enormous demand for innovation in the public sector":

> "... If the welfare system is to be preserved, the public sector must develop innovative strategies. New thinking becomes a central leadership task. New relations to citizens are necessary. Innovative milieus must not drown in daily operations"
> (Mandag Morgen, no. 7, 16. February 2004, my translation)

The case forms a basis for capturing, describing and joining as a consultant the process of introducing and implementing non-deterministic organizational processes that can count for efficient project work in an organization living under complexity, change and unpredictability. Focus will be on two levels. Firstly, focus will be on the social construction/ emerging process of organizational competencies in developing services through project cooperation. Secondly, focus will be on the process of cooperation between the organization and me as a consultant.

General overview: the task oriented organization

In these years, the municipality maintain a general focus on developing or changing the organization from a traditional, functionally divided organization, where the work is done, according to well-defined procedures, structures and roles of an organization where the character of the task is determining which structure or network of competencies that will best solve the task. The name of the vision is: "The task-oriented Organization". The aim of the change is to give a more flexible service to citizens and politicians, while still demonstrating

efficiency and high quality. Part of the concept is that teams of employees should be given responsibility and competencies to develop the operations in existing services and in new or different kinds of services and administration. They want to organise this work as "projects".

I was hired to assist the administration in moving towards a task-oriented organization, by using training programmes and workshops. This administration was approx. 45 people, who all participated in 2-day workshops/courses on the "basics" of project work and management, run by me. At these workshops, I engaged them in exercises of what I today would call "collective sensemaking" methods and tools. The methods ranged from the more linear, planning oriented tools that focused on the determination of activities, to the more reflexive, emergent meaning oriented methods that focused on ensuring meaning around the project.

Furthermore, I was hired to run a 6-day programme for "rope holders", where there should be opportunity for these 15 people to deepen their understanding of their role as – not project managers – but "rope holders". There were two reasons why they should not be called project managers even that managing projects was what they were supposed to do. The first was that this title would create disturbances in relation to a new "pay for qualifications/performance" salary system. The second reason was that projects as a word is positively connoted and related to something interesting, exiting, new and important - in contrast to daily operations that would be increasingly seen as dull, boring, or routine-like.

The two-day basics workshops were held first and the course for rope-holders were planned to take form after the workshops for all employees. In my role as the consultant, I engaged in a series of dialogues with the people responsible for the training in the administration. These dialogues are also in focus for the present analysis.

The case is an example of change processes that are "messy, disordered and strange" (Battram, 1998). Projects and change processes are often like that, in my experience. I could have wished that I have had clearer cases with very immediately convincing data, but these are the stories I got.

4.3. The case with reflections

After this general overview of the case story and the context I will go into some of the details in the story and include some reflections I had at the time the things happened and my reflections now as well: reflections on the reflections. The synopsis will concentrate on episodes of particular interest in relation to reflections of practice – or Occasions of sensemaking in Weick´s terms.

1st meeting.

The story begins in February 2002 with a meeting between me, a project director and a development consultant. They presented their wish about the assignments: one part was a start-up-package of 2 x 1 day for all 45 employees in the organization, where everyone should be introduced to the basics of project work and organization. The second part was a 6-8 day programme for rope-holders in the organization, also from institutions outside the City Hall. The conclusion was that I promised to return with a proposal for the start-up package and think about my interest in the education.

Reflections after the meeting.

I saw the assignment as an interesting opportunity to work with the client in a way not just "delivering" but also extending the cooperation to being a partner in the realisations of the intentions and dreams behind the "deliverance". On the other hand, I was not sure how far the client was interested in going in this direction, and I did not want to spoil my schedule the entire fall if this proved impossible.

One of the significant things about the task was that they wanted project management skills to the organization, but did not want to call it by that name. I was told that they had experienced that some employees reacted strongly against a change that included that some special employees were chosen to work in "projects" with "exciting" development tasks, while the rest were left "behind" with making the daily operations work. Thus the management had decided to use the phrase "tasks" instead of "projects" and "rope-holder" instead of "project manager". They hoped this way that they could embrace all employees in the new, more task-oriented way of working, and include everybody more or less in developing new or better services and administration. It may also be seen as a differentiation-integration issue.

For me, this constituted a dilemma: I was invited in as an expert in project management – but was asked not to work as an expert in project management. On the other hand this was recognition of the shortcomings of the conventional wisdom about project organizations. I thought about the assumption of projects as a way of working that is used by organizations, when the stable, basis or line organization was not able or suited because solving the task demanded contributions from different parts of the organization. It constitutes a clear distinction between project and non-project work. This may have been true once upon a time, but in today's organizations stability is nowhere to be found in this sense. On the contrary, in a lot of organizations project constellations are more lasting than the line organization, which are exposed to changes due to ideas about e.g. lean production, Business process Reengineering, Total Quality Management, Business of Excellence, learning Organizations etc. This is an inherent source of non-determinism in projects: the continuous series of reorganizations, and thus changed conditions for implementation and integration of the project outcome.

As a result of these reflections I decided to try to establish cooperation with the client based on a joint process of training and inquiry/research into the organizational capabilities for developing and adapting services and deliverances in cross-organizational networks or teams. I saw this as a way of living the contradiction instead of trying to solve it once-and-for-all. (Stacey, 1996).

Story continued

Next day, I called the project director and suggested the "reflective practitioner"-consultant contract, which he accepted rather enthusiastically. It was possible to talk about the contradiction project-not-project in a way that felt better: not as a contradiction I should overcome, but as a common issue of inquiry. Next step would be a meeting with the VP of the administration.

In March 2002, a meeting was held with the VP, the PC, the DC and me. The purpose of the meeting according to the PC was that the VP and I could meet. The very first moments of the meeting were interesting. The VP asked: What can you do? I answered: it depends on what you want, and told him that my experience was that education can lead to nothing, and that project capabilities could emerge without education at all, that there were no guarantees or causal links between investments in training programmes and organizational efficiency. He seemed to accept that I was not going to praise myself, and was inviting him to test this.

Reflections.

These moments were important for the emerging relation between me and the client. His initial question: "What can you do?" constituted a crossroad point for me. I could either choose to see it as an opportunity to appraise myself and my expertise and list of references as a good sales person to a purchaser. This would have consequences for the long term cooperation, for what would be possible for me and what not, because I had now defined myself as an expert. And in some people's opinion, experts do not question, they deliver answers. On the other hand, would this show respect for the agenda as the client had set it, which one should expect would be trust building.

The other possibility was to choose to react on a process level and invite back so to speak, to a partnership relation: I can only do something if we work together. I chose the latter, because I was not interested in being in the role of a "supplier of courses" but rather to be a partner in training and organizational learning. Thus the meeting can be seen as a beginning of the establishing of a psychological contract based on exchange of beliefs and intentions. A relational responsibility for the organizational outcome as contrasted to individual responsibility for "my part – my delivery", which in the case of failure would guarantee that we would have a conflict on who was to blame. The back side of this possibility was that I disconfirmed the first invitation that I got in the contact with the upper manager of the client system, and that this disconfirmation would cost on the trust dimension.

Story continued

The beginning of the meeting made it possible to talk about the dilemmas in the organization. The following dilemmas were co-created during the dialogue:
Manoeuvring in an organization:

- *with employees ranging from 40 years of service to new-hire-academics*
- *that is concurrently administrating and developing its services*
- *whose ambition is to increase quality and efficiency at the same time*
- *where project work is perceived as exiting and straining*
- *with changing political priorities: deliver the original or the now relevant outcome?*
- *requesting guidelines and freedom at the same time*

The meeting was taking a turn that stated that "all these +-words" all have their down-side". The project ideas had sprung out of a period with engagement in the concept of value-based leadership. The meeting concluded in an appointment of continuing the process by involving the entire management team of the organization in a dialogue about the meaning of the

"project-project". And we agreed that I should send a first proposal for the "rope-holding" part too.

Reflections

It was still unclear to me what my role would be, but I found confidence in the observation that my experiences and thinking about the psychological aspects of managing by projects and of organizational dilemmas/contradictions made sense in the dialogue with the VP, PD and DC. I felt a strong temptation to clarify but hesitated because I could not find a way to do it without at the same time risking finding myself back on the "salesman trail". If I would stay in the role as a partner I had to mirror the uncertainty of the organization. At this point of time I had no idea either if there was agreement or disagreement among the central players of the assignment. This mirroring included that it necessarily had to remain open when it came to the when's and how's of the programme. Finally, I had to face the contradictions without demanding them to be solved before take-off, and instead try to live the way through, together with the client.

In general, the process until this point had focused on the meaning making and less on the definition of the amount of days, budget, curriculum, structure and goals for the courses. I thought that my proposal for the rope-holder course should continue this line but balance the meaning-describing with some headlines for themes on the different course days, but high-lighting that everything could be changed as we moved along. Psychologically, it is hard keeping things open, and writing a proposal was a sacrifice, which may have been good for the nervous system of PD and DC, but potentially bad for the partnering relation, pressuring in direction of the salesman-customer relation, that tends to invite to individualistic responsi-bility instead of relational. So I was excited to see the reaction from PC.

Story continued: Meeting with PC

April 2002. A brief meeting with PC, who was positive towards continuing the work based on my proposal. We could go on without planning in detail. During the meeting, two subjects were particularly discussed: the balance between organizational learning and individual knowledge. PC was a bit "divided" in the sense, that he wanted a course that lived up to any other courses on the market on the one hand, but also agreed that the meaning was to generate organizational competencies in cross-functional task solving. I proposed the metaphor of building the swimming pool and the candidate swimmers; there are certain limits for learning to swim without water to practice in. We agreed that organizational and individual learning had to go hand in hand, and I promised to write the documentation of the content of the course afterwards in a language that was compatible with other courses on the market.

Reflections

This meeting showed again the consequences of trying to avoid fixing the process and the expected outcome too early in non-deterministic processes. PC expressed a tension between keeping things open so that it could be adapted to the emerging meaning and action patterns at the organizational level along the way, so to speak. I believe that the idea of writing the

specifications afterwards was helpful in this case, as well as talking about the co-creation of the organizational and the individual learning processes.

Story continued: Meeting with the management team

Before the meeting, I had asked the participating managers to prepare two types of stories:

- *Tell stories that you would wish to tell in a year or two about developing competencies in project work in CSL*

- *Tell stories about events/incidents that have given you confidence in the potentials of the organization*

At the meeting the VP set the scene for the meeting, and I was taken by surprise because my picture of the kind of process we were entering was not the one the VP actually initiated. Instead, he set the context of a more "normal" meeting in the management group, but with a guest: me.

Reflection:

I had expected my role to be the process manager in the meeting but the VP clearly wanted to stay in charge and keep in control. I felt it difficult from that position to inquire in the dialogue the way I had wished. On the other hand, I could have directly suggested a shift in the role pattern, but in the situation I felt it too risky in relation to the maintenance of a trustful relationship with the VP, who might have a certain reason that I was not acquainted to, not to show any signs of "not being in control".

As a result, it was only gradually possible for me to gain a position from where to be curious, to question and to inquire into details. The consequence was to be seen in the quality of the stories. The stories are more examples than actually stories, and therefore they don't contain the feeling, details and poetry I had hoped for in order to capture the "social micro-processes" of organizing that each of the managers had appreciated. On the other hand, as I wrote in my personal notes after the meeting, the outcome of the firm leadership of the VP in the meeting also was that ownership of the competencies development project stayed in the line of the organization, and was not something "beside" the business, encapsulated in programs from HR and a consultant.

Story continued

The VP started with his stories, which were many, and after some time the other manager's joined in. I chose to improvise, since we were already in the middle of telling stories/ examples. After a while the other managers in the group joined in telling their stories and gradually the meeting emerged into a "collective sensemaking process" in relation to the meanings of the development of project competencies in the organization. As an example, the VP told the following story about events that made him confident of the potential of the organization:

" ...the half-mad people in the secretariat that dare stepping into the unknown with engagement, courage, their antennas out, letting themselves be engulfed into processes with different parties.."

Reflection:

The coordination of meaning of the workshops/courses in the management group based on stories of wishes and stories of confidence made the discourse very informative and in another language than if it had been in the language of a supplier/purchaser language of training products. It was the beginning of a cooperation pattern based on trust and mutual respect more than just preparing for a "blame game".

Story continued

The first day of the workshop especially focused on the meaning making processes in relation to all stakeholders. Different exercises in stakeholder analysis and dialogue were undertaken. I asked them to observe and take notes regarding episodes of creating increased meaning of project stakeholders, and bring the notes and stories to the next module.

A few weeks later, and before the second and last workshop day, I met with VP, PD and DC. They told me that the workshops were all right, but that the premises for the rope-holder course had changed. They had been forced/tempted to send 8 participants from the target group of this course to another project management programme in the central organizational setting. Also, the scope and time had to be changed. Furthermore, they were not sure if they would continue as an administration or if they would be fused and/or dismantled in the near future. Of course this meant a radical change in the conditions of the task that I was given as a consultant.

I suggested that we focused on the desired effects for the organizational development process and that we tore the contract apart and started from there. It was a difficult discussion because they had put the concrete programme in the budget, which had been a hard struggle for PD, who was unwilling to take it away again. Different ways forward were discussed: postponement, having leaders "top up", and having project teams participate together. I supported the latter and they decided to make the decision on the management meeting the following day.

Reflection.

This is an example of a project/process exposed to unpredictable change stemming from a change in organizational priorities. For the project to go on meaningfully, some non-deterministic quality in the form of adaptation or improvisation must be enacted by those involved. However, some loyalties in the system make it difficult to change the course. Namely that the budgeting procedure was of a kind that made previous decisions hard to change, when some actors, in this case PD, used the budgeting procedure as a lever for his interests in ensuring the project life. His fight for the survival of the project forces us all into clinging to the initial solution idea.

First at this point of time I realised why PD constantly recognised the need to be flexible, though also to have a specification of the "product". For me, this constituted a dilemma: that I had to define the product before timing and context were clear. Defining nothing, on the other hand, made it difficult for PD to win a place in the budget. My way of dealing with the dilemma until this point had been to compromise through describing the course on a process/effect level. This demonstrates the difference it makes if a contract is made on the basis of the desired or dreamed-about effect on the world or it is based on following certain steps in a pre-determined procedure. It also demonstrates that adaptation to the new situation for some is an attractive thing to do and for others it will include the risk of loosing a vehicle for a visible success.

Story continued

In August, the last workshops took place. The participants told stories about "meaning-making experiences" from their projects that had taken place since the first workshop. The stories were surprisingly interesting for me. Many did actually not bring stories as they were not engaged in project work at the moment, or due to summer holidays. But a handful of stories were very illustrative, because they underscored what differences, or effect followed from my introduction of the perspective of projects as social construction of meaning. One change had happened in a project manager's view on stakeholders. Namely from that of seeing the end user as an "object" to be analysed and manipulated by rationality to that of seeing a stakeholder as another meaning-seeking subject with legitimate interests and perspectives that potentially could turn into a partner and not solely be a competitor or resistor in relation to resources, visibility and future positions. In several projects the stakeholders had been actively involved in some way.

Another comment was about the talk we had about the difference between language games of blame and language games of mutual support and partnership. One story was about a slight change in the atmosphere of the organization that had followed from all employees having attended the first workshops. The atmosphere had been a little bit more considerate, and people had thought more about who else should be involved or hear about this.

Reflection

How can these stories about significant change following introduction and experience with "meaning making" approaches make sense? One possible explanation is that it is a logical consequence of changing from a position of a project manager who is in control, to a project manager who is in charge of making a project meaningful.

Sensemaking is grounded in identity construction, so when the meaning of the job is seen to be in rational control of a project, we can expect that the holder of the job will be looking for something to control,. The condition is enacted that the involved persons are people who need to be controlled. People who are controlled feel less responsible, and thus must be controlled if the project is to be successful.

When the meaning of his job is to engage in conversation with stakeholders for exploring and if possible integrating different perspectives on the project, he is looking for cues that will help him understand what dialogues will support the project. The condition is enacted that the

involved persons are met with curiosity regarding the meaning or lack of meaning from the experience with the project. They feel more like supporting the project because the project manager has shown respect for their perspective, and they tend to support the project without the project manager asking for it.

Story continued

Time was running, and I was behind my schedule. I had to improvise, and as an experiment I asked groups of four or five to "warm up" to working on a case by four "express" analyses from the conventional project management toolbox. The groups were given 20 minutes to perform the following tasks in relation to a case project they were more or less acquainted with:

1) goal setting and defining success criteria
2) risk analysis
3) stakeholder analysis
4) sharing dreams and potentials as a project member.

In my notes, I wrote that this was "a dramatic success" warming up, as most participants were surprised "how far" they reached in 20 minutes. A group of people who had not prior experience of working together as a group were able to generate some shared holistic understanding of a project in 20 minutes. Afterwards the groups simulated interactive planning of the project process and in the afternoon we played with appreciative inquiry and storytelling as post-modern project management "tools".

Reflection.

Most interestingly, I found the "warm-up" series of project workouts surprisingly effective. Why this effect and what is it about? I believe that part of an explanation is that in the short time you on the one hand explore different aspects and perspectives of the project - but don't have time enough for discussing and for developing something like a consensus. Therefore, maybe, they felt they had gained a lot of understanding of the project and its context, but without authorizing one single version as the true one. In conventional group work there are traditions for seeking agreement and preferably consensus about the results of the work, but because of the time pressure this possibility was not perceived as a possibility. Instead, the ground was created for coordinating multiplicity.

It can of course also be argued by rationalists that it was a superficial pseudo-analysis that did not give rise to serious considerations and that it was not a success, but loose ideas mistaken for knowledge. If the preparation of the project is seen as the job of planning everything in a rational way, this is a serious point. But if the planning has as its main effect generating a collective will to act, as proposed by Weick, even 20 minutes in this case seemed to be a good investment.

Story continued

The next meeting with PD and DC was about the rope-holder course. Target group and the idea had changed due to organizational politics: City Hall had disapproved that this particu-

lar administration had intentions about its own programme about project management/rope-holding. As a result, they opened up for participants from other administrations. This was a bit troublesome in relation to the idea of the course as a programme supporting the development of organizational capabilities in project work in this particular administration.

Now more than one self-contradictory purpose or objective was set for the course, which made me feel very bad about the chances for success. Now the target group consisted of employees from this administration and some from another. It consisted of participants with and without previous experience with project work and project training. It consisted of employees with and without an actual project assignment. And the programme should include the same subjects as the "central" programme, and yet tailor-made for this particular group. I was very confused and asked to set up a meeting with the whole management group to have a dialogue on several of the questions that confused me. The meeting was set and I put some questions:

- *Is this programme part of a top-down initiative on new ways of cooperation?*
- *Is it support to a grass-root initiative?*
- *Is the cross-functional project work a red line in the management group?*
- *Do you believe in learning as exploration of practices or do you believe in "learn first, then change"*
- *Who is waiting for whom in relation to more cross-functional cooperation?*
- *What do you need to understand to go on?*

They responded that these were important questions. And the meeting showed that the management group did not have a common basis for the leading of the change process. "We don't exactly know where we are going, but we know that we want to do, and that this programme is one of more elements to this end" and: "we are doing this to find the meaning" (PD). It became clear to me that I had overestimated the decisiveness of the management group in direction of organizational change and development of competencies in cross organizational project work. I was somehow relieved and agreed to see the programme as an explorative process for a group of interested people.

Reflection.

Why did I feel better after this meeting? I believe that some clarification had taken place: I no longer viewed myself as participating in a supplier-purchaser relation as I did at the beginning of the meeting, and that provided harmony with myself. Besides, the supplier-purchaser relation did not fit the understanding of my client system either, so they probably felt better too. But conventions of language games in the life forms of consultant-client interfaces may have made it difficult for us to sort it out. These conventions may have contributed to the illusion of the context as a "sale" situation of some "product" or expert deliverance.

Instead, during the conversation, we became partners in exploration of different opportunities. From the position as "expert" I entered the situation; I now became a "participant in the collective sensemaking and management of meaning in relation to the work in cross-functional project work. We had entered a relational form that was more aligned with the content of our conversation: how can cross-organizational teams cooperate to be able to develop services in a complex and changing context of a politically governed organization?

The case had turned into a "project" in an existential sense and authenticity was possible. Accordingly, the course turned away from a thing to more of a joint research process, and together, as partners, we were better prepared to meet the unpredictable challenges.

After the meeting, I was able to write a proposal for the course/programme without aches in the stomach. At the next meeting with PD and DC, I was told that the meeting retrospectively was seen as a positive starter of important clarifying discussions in the management group. We discussed further how the programme could integrate dialogues with participants and members of management. I wrote in my notes: "I'm on - this is now a parallel creation of the programme and its context". Small details were clarified and the programme was agreed.

Reflection

The programme in itself constituted a compromise between being a prefixed agenda and an open, evolutionary agenda. In relation to the discussion of non-determinism and determinism, it was an attempt not to choose (either-or) but to find a way to the right proportions.

Story continued

The course was run as 3 x 2- day modules. The intentions of integrating dialogues with management faded, and it gradually turned into a more conventional training programme when it comes to the encapsulated learning on courses, not integrated with other organizational and managerial processes. When it comes to the content, unconventional thinking was represented. Because the meaning of the entire programme was clearly constructed with the management, namely by improving the skills of working task-oriented, I could present thinking and approaches to project management as social construction of meaning as the umbrella, under which more linear approaches and tools could be used under the mindset of working non-deterministically.

One example is project planning. In many books and manuals, the premise for project planning is the assumption that good project planning means constructing a plan that it is possible to implement. The determinist vocabulary of coping (Chapter 3) prescribes that change of plans is a sign of incompetent planning. Alternatively, project planning in the context of project management as collective sensemaking will give meaning as ssocial construction of a holistic picture of the project dynamics and context. And in this context the planning should not be judged on its capability to avoid changes, but on its potential to coordinate meaning and action, allowing for flexibility, learning and innovation. Interactive planning workshops with all involved as participants is a very useful form for collective sensemaking. The same can be argued for interactive use of stakeholder analysis, risk analysis, goal setting, critical path methods, Gantt diagram's, etc.

Reflection

This course was one of the first attempts by me to integrate the determinist school of project management and the non-determinist school. Until this time, I had seen more the non-determinist approaches as a more mature, more developed, higher standard way, and determinist models as primitive, archaic and lower standard. What was helpful in taking the step further was the reading of "Invitation to Social Constructionism" by Gergen (1999). He takes

the position that social constructionism as a language game should not at all try to abandon other language games, e.g. what he calls the "truth game". On the contrary, other language games should be invited. The truth game is a very useful game, when we want to put a man on the moon or land a rocket on Mars.

The truth game is, though, still a game. The predictions and coordination of actions are a result of coordination in the community or the project group, not because science has access to the truth about the condition of the universe in the future. What is important is that the group or the community has collective procedures for verifying or falsifying different scenarios or pictures of the project. The interactive tools for analysing and planning projects are examples of exactly these kinds of procedures. So, when frustrated project managers from the old school ask: "Why plan at all, when the world keeps changing? How can we manage projects in a world like that?" the answer may be: "collective planning processes do not read the truth in an objective sense, but are a process of collective sensemaking, verification and falsification of socially constructed big pictures of the project.

The success of a project is not a result of the actions of the members of the project group alone, but also a result of the way the actions are made sense of, are interpreted by stake-holders and other involved parties. And this you can't control by prospective decisiveness but only influence it by a repertoire of means like retrospective sensemaking, storytelling, and appreciative organizing. For the project managers and group, this means they have to be as good about telling why the story did not go as planned, as they are at telling about their decisions about what they want to do.

Story continued

The course was not over, when a reorganization was announced. The organization was changed and the administration divided and organized in a new way. For some participants this had almost no effect - for others their projects were no longer meaningful at all. For the VP and the management group this was a big change and I was asked to facilitate a meeting in the new management group where the future way of working together should be discussed. This meeting took place after the course was finalized, and I will come back to that a bit later.

Reflection

What is very interesting at the moment is that the task oriented way of organizing was an attempt from this section of the City Hall to adapt to new demands from the political level and the public. They were pioneers in this work, which later had the paradoxical or ironical effect that the section was dismantled and the functions distributed to some of the prevailing sections or to one new section by upper management of the municipality.

Interestingly, this was seen by some as an example of good task orientation of the organization, as the change was initiated to ensure an increased focus on prevention in the area of children. But others saw this as the voice of the "old" structure-determined organization that has the logic of structure-from-top-down, instead of creating cross-organizational teamwork in the existing structure. I think this can be seen and be made sense of as a stroke from the proponents of structure-determined organization in a power struggle against proponents of task-determined organization. This may suggest that the intention of task oriented organiza-

tion is not shared entirely by all members of the organization. The sense I made of this was: 1. on the next module, therefore, I found it meaningful to work with trust in projects and 2. again, it is a documentation of the condition that it is not always what you do, but what sense others make of it, that counts as the result. Effects are what follows and cannot be determined by analysing the cause, like in linear machines.

The reorganization was an incident of sudden change in conditions - non-determinism in practice in the perspective of the VP, the management group and the project groups that were affected. The decision of having a meeting was the instalment of a collective sensemaking occasion: what is the meaning for us and how do we go on? They lived their new compe-tency: that when the catastrophe hits, the need is to adapt and make new meaning in the community. I interpreted the invitation as a sign of trust to the approach to non-determinism that I represented.

Story continued

Appreciative organization principles (Chapter 3.4.) were introduced in the programme. As an example, on the last module, I asked groups of participants to prepare and act a scene, showing an episode from the following week that would convince them that the organization is moving in the right direction of a task-oriented organization. They performed the play for each other and we reflected together.

Reflections

The work with preparing the plays invited the participants into "faithful inquiry" that was presented in Chapter 3. That they were working on the details of observations, that would give them faith and trust. The exercise was an invitation to an "I will see it when I believe it" mindset, instead of the mindset of "I will believe it when I see it". In relation to project management, the exercise shows the possibility of planning for flexible action, when the process is steered through context markers (success indicators) and not in lists of activities. The difference corresponds to the difference in the project groups in the complexity case where the action planning group and the dream/vision group reacted very differently to changes in the context for the projects.

Story continued

The meeting with the management group of the new organization was taking place, and I was facilitating the first half of the day they had set aside for the meeting. Over the phone I had assisted the VP in formulating the questions he wanted the managers to reflect upon before the meeting. The questions were an attempt to contribute to the creation of a dialogue in the management group about building trustful and responsible relations in the new situation. The questions were:

1. What would you like to preserve from the organization as it was before?
This question reflects the assumption that we meet the future with more confidence if we know in what ways things are the same. Also, this respects the responsibility for the past: not everything that has been done until now is stupid.
2. What role do you see for yourself – what would you like to contribute with in the future?

This question is related to an assumption that in times of change people are better assisted if they experience themselves as acting subjects, rather than as passive victims or objects. This is based on the idea from Chapter 3.2 that in projects we not only work to get the economic result, we also produce an identity for ourselves along the way.
3. What do you need from the others to ensure quality and efficiency in the new organization? This question is related to the assumption that in times of change and uncertainty the relational responsibility is a more flexible frame for organizing than individuals following individual success criteria.

The meeting took off as a series of interviews, where they were interviewed in turn by me and elaborated on the answers to the three questions. Before I left at noon, there was a reflection round, and some topics were identified for further discussion in the afternoon:

- *How to contribute as managers to re-establish confidence and a safe atmosphere in the organization*
- *Teamwork and relational responsibility in the management group*
- *Find and show the employees the direction and ambition of management*
- *How to support self-managing employees and managers*

Later, I was told that the group in the afternoon had been able to decide on all issues and prepared themselves well for the challenges in the period to come. I saw this as a sign that the morning session of appreciation, imagination and relating dialogue had not hindered the group progressing with their agenda. And who knows, maybe it was even helpful.

Reflections

The process was a process of start up of a new group: new members, old members, missing members. Some of the previous group's tasks were left, some were still there, and some were new. The equilibrium was far away, and my thought was that they needed to self-organise spontaneously by staying on "the edge of chaos". Or in Weick´s terms, this was an occasion for collective sensemaking. Of course, they needed to take some actions, but my idea was that they first needed to build up and share knowledge about each other, the situation and their responsibilities. They built up common knowledge before they stated action planning.

Knowledge was created about themselves as a group and about each other. Arriving at a consensus was not the issue in the morning, but made it possible to coordinate their differences and the multiplicity. By increasing the system's information about itself, the ability of spontaneous self-organization became possible. They were able not just to re-establish the old order (by telling the new members how to behave) but to construct a new order. (What Gergen calls "social accounting" Chapter 3).

Epilogue

After this, I have suggested some kind of valuation of the work on competencies in project management/cross functional service development. I suggest a valuation process including interviewing the management group and a focus group of employees. The valuation should explore, capture and reinforce behaviour, relational practices and other things that were seen

as indicators that gave confidence in that the organization was able to develop the abilities to develop services in cross-functional teams in dialogue with stakeholders.

In June, VP called and 2 meetings were set up: one meeting with the management group and one with a focus group of employees and "rope-holders". The meetings will be interviews conducted by me as a researcher/consultant. The theme will be stories of episodes and processes that they have seen in their part of the organization that have given them trust in the abilities and potential of the organization when it comes to cross-organizational teamwork around developing and improving the services of the municipality.

Interviewing the management group.

To prepare, I sent the managers an e-mail with three questions:

1. What have you seen happening in the organization during the latest ½ year that has made you confident that the organization is well on the way to becoming task-oriented and with according project competencies?

2. What do you think that your employees have seen happen in management that gives them faith in the organization on its way to becoming task-oriented with according project competencies?

3. What potentials do you see in your answers in relation to the continued development of the organization in the next ½-1 year?

Interviewing the group of employees

5 non-managerial employees were interviewed in a free-structured focus group interview 1½ months after interviewing the management group. All members of the group had experience with project work, though not all in the role as project manager.

The questions were e-mailed to the participants before and were:

1) What have you seen happen specifically during the latest ½ -1 year that gives you faith /trust (not courses and training activities)?

2) What have you noticed that has happened in management that gives you trust/faith that the organization is making good progress towards organizing tasks with according project competencies?

3) What potential do you see in these answers for the continued development of the organization for the next ½-1 year?

4) From your point of view, what will it be necessary to strengthen, turn down, change etc., in order for this potential to be utilized optimally?

Reflection: why these questions?

The process of developing abilities for task orientation and project work is not a deterministic one that is a question of implementing a model. Instead, the process is characterized by a searching and learning process with non-deterministic features. In such processes it is more fruitful to explore practice and thus being able to recognize, observe and so reinforce the practices and qualities that are followed by energy and momentum. It is the assumptions of appreciative inquiry that are behind, like in the explanations behind the questions on page 135.

I also chose these questions as a way to study the details in the actions that made a development of the relational practices possible or difficult. For the client system, it would be highly relevant to have a consciousness about the 'how-to' of building relational responsibility. To be able to explore the experiences and the sense made of it from other groups was an opportunity that could contribute to an understanding of the reflective dynamics in building relational responsibility.

Afterwards, I regret that I did not ask questions that in all cases reflected each other: e.g. the question to the employees: "what do you believe that management have seen you do that gives them confidence in the organization". I don't know why I didn't.

The meeting

The meeting was conducted as a series of interviews with each of the managers in the group, with a few comments along the way. Afterwards, I have wondered if a more chaotic, but free dialogue would have been more useful in understanding the themes and aspects of the process. It would probably have been more lively, but on the other hand it may have led to a distribution of speaking time that mirrored the power hierarchy, and the VP may have dominated the discussion, and some points of view accordingly repressed. Below is a résumé of the themes from the interview.

During the autumn, the organization was changed and divided, so that the activities regarding prophylactic work for children were organised in a separate department and thus no longer as a part of the organization. The purpose of this change was to create an intensified focus on prevention in relation to children. Some of the managers saw this change as a good example of task orientation - that the task: focus on this was accompanied by a special organizational unit to "do the task".

On the other hand, some managers saw the reorganization as something that was not necessary, because if task orientation is the principle, the focus should be followed by a task force, but not reorganization. Reorganizing is "the old way" – the reasoning may sound. The same episode gives rise to completely different meanings. This is a demonstration of sensemaking in organizations that is as important as making the decisions.

At the same time, it was decided that the two departments would share the administrative functions and not build two new administrative units. This was, on the other hand, seen by all as being a sign of task-orientation.

Here are a list of observations that were seen as "occasions" for sensemaking with the result of trust in the organization's abilities and willingness to work task-oriented. What do managers look for to be confident that the organization has the potential to work task-oriented and non-deterministically?

1. What have you seen happen in the organization during the latest ½ year that has made you confident the organization is well on the way to becoming task-oriented and with according project competencies?

Managers:

- Employees are "just doing" and less speculating and hesitating
- Decentralized units and employees/managers are increasingly involved as stakeholders
- There is a "musketeer" spirit of "we": everyone in the team is accountable while only one is still responsible
- An increased focus on deliverances
- More initiatives are taken by employees
- Chairmen in the teams from non-managerial ranks
- Less individualism - more team-play
- Spontaneous organizing/reorganizing according to the development of task
- Selective use of elements from project management methods
- Cross functional projects: from "magic" and smart talk to a more mature level of practice
- Tasks are defined and categorized more thoroughly
- The organizational borders are more permeable
- Until now all projects have delivered results - they always come
- In emergencies everyone seems to think: who should be involved on an ad hoc basis to solve this?

Employees:

1) What have you seen happen specifically during the latest ½ -1 year that gives you faith/trust (not courses and training activities)?

- The willingness to will from the top management of the City Hall
- The ideas of the task-oriented organization are anchored in the business plans
- Quietly and gradually, the language drifts and adapts to the intention of task-orientation
- Structural changes have taken the task as the building principle, e.g. prevention in the area of children is worked on from many different perspectives – but with the task in focus
- Cross organizational functional initiatives (ex. Finance)
- Cross organizational task analysis groups are working
- Involvement of employees where task, not structure is what is in focus
- Internally, we work now in three task teams

2) What do you think that your employees have seen happen in management that gives them faith in the organization being on its way to becoming task-oriented with according project competencies?

Managers:

- We do not talk about project work as smarter than other kinds of work (and some employees also seek safer and more "orderly" tasks
- We let projects be born bottom-up
- We think of the competencies needed for the task before functional habitual manning of projects
- We are more concerned about time spending – "how much time is needed – do you have it?"
- Employees are given more responsibility for tasks
- The quick response from us when the new organization was "launched" – consequences and revision of short term and medium term goals
- Our new goals reflect the task orientation
- Management Forum have cross organizational discussions re: work teams and projects – and reacts if necessary
- Non-managerial staff as heads for project/task groups
- We are more visible and accessible – employees contact us more spontaneously
- For changes we focus on the consequences for the task
- Our dialogues with the teams are shorter and more frequent
- We give responsibility to the teams - maybe - a little
- We focus on the task, the structure and the solving of the task
- We rush around and tell everybody about our great ideas
- We initiated cooperation seminar with other department

Employees:

2) What have you noticed that has happened in management that gives you trust/faith that the organization is making good progress towards organizing tasks with according project competencies?

- We see and hear a sympathy in favour of the task orientation
- The cross functional projects in the business plan
- Reorganization towards teams for tasks
- One department has set up self-organizing teams (institution teams)

Managers:

3. What potential do you see in your answers in relation to the continued development of the organization in the next ½-1 year?

- We can be more flexible because our values are clear and we can have a shorter planning horizon
- We can work more team-based in the management group

- In the future we have more tasks that call for cross-functional projects/tasks where the project competencies will be relevant
- We will see a framework that makes it possible for employees to navigate their resources in the organization as a whole, with us in a supportive role
- We now have a tool we can use consciously in the involvement of citizens, for political uses and for creating results in this complex field
- We become less bureaucratic and more citizen-oriented, and thus also more policy-creative
- We will think like this: is this really a way to do this? What kind of a task is this? What kind of approach could we propose or try out?
- As managers we can spot and support the "frontrunners", the carriers of the new, task-oriented culture – and ensure their backup and support
- We will need less middle managers – but still need line hierarchy for 1) crises 2) conflicts between equals and 3) damage control for "catastrophes"
- We will balance the operational and the contextual uncertainty
- We shall continuously pay attention to the good examples in practice – it is not a new organization form but a way of thinking that we all shall learn over time how to live

Employees:

3) What potential do you see in these answers for the continued development of the organization for the next ½-1 year?

- That the territorial war is coming to an end
- More good examples from finished tasks and projects
- Staying close to the idea – no more new concepts (stop reading)
- Celebrate small progresses and successes
- Tell about the churchyard project – communicate the idea by example
- The great willingness to participate cross functional tasks and projects, nurse it and hold on, keep focused and follow it through

This question was directed to the employees only:

4) From your point of view: what will it be necessary to strengthen, turn down, change etc., in order for this potential to be utilized optimally?

- A change of mindset of the single leader: less control, more focus on efficiency and quality
- A shift in culture and less dependence of the "old" ways
- Less expectations of managers to be answerable and in control of everything
- Let employees meet with people on the political level and with citizens
- An increased focus on working in an organization, not in such and such a "box"
- Letting go of the usual ways of thinking and doing: have the courage to try if it works in a simpler way
- The courage to take a risk, and risk being wrong (not yet)
- From time to time to reflect critically: is this still a meaningful task?
- Being better at estimating time expenditure necessary in a given project or task
- To generate safety in relation to allocation of employees to projects outside own area

- More job rotation as a means to a better Big Picture Understanding and new perspectives on own tasks
- A payment system that supports teamwork across boundaries (pay DOES motivate)
- Less task orientation as expert teams – more task orientation as cross disciplinary projects and sharing of knowledge
- Address the story about territorial war and the stories about personal conflicts as the dominating factor in decisions about structure – so the story about task as guiding principle becomes reliable

Besides the potentialities, some critical remarks were also said. The following observations or judgments were mentioned:

Managers:

- We have to be more decisive in delegating responsibility for how to run the projects
- Some employees still doubt if we stick by our decisions
- Some employees believe that the delegation is pseudo: "there is the 'right' answer in a drawer somewhere"
- Some employees do not see any difference: "What's new?"

Employees:

- The example of the restructuring was seen by some as a sign of task orientation, but by others as a sign of the old "structure first" thinking

- The approach of the children & prevention unit was an uncritical imitation of the school project, but conditions of the two projects cannot be compared

- When focus is created by taking people out of their daily work, the risk is that a "subculture" is established at the same time - and thus the result is difficult to integrate…..

Reflections on Reflections: epilogue

Originally, it was my intention to have a meeting with managers and employees and set the scene for a dialogue about the meaning of the above statements. For different reasons it turned out that I did not take action to make this happen, which means that today these statements are strangely dead: like the statues on the Easter Island: what was meant by these productions? I believe that time has passed…?

I can reflect on why I did not hold on to my intention in this case. Maybe I relied too little on the process of meaning making that would be made possible and was too afraid to look foolishly into the eyes of a client I hope to work for again? I think that my uncertainty in the researching role was followed by anxiousness for my data not being good enough for a dissertation. But when I moved in the pure role as data-gatherer I was no longer in the relationship of a consultant, and was uncomfortable returning to a client that had not invited me. So in the role of the consultant I was afraid to be too much the expert, and in the role as a researcher, was I afraid not to be enough of an expert?

In the role of consultant I tried to resist being captured by the conventions inherent in the discourse of the management expert, where I am not allowed to be not-knowing. On the one hand, I tried to be in a not-knowing position so I could ask questions. And in the role as a researcher I tried to resist being interpreted into conventional discourses of a student without practical knowledge that poses not-knowing questions. I was in the dilemma at the same moment that I tried to put in some "pure research elements". These "interviews" that were on my initiative, I get the idea of having created an expectation of a "result" and a report. (I met one of the managers recently, who asked: "Did we ever get the results?").

So, in this case I have not succeeded in creating a dual role as researcher-consultant, which originally was my intention. I think here in retrospect that if I should do it all over, I would have to do one particular thing differently. I would have to be more confident in the action researcher/reflective practitioner role. In this story, I was feeling shaken insecure about the demands of data for my dissertation process. The problem was that I was working with a rather new and potentially large client for my business as a consultant. I did not dare to speak sufficiently openly with my clients about my insecurity in this new role as consultant with a researching agenda. I was afraid that they would doubt my competence as a consultant. In retrospect, I think that confusion about the relationship and the mutual responsibility followed from my holding this back. If I had dared, it is likely that the client would have volunteered as a "co-researcher" like the propositions of Gergen.

Leaving the expert role and individual responsibility in favour of a multiple role and relational responsibility is anxiety provoking. For taking the risk that is perceived in association with this change, it seems that we need some support to hold the anxiety. In this particular case, I did not manage to get this support. Maybe because I saw myself as an independent consultant working alone on this task and "forgot" to talk with colleagues from my network and with my supervisor.

4.4. Summary and conclusions

The case is illustrative on two levels: on the level of reflexivity between the role of a consult-ant and the role of the client, and on another level the reflexivity between the client and the client system on the other.

The level of consultant-client relation: implementing non-determinism

In this task there was a continuous negotiation and also insecurity about the relation between me and the organization. I had the intention of letting this assignment be a case, where I demonstrated how I work in a role that was merging traditional consultant and researcher roles. I did not succeed in this, only partially.

The role of the consultant can take a traditional modernist form of a supplier, where the knowledge is assumed to be in place from the beginning of the deliverance and is induced in the right amount in the right moment to a competitive cost. The corresponding role of the client is that of a purchaser of services and expertise. A role that is conventionally filled minimizing risk and cost and on defining the need precisely and based on this specification

the best supplier is identified. This led to a relationship with individual responsibilities and differences of interest in some respects, controlled through a formal contract.

Or the relationship can take the post-modern form of a partnership, where the partners, through a continuous dialogue, work together to integrate the knowledge that is created along the way. This relationship is controlled through mutual trust and a psychological contract. The responsibility is relational, meaning that the two parties together bear responsibility for generating success for both parties, and that both parties take responsibility for acting in a way so the relation can continue and survive. The first one leads to a determinist approach and the latter is a more evolutionary or non-determinist approach.

In this case, the partnership model with a rather high level of mutual trust was preferred. It was expected to be helpful in generating understanding throughout the project, so the organization would be able to make the deliverance valuable at the time the cooperation finished. In contrast to the expectation that if the consultant accepts the role of the supplier, the risk is that the purchasing organization is not able to integrate the deliverance, because the deliverance is out of phase with how the organization has changed while the project went on.

On the level of reflexivity between the role of the client (PD and management) and the client system (the organization) it seems in the epilogue that a journey has begun, but that the perceptions of the two sides differ on several issues. On the other hand, it seems that there is some success by the evolutionary approach: "we don't know exactly where we are going, but we know that we want to". Maybe this sentence expresses the same condition about sense-making in organizations that Weick expresses in the famous sentence: "How can I know what I mean before I see what I say?"

PD was very honest about the lack of overview of what the end result would look like, but that many different ways could be thought of, but it was not proper to choose at the moment. This line of thought is supported by the fact that when I helped them review the first period after the workshops and courses, it was obvious that some change had taken place. The reorganization that was imposed on the organization was used as an opportunity to show the new orientation to tasks: what Gergen called "social accounting procedures" – the logic that is used to re-establish order after a period of far-from-equilibrium was consciously used as a tool to support the task-oriented organization.

This case shows a process of developing client relations and a project (competencies devel-opment) where the end result could not be specified from the beginning. It is also a case about a project exposed to change. Thus, it is a case of project management where the determinism models were not sufficient as mental and practical models for efficient work.

Two important "moves"

Two important "moves" deserve to be mentioned that partly succeeded and to some extent made it possible to go on in the process under these circumstances:

1. Moving from the idea that a specified end result is necessary to the idea of keeping the end open to ensure flexibility as meaning, knowledge and experience were created "along the way". This included that we explicitly put aside the idea of "one truth" about where to go.

Instead, we started the journey and tried to coordinate the diverse perceptions while the deliverances maybe are best described as experimenting for practical knowledge.

2. Developing relational responsibility or partnership among key players in the process. The development of partnership was explicitly supported by processes of communal meaning making and seeking dialogues, where the interests and positions of the parties were openly exchanged. Trust was built as a result of appreciating views and intentions and expressions of mutual understanding took place.

Some advantages in relation to coping with complexity seemed to follow from this approach. Firstly, we could start working without having to decide on matters we only had a very vague knowledge about. This is a demonstration of action rationality, presented in Chapter 3.

Secondly, the contradiction or paradox of the client organization calling for project competencies but could not explicitly call for project competencies was held and we took a position of both-and and hoped that solutions on the contradiction would emerge if we resisted in either-or thinking. Jung's axiom of holding dilemmas instead of solving them was helpful here.

The intention from my side of using the assignment as a case story for this dissertation must also be commented. The researcher-agenda was only superficially specified in the conversations between me and the organization. Today, in retrospect I am convinced that it would have been useful to have talked much more and also more openly about this. I do also believe that we would have benefited from me being honest about how insecure I felt about this role. Next time, I will try to do this and what I hope, or expect, to follow is that the client will to some degree take the role as my co-researcher as I am taking the role as their co-employee or co-manager while our cooperation lasts. This happened to some extent in the case, which was demonstrated by the immediate willingness from management in the organization to have conversations with me that were from the researcher agenda.

The level of client-client system relations: non-determinist coping with complexity

Which elements of non-determinist coping did the analysis of this case suggest?

Firstly, the case include several attempts at creating a contract among members of the management group and between management and employees that were useful in coping with non-determinism, which was one of the overall aims with the task-oriented organization in the first place. It cannot be proved that these attempts were successful, so it can only indirectly be analysed what the effect turned out to be.

I had the experience of joining or following an organization along a bit of its way on the journey of combining determinism and non-determinism. Some hurdles that were met on the way need mentioning: Previously, and this was the background for the assignment in the first place, the routine work and services were considered as the primary task, and projects (non-determinism) were considered as secondary. This had the consequence that even many projects were launched, and that in general the projects were seen as meaningful - although still not prioritized in the competition with ongoing tasks within service, etc. The result was a long list of launched, but inactive projects.

When project courses were introduced, it was perceived as a sign in reverse: that projects should now be the privileged work. This idea represented the same problem, but in reverse: some employees saw the project as a sign indicating that ongoing service jobs were inferior to project work. The hurdle was how to focus more on projects without focusing more on projects!

Thus, introducing non-determinism to an organization that is used to the determinist virtues will be made difficult if it does not show the traditional signs of accountability: that projects are set according to goals, approaches and budgets.

Consultant approach: a last reflection:

How would this story have been different in a different logic of action, for example the logic represented in modernist language?

In modernist language, the consultant is supposed to be the expert, the one who knows, and the client the one who has called the consultant because he does not know. The consultant is supposed to possess expert knowledge that is based on objective truth, and should avoid all sorts of subjective influences on his or her work. The expert in modernist language is therefore to be objective and neutral. He or she analyses the problem, finds the solution and inserts the medicine that will cure the situation.

The cooperation between client and consultant in modernist language often takes the form of making a very detailed contract on preconditions, methods and outcomes. Means and ends are strictly defined, so that it can be possible to find out who is to blame and pay for the extra expenses or lack of results. The sensemaking of the expert *enacts* this kind of relationship and *extracts* cues that confirm the sensemaking that at the same time maintain the identity of the consultant as the expert.

In the above case, how can one imagine that this would have turned out?

Firstly, one could expect that a specific contract on the entire consultant assignment was negotiated and signed before starting to work. This would probably include that the paradox of "we don't know how, but we know that we want to" would necessarily have to be solved once and for all from the very start, even if the knowledge was not particularly extensive at that moment. The advantage for some of the involved on the other hand would be less anxiety arising from uncertainty. It would also be easier to communicate with clarity, what was defined as the outcome.

The price to be paid would at the same time probably be a bias towards extracting cues that were related to the stated target, and blindness towards cues, where sensemaking could lead to a change in direction, either due to unpredictable chance events, due to new knowledge or emerging conditions. For example, it was somewhat of a surprise to me that the most influential idea from the very first workshop day was that about constructing meaning and about language games of trust vs. blame. I could use this knowledge in the preparation of subsequent workshops and modules, so that the planning of the programme was flexible in a way that would have been more difficult in a modernist setting. In this case, possibilities increase,

that the process remains meaningful in the context of the future conditions, when a non-determinist approach is chosen.

Secondly, the relation between me and the client system would have been more like a buyer-seller relation and not a co-researcher and partnership relation. From this may have followed a relation where uncertainty and curiosity were not seen as necessary steps towards generating new understandings, but as signs of lack of, or weakness in the expertise. We would both be looking at each other in another way, namely for checking out if the other is "doing it right" and should be blamed.

Thirdly, the expert approach may have turned the process more in a direction of solving a problem than in a process of collective learning and search for new understandings. The problem solving approach's main advantage is that the problem can be communicated very clearly and specifically. The main disadvantage is that you risk solving an already historic problem, and that you create a deficit orientation that may not lead to any ideas for doing things differently, but only lead to identification of someone to blame (see Chapter 3.4).

In conclusion, one can expect that different kinds of processes and relations emerge whether the co-consultant or the expert role is chosen. The former represents a non-modernist, non-determinist coping approach and the latter a modernist, determinist coping with uncertainty, diversity and change. Advantages and disadvantages are involved in both, and for project managers, change agents and consultants dealing with complex projects, both approaches are resources that from time to time can be relevant.

Chapter 5: Radical non-determinism: Biotech case

5.1. This Chapter

This Chapter deals with the question of coping with radical, unplanned change in complex projects and processes. By "radical" I mean changes that are so disruptive, that the situation afterwards differs completely from the situation before, e.g. a project is closed down, a company is sold or a market is destroyed overnight. It also represents changes that by no means could have been coped with by careful planning. (If this was the case, one should move to invest in shares on the stock market instead of being a project manager). These changes are examples of moving close to the limits of social construction as coping strategy.

The case story that is presented in this Chapter differs from the other case stories included in this thesis, as it is about a product development project, namely from the bio-tech industry. The uncertainties and complexities that usually characterize this sector, especially in start-ups, are described in the first Chapter of this thesis (1.4)

5.2. Why this case?

This case is included it this thesis despite the fact that it in a certain perspective is a non-case. By that I mean that the story ended almost before it started due to some radical changes in the circumstances of the company involved. My first thought was that the story thus was not relevant for the present thesis, but my second thought was that this is a case story about something normal, namely that projects are stopped or radically changed, because it no longer makes sense to go on as planned. In bio-tech start-up companies, where the story is from, this is what is expected. Therefore, to exclude the story because something unexpected happened would be to exclude a whole range of "normal" stories from the basis on which the discussions of this thesis stands.

5.3. The case story of biotech B

This is a case story about an assignment that was about developing competencies and relations in a bio-tech start-up company. It is organised around a few drug development projects that are run in very complex and emergent conditions. In the external environment several stakeholders can be identified with differing perspectives: investors, pharmaceutical industry, authorities, patients, etc. Of course, not all are equally important in relation to how projects are run, but none can be ignored if the projects are to get to the market in the end. This complexity in the company's conditions also affects the conditions for being an external consultant.

The story

The contact between the company and me was about an assignment in the early summer that was in cooperation with another consultant to facilitate a three-day seminar for the whole organization. I was contacted due to my reputation as a training specialist in project management from a job as internal consultant in the 90s. The seminar was supposed to deal with both team-building and goal-setting purposes. Before the seminar, the CEO wanted all employees to fill out a so-called Preference Inventory, namely the Jungian based Myers Briggs Type Indicator. After filling out the questionnaire, each employee should have a dialogue about preferences at work with a consultant, and that was what I was asked to do. Unfortunately, the three days for the seminar were already set, and the dates were so that it was not possible for me to attend.

However, we had talked about an additional role for me after the seminar, namely the one of being a consultant in project management in some way. This was an obvious option for me to try to include this assignment as a case story for this dissertation. It was an assignment about developing project management abilities in the organization with respect to their development projects. The consultancy assignment included process consultations and training of the project group and mayor stakeholders/key persons. The research perspective of the same task is "collective sensemaking in projects with a high level of uncertainty, complexity and confusion." A written agreement on the "consultant/researcher" was agreed between me, the CEO, and the research director. A dialogue took place with the project manager of the company's most important development project, where we talked about how I could be constructively involved in the project as a resource for them, and that they could co-research with me at the same time.

Reflection

I was rather content at the time with this arrangement, but I also felt uneasiness about whether the approach I had on this subject would meet their expectations and hopes. Had I been sufficiently explicit about what my "take" was on this? I had some hints from the CEO that what they needed me to help with was to learn to manage and control the projects, e.g. through good planning procedures. I knew the CEO a little from earlier, where we were employed in the same company, and where I had worked at that time with training in the more linear or determinist approach to project management. I was in the dilemma that if I was fully-open about my present approach to research and to the subject of this thesis, I may be seen as too strange and unpractical in the light of more conventional management thinking. The other side of the dilemma was that if I did not, I would have to somehow deal with the fact that what I was doing and what they believed I would be doing were very different things, which sooner or later might lead to some sort of trouble.

Story continued

The summer passed, and to my surprise I did not hear anything from the company. At last I called and was told that the US partner/investor had just withdrawn from the most important project, which was the one I was supposed to be involved in. This was no less than a catastrophe for the company. I offered to join the process of "crisis management", or collective sensemaking. This was an opportunity for assisting and studying the process of creating a

new meaning for the employees, customers and other stakeholders in turbulent times. But they did not want to go into this process at that time. In fact, the CEO said that it was a possibility, but that he was not enthusiastic about the idea, but I did not grab the moment. There was no further contact in that process.

Reflection.

I think that this missed opportunity was an example of how I feel that it is "tough to be strange" and how positive the feeling of being normal, understanding, etc. is in uncertain situations like this. I wonder if my need for feeling safe in the sense of being aligned literally with client expectations is exaggerated as a consequence of the unfamiliarity with the role simultaneously of both consultant and researcher. The same argument can be put when it comes to the client: in a situation where the company is in a crisis and stakeholders, medias, employees are closely observing what the management does to cope with the situation; they may tend to turn to the most familiar response. This may be supported by the idea that when we are observed and under stress, we tend to experience aspect-blindness and turn to the response that we are most familiar with (Weick, 1995). In the language of behaviourism, I was responding with the response pattern that was on top of my response hierarchy in situations where I interpret the stimulus as an invitation to a client-expert relation: that of a reliable, confident, knowing expert consultant.

The relationship between me as a consultant and the CEO ended when the original idea of the meaning of the relation was no longer the same. What could have been done so the relation was re-constructed according to the meaning? What were we not at that moment able to think? Is this not a case of machine-metaphor thinking of relations, that they are a thing that must be put away or replaced, when the original purpose is not here anymore? What could the CEO, the organization and I have learned if we had seen this as a sense-making occasion, and co-constructed new client-consultant roles – that could embrace the opportunity to learn about the relations between mindset and ability to go on when the world exposes you to a radical change (catastrophe). How could I in the role as a consultant have helped in this situation?

If the turn to the most "conventional" coping approach follows from the combination of observation and stress, as Weick suggests, a coping approach that is different or strange has to address these factors or at least one of them. The level of observation is hard to affect. It leaves us with the level of stress or anxiety experienced. This may be affected by different means. One is to try to re-establish order as soon as possible which could be what Gergen calls Social Accounting as a response to disruptions (Chapter 2.4). The alternative is to turn to seeing the disruption as an occasion for making sense of the situation in an entirely new way. This approach is related to the presented ideas about self organised adaptation on the edge of chaos, and on the idea of improvising as a mindset in situations where plans are not that helpful.

Following this idea the level of stress and anxiety might be reduced if the mindset was changed from that of being in "lack of order and predictability = failure!" to that of "new order is under construction = competent action". The change of context makes another coping approach meaningful, and this could constitute that a non-deterministic one would be included as a resource.

Finally, it can be argued that the termination of the assignment was related to the fact that there was no story of cooperation yet, besides the work on MBTI, which was not related especially closely to the issue at this moment. It is speculation, but wouldn't it be plausible that a certain amount of trust between me and the different client representatives would make a difference when it comes to the decision to continue or finalize the consultant relation?

5.4. Summary and conclusions, Chapter 5

This story is a demonstration that certain projects live under change and unpredictability – and sometimes these changes are of a size so that continuation of the project is not a question of adaptation but of survival. No planning can prevent things happening like the crisis in dot.com economy or turnarounds in the investment climate in venture capital in the biotech sector. No social construction of meaning can eliminate the consequences of a financial basis that suddenly has disappeared.

In this kind of situation management and consultant in particular are unusual conditions and under extended observation. An inclination to well-proven approaches follows from the combination of combination and stress. This makes it accordingly difficult to adopt non-determinist coping, at least this is the case in those organizations where determinist coping is the dominant logic or rhetoric of reality. When serious change occurs, the question of restoring order represents a dividing road point where one can try to re-establish the "old" order as far as possible; the other is to accept and embrace the uncertainty and emerging quality of a new meaning and frame for understanding the project or process and its context. In short," when the going gets tough, it's tough to go strange!"

It has been suggested, that the change of mindset may be a possible resource for managers and consultants "on the edge of chaos", so that the determinist coping is a real opportunity, also in worlds, where determinism is the "taken-for-granted" rhetoric of reality. It is also suggested that this is difficult in settings, where trust has not yet developed in the relations. Trust is a main issue in the next Chapter.

Chapter 6: Trust and partnering

6.1. This Chapter

In this Chapter I will discuss the question of forming relationships that are sustainable in relation to emerging conditions, uncertainty, change and complexity. Can anything useful be said about how the flexibility and ability to adapt can be obtained by non-determinist coping – in a branch that for many years has been dominated by determinist thinking in terms of detailed planning and implementation, namely the building sector? The discussion builds on a case story where the question of implanting non-determinism was an important part of the issue.

6.2. Why this case, and what is the focus?

This case is not a typical assignment; in fact it is a not-assignment, because the part I want to present in this Chapter was a dialogue that ended without an assignment and also without a research appointment. This I did not know at the time I started writing the story, and the question is whether only happy ending stories should be told?

I include the case anyway, because it demonstrates from practice how some organizations are working to find ways to live more constructively (and happily) with complex and emerging conditions by cultivating non-deterministic coping as a part of project management practices. The story illustrates the practical use of several of the coping strategies that were presented in Chapter 3:

1. Relational responsibility as opposed to pure individualistic responsibility
2. Collective action in cross-disciplinary as well as in cross enterprise projects
3. Language games of trust as opposed to language games of blame
4. Self-organizing principles as opposed to implementing a plan

My role in the story is that of a dialogue partner and co-constructor (researcher). At the time of the conversations, it was still open what kind of future we eventually had together in relation to intervention (in the role as a consultant) or inquiry (in the role as a researcher) focus on capturing and describing the details of building trust and mutuality. My contribution or role in the story is to interview and to reflect and co-construct new, possible ways of relating in the projects, and so being a participant in the possible futures of the organization.

In this case I will especially focus on relational responsibility, trust and partnership and investigate the potential of these in dealing effectively with non-deterministic processes that are necessary in projects in a context of complex change and unpredictability.

6.3. Case story: Organizing for complexity in the building sector: "Partnering"

General overview.

The story is from a series of dialogues I had with people from the engineering business, who were engaged in managing projects in relation to building and installation projects. The client is one of the major engineering companies in DK. The case is a story where I have both-and relation to the organizations. I have entered the relation as a researcher, but have also a history with the key persons from a client-consultant relation, where I was hired to educate or train project managers. It was at a follow-up meeting to these courses that I discovered that there were people in the organization who were inquiring and describing the experiences that the company had from projects that were conducted following the principles of partnering. They were interested in partnering from the same reasons as I: namely in the search of dealing more constructively with the non-deterministic aspects of project work in a world of constant change and complexity. Thus, I formed a partnership with 2 key persons in the company with substantial experience.

At present the actual cooperation is phased out, and maybe another story is coming, but it is a bit of a sad story about my difficulties in finding my own feet in the double role as a researcher and a consultant. Currently, I have talked to several organizations about the idea, but so far they have all withdrawn before we got into a practical contracting phase. I believe at this moment that it is too strange for the clients and it is too difficult for me to explain the advantages that they will have in this kind of cooperation.

Synopsis of the case.

This case story had its beginning at a conversation over lunch during a workshop for project managers I was heading in a major Danish engineering company in the fall of 2002. I was talking about my ideas of the subject of this PhD project and non-determinism in particular when he began to talk about an official "skunk" group he was a member of. This group of managers and project people had started meeting for inquiring, sharing and discussing experiences from practical use of the concept of so-called partnering. The outcome of the work of the group was that they needed to be able to describe the concept for building owners unfamiliar with this philosophy, and for building owners and entrepreneurs with whom they had no prior experience of cooperation. I understood that the members of the group believed strongly in the future of the partnering within the building branch, and saw the ability to join projects based on the partnering principles as an important competition parameter. Therefore, the issue of spreading the knowledge and craftsmanship of partnering internally in the organization was a current one.

What is "Partnering?"

Partnering was a new concept for the relations between the building owner, the building contractor and the engineering company. We all saw the concept of partnering as a way of dealing with change, unpredictability and complexity, which often gave severe dilemmas for all parties. The traditional, or normal way of establishing co-operation among the parties was to agree on detailed plans and contracts, specifying time and specifications of the buildings

and of the process as well. The dilemma emerges when something unexpected happens. Who is to account for expenses in relation to the changing of plans? Often, the parties had to go to court to have things settled.

In December 2002, I was invited to attend a meeting in the "skunk-partnering-group". During the meeting we explored the idea of partnership between me and the group, and we both presented our own interest and perceptions of potential in a form of cooperation. Their interest is in learning from their experiences and making it possible to use "partnering" as a branding/marketing argument. My interest is to engage in the dialogue to create culturally useful knowledge about the "ways" of partnering that make non-determinism more "liveable."

Some of the members were very eager to go on with the description work (pamphlet), and others were very forthcoming. One common theme or interest was in finding and writing down stories about practical partnering in building projects. Stories that could be informative in relation to themes like:

- The building of trust and confidence
- Contrasting of the traditional vs. the new way
- Is it a question of either/or - or can it be both/and?
- Is it a paradox if the branch competes to be the best at partnering?
- Selling the concept while we are still developing our skills
- Is it one thing or many things?
- Partnering in several levels in the organizations: project level, strategic level, construction level
- The details of what it actually *is*
- The different problems, dilemmas and paradoxes of demarcations/specializations

The conclusion at the meeting was that some interviews with key persons in projects that had already taken place could be a way to move forward. We agreed to think and continue the dialogue over the phone/by e-mail.

Some weeks passed and I was wondering if I had totally misinterpreted the situation. I contacted my initial contact, who in January 2003, told me that the company had run into severe problems and were downsizing and some replacements in upper management had taken place. All had the consequence that the members of the group had their thoughts everywhere else than in research into partnering. He said he had struggled to get a response from the key persons and in March, two interviews were appointed to take place in April 2003. It was still unclear whether the group would continue.

In April, I met with a department manager who was the manager of the project managers in the section for projects within installations (water purification, etc). I was prepared to start the "right way" in the context of partnering: exchanging what's in it for each of us, and what do we hope to develop from our interaction. I made it very explicit that I was wearing two hats: the consultant hat and the researcher hat, and that billing had no interest at this moment. He was also interested in the craft of partnering but from a surprising angle. He had been a participant at the course ½ year before, where it all started, and he had reflected a lot about a comment made by me about the potential of utilizing the dynamics resulting from the principles of partnering in the internal cooperation in an organization, department or project

group. So, in the spirit of partnering he revealed this agenda, which was compatible with my idea of seeing partnering as a principle that can more generally inform project management practices.

He had written and published a case story from the building project of a water purification plant, where the owner: the municipality, the entrepreneur and the advisor (engineering company) cooperated along the principles of partnering (1). To my question about why partnering was chosen as a principle in this particular project, he answered that the situation was very special because the installation was leading the waste water away from a large production plant, which by large meant the biggest workplace in the municipality, and no operational stops could be accepted. And at the same time, there was high uncertainty when it came to the concrete technical and practical solution of the problem. The combination of high risk and high uncertainty called for cooperation between partners with a high level of trust, he said. One of the parties involved was experienced in partnering from building projects, and suggested that this principle was used. At the same time key people were chosen, where trustful relations were built up from previous projects. This was the background for the first partnering project within the installation sector in DK.

The below lists some of the characteristics of the cooperation process from this story about a partnering project.

From bilateral negotiations to multilateral dialogues.

Earlier this kind of project was conducted in "over-the-wall" kinds of processes, where each of the participating parties received and delivered the project to the previous or next link in the chain, according to a list of detailed specifications that had been negotiated on a one-to-one basis with the project manager. Coordination and responsibility was the project manager's alone, while the responsibility of the participating parties was to deliver, according to specifications, at the lowest possible price. In this project, building on partnering the deliverances and success criteria was negotiated multilaterally, so that all involved were able to build an understanding of the project as a whole, and the connections between their own role and the roles of others.

Sharing of revenues/losses

The building of interpersonal trust at the meetings and workshops was supported by the development of financial incentives. On the initial workshops different scenarios/solutions were discussed and a preferred approach was chosen as a basis for the setting of a target price. The target price mirrors the possible and reasonable price, based on key numbers/prices from the different specialities. An incentive system based on the revenue that comes from eventually going faster and cheaper than target was negotiated, so that all involved also had a financial incentive for trying to choose the good for the whole instead of following the temptation to go for their own individual success. In this project, the percentage of the eventual gain was mirrored in the same percentage to cover in the case of ending above target price. (Remember the A-B game!).

Collective construction of criteria for non-financial success

On the non-financial side, the building of trust is based on the mutual understanding and interest in staying in business together in the long term. At the initial workshop the parties revealed their situation, needs and interests in their particular branch. A declaration/letter of intent was signed including a discussion of game rules for the cooperation and maintenance of trust.

Workshops with all involved

In contrast to the conventional way, all involved in this partnering project joined the process from the beginning. During two-day workshops the project was explored and as trust building dialogues, discussions of rules-of-the game were used. Risks related to solutions and approaches were collectively explored. Trust and so-called Big Picture understanding was the effect of these workshops.

Dynamic planning and detailing

In this project many details did not need to be in place from the beginning and could be put in place at a later time, where the knowledge about the actual context was bigger. Thus, changes and adaptations were easier, faster and cheaper to deal with compared to the more conventional methods.

Trust and confidence the selection criteria no. 1

In these kind of projects partners and key persons are chosen on the basis of perceived trustworthiness more than in anything else. Accountability thus is a must for persons who want to work in the industry if this kind of working takes off for real. This can be expected to have some controlling effect on behaviour, because the consequences of "cheating" or going for the short benefit here-and-now for oneself at the expense of the partner company, will lead to a drop in perceived accountability and thus attractiveness as a partner in future projects. As was seen in the A-B game, if black-black is played, it is difficult to get back on the win-win trail.

Entrepreneurs/craftsmen companies on board from the start

This approach involves everyone who is going to take a role in the project from the start, even if some of the craftsmen were not supposed to contribute to the work before later. The approach made it possible from the beginning to use the knowledge, experience and ideas from the parties working in the later stages of the project. The more psychological effect is that when a person is involved in structuring, planning and goal setting a process, your commitment to actually implementing the plans are higher.

Reservations were welcomed at the point of time where they could be addressed

One very interesting thing is that at the initial workshops where the parties were elected, they felt it more safe and meaningful to be open and honest about their concerns and reservations. The point of time was right, for it was still possible to reconstruct the approach in contrast to

conventional projects, where reservations and inconveniences are discovered too late to be used constructively without raising the budgets severely. To the extent that the person's experience that their contribution is actually used and their interests are mirrored, one can expect that this adds to the level of trust.

Signing a psychological contract

At the initial workshop the parties wrote letters of intent and rules of the game for their cooperation during the project. In particular, rules for dealing with the unexpected and with changes were dealt with. Rules that could ensure that changes and necessary adaptations did not result in a lot of bureaucracy and extra cost - not to mention result in a lot of time spent in fighting about who is to blame!

Continuously evaluating the work process

During regular meetings the parties evaluated the quality of the cooperation process. The evaluation took place based on the letters of intent: the qualities they wanted to create. All involved in the process filled in questionnaires regularly. Evaluation was part of the meaning making process along the way, not a once-and-for-all thing in the end, where you cannot use the resulting figures for anything because it's over.

Co-constructing an incitement structure that favours joint responsibility for client satisfaction.

The owner has an interest in keeping things open, that it is possible to adapt and change the solution until the last moment. He of course only knows a part from the beginning compared to what he knows at the later stages. On the other hand, public organizations have a legally defined duty to control costs on behalf of the taxpayers. So, in traditional projects the participants are exposed to the dilemma between delivering what is in the original contract and what will be satisfactory in the present situation. The dilemma is present whenever the world can't stand still while running the project.

The entrepreneur in traditional projects at the beginning is pressured to find the cheapest way to deliver the solutions specified. This is ensured through a detailed description and on submitting tenders. As a result it is a very complex process to deal with changes based on this kind of contract, but often entrepreneurs are tempted to write extra bills in these situations, and a small battle can begin.

The advisor to the owner who is an engineer from the engineering company, tends to resist changes and adaptation for the same reasons. His success is indicated by the degree to which he is able to create a project description that results in a project on time, on budget, and on specification.

In this partnering project, the three parties together negotiated success criteria and criteria for dealing with revenues/losses, to which they committed themselves in favour following their own, short-sighted interests.

No local fat in plans – a common buffer (fat pool)

In conventional project planning the duration of the activities are estimated in a way so the individuals are accountable. As a result there is a tendency to overestimate the time needed to be sure that you will not be to blame. As a result in the project plans there is a lot of buffer time, but distributed locally in activities with no possibility for the project manager or others to manage these buffers around the considered project interests as a whole. In the partnering project, the parties committed themselves to be open regarding buffers, so that all buffers are for common use, and that surprisingly winning time is also at the disposition of all parties. In this way not only do delays accumulate, but things also go faster than expected.

From the publication of the article about this first Danish Partnering project within installation: (Lerche et. al., 2002)

> *"The overall evaluation of the project process from each of the three parties has been:*
>
> *The owner:*
>
> - *The possibility of adapting the project all the way gives high flexibility……*
> - *…employees have throughout the process developed competencies… and knowledge, that are useful in future projects*
> - *One single entrepreneur´s behaviour did not live up to the intentions of the partnering agreement, which resulted in delays …(focus on the weakest link of the chain)*
>
> *The entrepreneur:*
>
> - *We as entrepreneurs have seen the possibilities and challenges of being on board earlier in the phases, than normal*
> - *By placing our specialists at the table during project development, optimal implementation was ensured*
> - *We succeeded in creating a team spirit, a good atmosphere and a progressive dialogue*
>
> *The advisor:*
>
> - *We succeeded in creating shared attitudes to the level of quality and details…."usual" discussions on building meetings about interpretation of the bidding materials were not necessary*
> - *Some participants hesitated in the beginning to committing themselves to partnering…("all involved must participate in the workshop to ensure a rapid start-up of the partnering process")*

Reflections

Partnering involves useful principles for building projects coping with high uncertainty and risk. It is a concept that is a way of living the non-predictive aspects of an installation or building project. It seems to constitute a complex wholly, where the above mentioned aspects work together to create conditions for the emergence of a cooperation pattern with potential that differs radically from more conventional approaches.

After the interview with this project manager I wrote him a proposal that went in line with his intentions about exploring the possibility of extending the dynamics of partnering to the internal cooperation in the department he was heading. The proposal suggests a workshop for all employees, where the key players from the project described above were invited for a couple of hours so that the employees could interview the partners about the craft and the effects of the principles of partnering. I suggested that this was followed by a discussion about possibilities and limitations in transferring some of the dynamics to the inner life in the department. He responded positively and suggested a workshop on the issue in August 2003. Here, more than a year later, the workshop has still not taken place, because support from upper management could not be obtained.

This case was at this point of time developing into a merger of the role as a consultant and that of a researcher into a position that looks most like that of a "reflective partner". We tried to do some of the things that work when partnerships are established in installation projects, namely being open and honest about our different interests and having a dialogue about how both agendas could be given space in the process. We agreed explicitly about not being too explicit about the question of how we were going to do it, for having maximum flexibility. I trusted the manager and the fact that he worked for the workshop confirms my impression; that he trusted me.

However, the manager's boss had never met with me, or taken part in the process that ended up with the manager and me seeing our companies as potential partners. Therefore, he neither felt any enthusiasm nor understood the reasoning behind any. And, maybe most importantly, he had no reason to trust me (and thereby, us). From there followed that he could not support the idea. Especially because the idea could not be realized on the basis of the existing control system in the organization, which was very individualistic and deterministically-oriented. In fact, part of the idea was to develop some kind of free status in relation to this control system, and of course this represented something that would involve great risk on behalf of the manager's boss.

One can reflect a bit on the apparent paradox that the company was advocating for relational, non-determinist coping (through partnering) in the cooperation **between** companies but insisted on individualistic, determinist control **within** the company itself. The question is, whether it is possible to harvest the full potential of partnering as non-determinist coping, if the internal control system forces the employees into individualist responsibility through detailed planning and following-up. On the other hand does the paradox make sense if the alternative is perceived to be that it would not be possible to react in time in projects that tend to give the company a loss?

For me, the case was one more example of how difficult it will be to come to work in the mixed role of a consultant and a researcher. There is always someone else to take into account behind the one in the client system that you now have developed trust with.

Story: History of partnering in building projects

After the interview with the department head, I had a meeting with one of the very most experienced PMs in DK when it comes to partnering in building projects. He was a member of the "skunk group" formulating a ground for spreading and selling partnering project management. He told his story about how the idea was born to one of the first building projects in DK that was built after what is now called the partnering principles.

The story began with an order from one of the major medico industries in DK. This order was special in the respect that in the word of the "owner": "No matter what, the price cannot be increased". The conventional way of approaching this challenge would be to go into very detailed descriptions of all components and aspects of the building process. The idea was that if you describe 100% into all details you are doing the best to ensure that the projects come out on budget. But, at the same time, anyone in the branch knew that this is almost impossible, and that in some cases it makes the problem even worse.

The argument is as follows: there will always be changes during the project, for example due to the owner changing his opinion or his situation so that the specifications of the project must be changed. Changes can also arise from unexpected difficulties in the chosen approach or in other circumstances in either of the participating companies. Changes can also be necessary because of knowledge that is generated after completion of the plans.

A change in project specification, however, is very expensive because the entrepreneur has taken the lowest bid on the basis of detailed specifications. The bidding procedure thus must be repeated and this very often results in accusations of "over-engineering", so that the extra price is out of proportion to the actual change in specifications in the eyes of the owner and the advisor. In most projects, this is followed by conflicts, mistrust and persecution, often ending in court.

Reflection

In this story, we get an impression on the micro-level of how the logic of action emerges in the process and what kind of relation follows. Will it be a relational logic based on trust: "We have to believe the Other can be trusted, before trust can emerge" or the individualistic logic of: "I will trust you when and only when I have seen that you are worth trusting". The project manager thought that in this project, where the price was fixed no matter what, that conventional individualist approaches would be too risky. That it would be too risky to minimize risk!

Story continued

This time the project manager asked the owners if they could do something different. He proposed that they made a trade-off: the owner renounces submitting tenders and instead chooses the cooperation partners from the beginning. In return, he gets a stronger influence

and ownership throughout the entire building process. This was a proposal of a very different psychological contract, but it was accepted by the owner.

The project manager thus started working out a set of incentives, financial as well as non-financial. On the financial side the incentives were based on the criteria that all involved should benefit financially for a well-run project, and that they also were "in it together" if the project did not go so well. And the idea was that they could save a lot of hours, days and weeks from not having to pursue "claim management" where huge detailed re-engineering/tendering was no longer necessary.

On the non-financial side, the common criteria was that it should be fun, and that all parties should create good references for future projects, so that they could help each other stay in business. This was the beginning of partnering for this project manager, and after this point in the story an approach is described, which is more or less similar to the previous example from installation projects.

One story illustrates some of the dynamics and the potential difficulties. One of the craftsmen said at a building meeting: "The tearing down went faster, so now I have more time for…." Where the PM replied: Oh no, this is not for you, it is for the common buffer, the time saved goes to the activity that is in the greatest need for us all – this is what partnering is about". The partnering principle about sharing risk and opportunity clashes with this person's normal way of planning his work and making his business run.

Reflections

This story illustrates why and how better results may follow from the openness and trust that is a presupposition for partnering to work. But also how much the thinking is different compared to the conventional way of controlling project work. If, and only if, trust and openness are combined with financial incentives for collective action (3.2.), there is a potential for the involved parties to work in a way that copes with uncertainty, diversity in agendas, and chance in a non-determinist way.

In the partnering projects a lot of time is spent on dialogue among the participating agents. These dialogues about the project result and process is what replaces what plans do for conventional projects. The planning is implicitly embedded in the dreams, stories, images, visions and use of language that emerges through the dialogue about project and its different meanings. The projects are controlled by continuous social construction (3.3.) of the meaning of the project. They set the mind for a certain amount of improvisation (3.6.) - that continues without a script – where everyone coordinates his/her own contribution with what the situation as a whole calls for at the given moment of time. Responsibility is relational (3.4.), that is that everyone takes responsibility for acting in a way that the relation can continue on the one hand, while on the other it is the partnership that is the responsible unit, and which tries to adapt responsively to whatever comes up during the process.

Ideally, partnerships of this kind can be characterized as appreciatively organised (3.4) in that the parties are 1) aware of different perspectives 2) have dialogues where they affirm mutual meanings, and 3) mutually generate possibilities for each other, and generate a frame for collective action (3.2) where the involved act in such a way that allows all parties to succeed

and withdraw from the temptation of "scoring" short-term benefits at the expense of the others involved.

Critical remarks on partnering.

However, critical voices have also been heard about the present status of the concept of partnering. One is about the present practice being only different from traditional project management on a superficial level. The other voice says that for the partnering concept to work, you must have very many meetings and that so much time is spent without production that the benefits are wasted here. Let me briefly present the views.

The argument of superficiality is partly heard from project managers in the organization that are nervous that the focus within the organizations on predictability and individualistic economy systems are hindrances for efficiency in projects with developmental and cross-unit characteristics. The argument is: if the project manager and the people he needs to involve in the project work are measured on their individual contributions and their ability to predict cost and time needed for a task, there is only a limited incentive for working on projects that are uncertain, developmental and cross-functional. The risk involved in letting individualist responsibility go in favour of collective or relational action with uncertainty is simply too high. It is too difficult to make it work, because employees tend to prioritize individual responsibilities first.

An evaluation report from The Danish Institute of Building Research reviews 15 building projects that have followed, or tried to follow, the principles of Partnering. In Erhvervsbladet the research is reviewed in article, where it says:

> *"Partnering does not always lead to the desired results, but the picture is very mixed. We have seen very successful partnering-projects and also projects that got out of track. In general we demonstrate that hard and determined work is necessary for partnering-projects to succeed. It is not magic dust that you can just add on to the building process"*

And:

> *"It turns out to be far more difficult than expected to run projects according to partnering principles in a Danish building sector that traditionally has worked in line with almost opposite guidelines"*
>
> (Erhvervsbladet, 10/11 2004, p.3, my translation)

Another critic comes from authors and practitioners that argue that partnering is on its way to becoming a new determinism, in that it has now turned into a new recipe, and thus is not as flexible coping with uncertainty and complexity than it originally was introduced as. It has become a trendy tool, and use of tools is usually associated with less anxiety than modelling tools on a continuous basis throughout the project. So, it is argued, partnering is a practical approach to which a story is attached that reduces the anxiety that is accompanied to construction processes under changing and time pressured conditions.

For example, New Mexico Professor Howell and associates are discussing partnering from the perspective of centralism-decentralism and argue that partnering principles are not challenging the mental models of a "central brain" that overviews the decentralized activities, and suggest that partnering principles are transformed into a more fundamental change in the direction of thinking complexity and bottom-up processes among decentralised actors. They suggest, in other words, a theory for construction management that builds on decentralised control – which is – a non-determinist control (Howell, et.al., 2002)

Finally, it has been argued that partnering, especially because of building trust is so important, takes so much meeting time that the benefits that should result for all involved are instead wasted on hours in the meeting rooms. The main issue of this Chapter is the question of the role of trust in the relations within and between organizations that are dealing with projects and change in complex conditions. In the next section, I will therefore review some examples of the literature on the role of trust and of the social processes involved in building trust.

6.4. Summary and Conclusions

In this Chapter, I have analysed a task that did not become a task for my consultancy business, which happens from time to time. It is also a story where I experienced that it is not necessarily easy to form a partnership with clients that contains the researching dimension. It seems that it takes some courage for client organizations to enter business that is a mixture of consultancy and research. On the other hand, I am still working for this organization, and the dialogue has not ended yet.

The story is from the building industry that faces projects of high levels of uncertainty and diversity in perspectives, which adds up into complexity in Stacey's model. The story reviews the non-determinist approach to coping with complexity with the name of partnering. Partnering builds on a philosophy that is in line with several of the perspectives described in Chapter 4 in the present thesis.

It illustrates *collective action* (3.2) across organizations and disciplines in the sense that they trust the other parties to withdraw from actions that would harm the relationship. The collective action based on trust has the function of reducing the complexity, because a range of possibilities (risks) can be left out as long as the mutual trust is not violated, but confirmed by feedback. The partnering projects utilize this in that they have not made leads of paper with detailed plans and contracts stating sanctions if these plans were not followed, etc. The threshold that must not be surpassed if trust is to be maintained is negotiated and communicated in seminars at the start of the projects, and the confirming feedback is elicited through regular meetings with all parties present.

In these kinds of projects we see an example of *relational responsibility* (3.4.) as opposed to pure individualistic responsibility. This kind of responsibility arises from the recognition of the others' legitimate needs, if they are to stay in business. Using this information to act in ways so the relation can continue is one side of the relational responsibility: that everyone is responsible for the relation. The other side is that they try to create a situation "all for one, and one for all," where the relation holds the responsibility for the project success. Appreciative organizing principles are used as a bridging device in that active appreciation forms part of the procedures.

The partnering approach includes reliance on the ability of social systems to *self-organise* (3.5). This means that not all coordination and organization are in place at any point of time, but in a constant state of "under construction". Order emerges from constant dialogue and meaning making processes, and decisions are made at the point of time where the knowledge and data is present, not before. The dynamic planning approach also associates to the idea of continuous coordination from the jazz-metaphor, including *improvisation* (3.6).

The approach has some success, but also difficulties when partnership is to be made between parties that do not know each other - or have negative experiences. Some voices warn that partnering is becoming a "concept" or tool, and risk becoming a determinist procedure following a manual and not the logic of action that is continuously and locally negotiated. Or, the approach risk being superficial in its pragmatism, and not enough challenges the mental models behind the no-more-so-traditional approach, and thus not gain enough flexibility or trust. Finally, the question can be raised if the need for meeting and communicating face-to-face will be so expensive that the advantages are lost.

Chapter 7. Reframing the vocabulary of Project management

7.1. This Chapter.

This section includes and summarises some practical and theoretical suggestions and conclusions regarding the managing of projects under conditions of change, complexity and uncertainty. The aim is to contrast the "toolbox" of the project manager living in a machine metaphor with the corresponding toolbox for the project manager living the complexity metaphor.

The phrase "toolbox" is put into speech-marks because this term in itself is a word from one of the vocabularies involved, namely the modernist vocabulary of coping, in which the assumption is that competent management is a question of using universal knowledge to identify situations correctly, and by applying the one best tool.

In non-modernist vocabularies alternative phrases for knowledge and practices are "theories of action" (Hedberg, 1981), "vocabularies of coping" (Weick, 1995), "discursive practices" (Leppington, 1991) and "bricolage" (Smedslund, 2004). In these views it is underlined that what we make use of as resources for coping with different situations are not fixed entities like things. Instead, these competencies are embedded in our own sensemaking processes and in our participation in creating the world we experience. Of course, when this is said, there is nothing wrong with using the metaphor of the toolbox as an expression for the advantage of having a rich repertoire of approaches in a world, where you never can predict exactly what the situation will call for.

I have chosen the phrase "vocabulary of coping", as this term embraces both organizational psychological grammar (coping: e.g. Schein) and vocabulary (social constructionism: e.g. Gergen). The vocabulary of coping includes in my use of the word in this Chapter both the knowledge that the manager uses to pick cues from and make sense and meaning of situations, as well as the response repertoire that is applied. I am not suggesting that human beings in organizations are obeying causal laws: e.g. "this method causes that". On the other hand are people not totally unpredictable. On the contrary, in a lot of occasions our colleagues, customers and boss will behave the way we expect. So some degree of order is what we can expect, and this order is related to different levels of the human condition.

On one level, order is related to human beings as followers of rules, which should not be confused with obeying abstract psychological laws. (Smedslund, 2004). We follow rules that we learn as we are socialized into a language of a community or culture, which can include certain vocabularies of coping (in local groups and relationships). These rules are different from laws in that they are not entirely deterministic in a causal way. The rules constitutes logics of action in the form of when a situation is such and such, people tend to do such and such. Depending on the interpretation of the situation, different rules may be relevant. In other words, there are different logics of action, so that certain action patterns follow from certain interpretations of the situation. This complex of socially constructed knowledge, rules and practices are what I refer to as the vocabulary of coping, and in this case a vocabulary of project management.

Three reasons are mentioned by Smedslund for why the domain of person psychology precludes general causal laws. Firstly, chance plays a significant role in making us all partly unique. Secondly, necessity plays a role too; that social rules and logic make it necessary to go on in certain ways according to the meaning, which often is shared in the form of common sense, and not in explicit knowledge. Rather, people and situations tend to be ever changing and unique. Thirdly, human beings act intentionally, which means that we follow goals, but that these are sensitive for how we perceive results (success or failure) and to changes in context.

On a second level there may be causality, in that we are also biological machines with a perception apparatus and nervous system that gives some causal predictability. On a third level we create some order and predictability through the knowledge and mutual expectations we create in face-to-face coordination and conversation with another human being. This knowledge is created from moment to moment and embedded in a particular relation in a particular context, and enable us to act on the basis of e.g. trust, because we "predict" that the other will not do something that will harm us. Together, these three levels of knowledge, according to Smedslund, accounts for the condition, that people are at the same time amazingly predictable and amazingly unpredictable (op. cit., p8.)

I will discuss the modernist vocabulary and suggest some alternative vocabularies of coping as possible resources for managers dealing with complexity, uncertainty and diversity. The discussion and suggestions will take in 10 of the most conventional tools or practices, which are well established in the communities of project management.

7.2. Reflections on vocabularies of coping: determinist vs. non-determinist coping

It is my intention to demonstrate how the perspectives, stories, reflections and ideas from this thesis can be practical instruments in a non-determinist and thus enriched coping strategy for leading projects and processes in complex conditions.

7.3 Goal setting

In the modernist tradition of organizing, goals are seen as important because it is assumed that deciding goals is followed by fulfilment of these goals. The assumption is that when we decide a goal, actions that will lead to this goal follow directly from this. In line with this

thinking, it is assumed that goals should be clear and unambiguous and that there should be consensus about them, so that the different contributions to the end product will fit together. Clearly, in a context of predictability and agreement about the meaning of the project or change, this is hard to argue against. If the goals are clear and agreed upon, less conflicts misunderstanding, confusion or mistakes will probably follow.

But in complex and emerging conditions, where there is uncertainty, disagreements and maybe a need for learning in the process, clear goals and consensus may not always be the best to work for. This model for using goal setting as being instrumental for predicting the end is only effective if environmental influences can be neglected, and that knowledge generated along the way not will affect what will be the best obtainable result.

It can be argued that what it takes to agree on goals is negotiating a compromise that no one really burns for. And it can be argued that forming coalitions on goals that are specified in detail on a point of time where knowledge is minimal is, at best, a waste of time because it will have to be revised anyway. Even worse there is a risk for "over-embedding" the objective so that no one dares to question it, constituting a serious risk for the project delivering the specified goal, but that it is no longer meaningful for anyone. If the assumption that action follows from sufficiently clear and agreed upon goals holds, then the risk is worth noting.

An alternative that follows from the stories and perspectives in the previous Chapters is to change from agreed, unambiguously formulated goals to goals that are meaningful and motivating for each and everyone. Probably every project member needs to have intentions to follow. The price to be paid is that the goals for different members differ from each other. But as we have seen, development and change is possible without common goals. Instead of common goals, indicators or signs of a better situation is enough to get the process started.

Coordination can take place along the way and alignment can work without prescribed, identical goals. Continuous dialogues about "How will I know that what we are heading is meaningful for the stakeholders?" can alternatively replace setting clear and common goals and coordination device. The important question may not be if the goals are common, but if they are coordinated and if they elicit a will to act to learn to act to learn to…etc. Instead of setting goals that should be maintained as a part of the working contract, goal setting can be seen as a continued process of clarifying, communicating and coordinating different intentions of the people involved. Continuous contact replaces contracts?

Reader service: How can this distinction be seen? The idea that it is possible to create change and development without clear and agreed upon goals was illustrated in the case of the City Hall and project competencies: "we don t exactly know where we are going, but we know that we want to". Also, we have seen that from the perspective of self/organization, a group meeting without the preexistence of common goals can obtain a meaningful result (3.5). Of course this does not prove that clear and common goals are always unnecessary, but suggest that it is possible in some cases to do without them. In the case story about partnering, (Chapter 6) it is told that the involved parties have different interests and uncertainties, but that work can be done in a meaningful way with goals that are emerging and agreements that are partial.

7.4. Stakeholder management

In determinist logics, there is a tendency to look for truth and for the essence of objects and phenomena, and in the case of stakeholders, the most commonly used approach is that of stakeholder analysis. It is recognised that disagreements are likely to occur, as stakeholders differ in interests and perspectives in relation to the project. Stakeholder analysis is usually followed by a stakeholder strategy, where it is discussed how the risks of losing stakeholder support is dealt with.

This discussion is usually followed by work on designing the right (the best) project organization. Stakeholders are regarded as either supporters or resistors of the project or the change, and thus implicitly put in an instrumental position. It is usually assumed that stakeholders are best dealt with through negotiations in the initial stages, where coalitions are formed and explicit or implicit agreements about the project are established. During the project, their input is only to a small degree considered essential for learning and adapting the process, but primarily as signals about how to protect or promote the project in its existing form.

In non-determinist coping strategies, the meaning of objects and phenomenons are created and re-created continuously, namely through coordination and communication in relationships. Thus, in this perspective stakeholder management is seen as continuous organizing in contrast to a question of designing and running the one best, "right" organization. Earlier in this thesis we have seen suggestive evidence that appreciative organizing and mutual trust can function as ordering principles as alternatives to prediction, planning and implementation.

So, the non-determinist alternative in coping with different stakeholders is to coordinate multiplicity continuously and to engage in and appreciate the perspectives of each stakeholder, trying to establish a language game of mutual support and trust and postpone the question of how to integrate the different views till later, where the situation anyhow may be altered in substantial ways.

> Reader service: How can this distinction between determinist and non-determinist vocabulary of coping be seen when it comes to the question of dealing with stakeholders? In Chapter 2 the perspective of social constructionism on narratives was introduced, and the project work as the construction of many stories was introduced. Stakeholder management as the creation of different stakeholder stories in emerging conditions are seen in the story from the buildings sector (Chapter 6), where differences of interest were continuously recognised and dealt with through regular contact between the parties. It can be seen as contact replaces contracts and this accounts for a non-determinist logic of coping with complexity. The perspective of complexity (Chapter 3.5) also introduced a difference in regarding bounded tension and disgreements (dissonance) as a source for constructing new meaning and new adaptations.

7.5. Planning

The concept of planning is a cornerstone in determinist coping: that careful preparation of a work package sequence is the way to ensure a good process. If the plan is sufficiently good, the project will be a success. But, human beings do not follow laws, but are intentional, context and result sensitive and exposed to chance. And at the time when plans are made, the knowledge level is typically low. Therefore, we cannot expect projects to go as planned. On

the contrary, we must expect that something else happens that could not be predicted, but that can only be explained or made sense of in retrospect. Or, even worse we work according to plans and ignore cues that would tell us that it would be wise to adapt or change the project direction or scope and maybe even finalize it prematurely.

What would an alternative, non-determinist logic of action look like? The cases in this thesis have demonstrated that development can take place without clear, unambiguous and agreed goals, and also without the decomposition of work processes into detailed plans for action. This may suggest that a recipe of this kind is something that we are used to, but we can do without them, at least in a number of instances. Preparation can take other forms, where some order, prediction and control is made possible. For example, this is the case in the kind of implicit coordination that follows processes of collective sensemaking.

Continual coordination and learning may eventually replace detailed action plans. But on the other hand, it has been argued in a previous Chapter that plans function in creating clarity as a necessary simplification for the time being and as an animating and orienting device. Project planning is followed by members starting to act and thus to experience and learn. Coordination can be prepared by collective meaning/sense making processes, and the planning work should be taken to the point where the will to act is elicited, and that the involved person knows where to start - not longer. Instead of following a plan, there are regular collective sensemaking occasions, because only in retrospect we know what we are getting at and where we are at the moment.

Reader service: Where can this distinction between determinist and non-determinist vocabularies of coping be seen in practice, when it comes to the question of project planning? In this thesis, it is seen in the case of meetings, where people create meaningful outcomes without following an agenda (Chapter 3.5). In can also be seen in development processes like the case story about improved working climate, where action plans were replaced by coordination of "signs of improvement" (3.4). It is also seen in the case of developing project competencies in the City Hall, where there were intentions and a beginning, but not a master plan. (Chapter 4).

7.6. Implementation

The phrase implementation is a word from determinist vocabulary, indicating that when the plan is made, the rest is a question of a loyal "rolling out". Implementation is about finding ways to the goal that was originally formulated, with help from the plan that was developed initially. If implementation shows difficult, it is assumed that this is due to bad work on the plan or the goals. If it proves necessary to change the plan, it is a sign of failure – of poor preparation. In a determinist vocabulary of coping we would say that a good project is one where it went according to the plan, that project success was determined by effective implementation of a good plan.

A non-determinist 'take' on implementation may focus equally on execution of the plan and on the question of *meaning* or *use* of the project result for those it is to benefit. There is a difference between focusing on implementing a certain solution or implementing/realising a certain meaningful difference, that could be called a dream, vision or added value. A dream or a vision can be implemented in many ways and the process of implementation is also a

continuous dialogue with those, who it is about. In comparison to determinist approaches, actions are seen as more provisional, a little like experiments, but which will elicit cues, which again will give us a hint about what will/will not be meaningful for end users and other stakeholders.

In a non-determinist vocabulary implementation includes experiments and inquiries into what follows from these experiments. Knowledge and goals are developed throughout the project by reflection and learning. In many cases, implementation depends on some level of improvisation, where knowledge is generated in the moment of contact between the people working on the project and the "audience" of the project. The role of the audience is played by stakeholders and especially the end users. And this role may or may not be accepted as something that follows from the project manager/group enacting the role of "improviser" and "experimenter".

Non-determinist logic of implementation includes a mind that is set so that adjustment is interpreted not as a sign of failure but of competence. To encourage engaging in processes, you cannot control or predict – and not a question of determining the one best way to approach. In a moving world implementation is not a phase after all the others, as in conventional project management literature. Implementation is the first and the last and implementation on the level of meaning/added value of the project can be seen as a continuous dialogue with stakeholders, in which it is explored which ways forward can be expected to gain support and which not.

The key question in non-determinist logic of implementation is not "how many activities are left" but "(how) does it make sense to go on?" In many cases, the implementation on the meaning/value level may take more importance than the production of the output goal.

Reader service: How can this distinction between determinist and non-determinist vocabulary of coping be seen in practice when it comes to implementation? In the case in this thesis in Chapter 3.3 about an organizational consultation it was told that the change project did not succeed as a result of effective implantation of the original idea, but followed from re-negotiations and responsiveness to emerging understandings and conditions. The other clear instance from practice is that of the competencies development project in the hospital, where implementation was reframed to the appreciative reinforcement of fluctuations that showed a potential for improved practice, and thus already had been implemented in practice at least on one occasion. (Chapter 3.3) In Chapter 3.6, a case story about role-plays is used as evidence for the usefulness of viewing implementation as "performing" into uncertainty, using principles from improvisation.

7.7. Team Building

In conventional, determinist coping approaches team building is a question of generating "high performance" in collaboration through recipes for establishing agreements, rules of behaviour, shared views, common goals and plans. The assumption is that if teamwork is established in the start, this causes efficiency. This concept of teambuilding, however, does often not pay a return on an investment. There may be several reasons for that, as pointed out in Chapter 3. Firstly, it is too time-intensive in the necessary investment to be efficient, and project managers most of the times feel "behind", and this recipe is not always helpful. Secondly, teambuilding may have as its un-intended consequence that the project members become "over-embedded" and thus too loyal to the original ideas and views. As a result,

conflicting views may risk being suppressed and adaptations not occur. Thirdly, in some organizations standard recipes for teambuilding are followed rather blindly, so that the context, the task and members of the particular group are not taken very much into consideration. The result is that working as a team makes no meaning and may thus not be a helpful approach.

A non-determinist variant may be the metaphor of the network of partnerships. The focus thus will move from the industry of teambuilding to the craft of continuous networking and building relational responsibility together with stakeholders and project members. Networks as a metaphor may suggest a thinking that is more flexible and adaptive in that they are not held together by a common set of goals, plans, behaviour and culture, but on a continuous bridging conversation, e.g. appreciative organizing and partnering. Networks and partnerships may also be expected to have less temptation to suppress conflicts and disagreements, because they by their very nature are expected to be based on differing perspectives and interests. In a context of uncertainty and disagreement, a "requisite variety" of ideas, approaches and perspectives is an asset in the light of many possible future scenarios. Network building supplements team building in non-determinist logic of coping.

Reader service: How can this distinction between determinist and non-determinist vocabulary of coping be seen in practice when it comes to team building? The difference is to be seen in the difference in approaches to collective action (3.2). The discussion of the case of the A-B game and of the literature review on teambuilding suggests that teambuilding may in some interpretations be based on determinist assumptions about forming the "right" organizational structure to the "right" task. The metaphor of the emerging network of partnership from the building sector is seen in the practice of partnering, and represents a non-determinist vocabulary of coping that is less embedded in certain views, plans and goals.

7.8. Control

Different paths can lead to control and order in projects. Earlier, prediction was seen as the most powerful and efficient tool, that through careful planning created a basis for controlling the work process, gaining order and efficiency. Control in this perspective is a question of creating conditions that enable the planned actions to be taken in proper time. In a vocabulary of coping that includes a necessity stating that "if A is planned, A always has to be done" the sensemaking will be affected. Relevant cues will be something relevant to the planned action, and what may be left out of sight are cues that might give a hint about loss of meaning of the project or about ideas that could change the project in an even more constructive direction. Determinist vocabularies of control may in this way generate aspect blindness, or tunnel vision.

Complexity theory gives another perspective, namely that order and control emerges from states with "bounded tensions" on the edge of chaos. In projects this means letting go the present form of control and order for a period to allow a new order to emerge through spontaneous self-organization. This involves a shift in focus from deciding "how to get there" to processes of collective sensemaking that allow new orientations to emerge, and thus a new basis for continuing. Social psychology, namely theories about cognitive dissonance, supports the idea of a dynamic in social systems that counts for emerging order and new meaning on the basis of conflicting and self-contradicting, but co-existing views.

An important difference in the two vocabularies of control is that in determinist control vocabulary, adapting and change of plans may signal "incompetent planning" - that the project manager is no good in delivering what was promised. In non-determinist control vocabulary, adapting and changing plans indicates a project manager who acts competently to maintain meaning.

In stable and simpler situations, action planning and control may be very effective and progress can be measured on the degree of completed activities. But in more complex, changing and unpredictable states, activity planning can be disastrous, as it has been demonstrated in the review of practices within the building industry. As an alternative, the planning can focus less on actions (what is done, what to do) and more on "cues" or indicators from the context, that will indicate meaningfulness (how we know where we are). The question of what is a progress will accordingly be answered differently in a determinist and non-determinist vocabulary. In the former, the question will be answered in the context of what was in plan – in the latter it will be answered in the context of what follows from it in relation to the intentions.

Reader service: How can the distinction between determinist and non-determinist vocabulary of coping be seen in practice when it comes to controlling projects and processes? In the case of installing non-determinism in an organization (3.3) the story was told about a meeting in the project group, where the course and meaning of the project was reconstructed simultaneously with the creative interpretation of what had happened and what was obtained until that moment. When the meaning of what the results counted for, the future of the project was also reframed. In a non-determinist vocabulary, the control mechanism would be that of comparing completed tasks and goals with the expected. In non-determinist vocabulary, the control mechanism is that of retrospective sensemaking in relation to emerging intentions and conditions.

7.9. Decision making

The making of decisions is maybe the most central feature of organizing in determinist logic of action and coping. Good decisions are seen as the means that determine efficient actions that again are the necessary and sufficient determinants for good result and successful projects. Good decisions require good prediction skills and the ability to cling to your decisions: proactive decisiveness is the key competence in determinist vocabulary of decision making. This idea, that good decisions is followed by good actions, is also called decision rationality, and is questioned in the literature because in some situations we are not acting as we are talking, and even when we recognize this, we continue to talk as if we intended to do so. What could be non-determinist logic of coping with the question of decisions?

In the case stories have seen that development and change that turns out successful can in some situations take place without first being decided in a "master plan". "Action rationality" suggests that the question of decisions is dealt with in a more provisional mindset, where the key is that decisions in a complex and uncertain context cannot be guaranteed by clever reasoning before the start. Instead, the preparation that results from clever reasoning has to be qualified in the meeting with the world. The decision is in this view no more than the best shot on "how to begin", and is followed by sensemaking on the basis of what cues that the action has elicited from the surrounding world.

This logic makes decisions and the risk taking involved less risky, because they are only implemented to the extent that it was considered meaningful after reviewing feedback from surroundings. As a consequence, it is more important to have conversations about how to try out if it is a meaningful decision, than to be very decisive on a long term. Competent project management is therefore in this logic of action about decision making, which enables learning and knowledge about emerging conditions to be part of the basis on which the next steps and stages are prepared. Instead of determinist vocabularies like proactive decisiveness, non-determinist vocabularies may underscore a responsive (response-able) hypothesis-testing, experimental or guessing view on decisions.

Reader service: How can this distinction between determinist and non-determinist vocabulary of coping be seen in practice when it comes to decision making? The case about developing project competencies in the City Hall (Chapter 4) is a story about a process with a succession of tentative decision making, succeeded by collective, retrospective sensemaking. The rather diffuse ambition was followed in a context of change from other initiatives in the organization. This represents non-determinist logic of decision making that was more responsive than proactive. In contrast, determinist logic would have waited to start the project until it was possible to make solid and proactive decisions. The partnering concept in the building sector is a case story that demonstrates how decisions can be postponed to a point in time, where collective and co-creative sensemaking based on feedback is possible (Chapter 6).

7.10. Conflict resolution

In determinist vocabulary of coping it is assumed that conflicts are "errors" that should be corrected before effective projects can be run. Conflicts are expected to be a result of misunderstandings and of poor work on consensus about the project approach and goals. Conflicts may be something to expect, but also something that is dysfunctional and that has to be prevented or resolved as much as possible. Therefore, it is assumed in general, that conflict resolution and conflict prevention skills are central for the role of project managers. Like in the case of adaptations, conflicts are seen as signs of "non-management" that the project manager and the group has not been good enough in preventing conflict when building consensus and clarity in the definition phase of the project. In some cases, this may be followed by team members withdrawing from raising questions and critical reflections.

Non-determinist vocabulary of coping may represent an alternative view on conflicts. Instead of seeing a conflict as a sign of incompetence or "error", it can be seen as something almost natural that is to be expected in developmental processes characterized by complexity. Conflicts, or dilemmas, contradictions, oppositions and paradoxes are part of the normal state of this kind of projects and should not be seen as something that must be prevented, removed, or solved once and for all. In a complexity perspective, differing views may even be seen as a resource, as a requisite variety, that is a central part of the preconditions for self-organised adaptations to emerge. (Chapter 3.6) The central skill in this perspective is that of being able to generate "containment" in the group of the anxiety that follows from the experience of risk, related to disagreements and uncertainty. In a social psychological perspective, this anxiety is connected to experience of cognitive dissonance that may lead to definitions of new meanings where the dissonance is no longer a problem.

The contrast between determinist and non-determinist logic of conflict coping is that in the former, conflicts should be solved, so proper project work can take place. In the latter,

conflicts are integrated part of project work and should not always be solved, but be lived (with).

Reader service: How can this distinction between determinist and non-determinist vocabulary of coping be seen in practice when it comes to conflict resolution? In the case from the City Hall (Chapter 6) there were polarities, tensions and contradicting interests all along the story. A determinist vocabulary of conflict management might have been that of prioritizing between the sides of the dilemmas or by negotiating some compromise, and building on that compromise determine the course of action. What happened in the case instead was that the people in charge insisted on maintaining both sides of the contradictions, etc., and "live" with the dilemmas, because the solution was not yet known but had to be developed along the way. Another practice, where it can be seen is in the case about working climate (6.3), where personal conflicts were not addressed directly, but indirectly through exchange of signs, that would indicate a slightly better mutual respect across the differing view.

7.11. Review and Evaluation

In determinist logic of coping it is often recommended that projects and processes regularly are reviewed to check if the project or process is going as planned or intended. There may be a little but essential difference when it comes to review and evaluation that is based on non-determinist logic of coping. The difference is closely related to some of the issues already dealt with in this Chapter and lies in the key question that is posed in the evaluation. Where determinist logic would focus on determining if the project goes as planned and lives up to what was agreed upon from the start, non-determinist review and evaluation pays less attention to this question, because it is not that interesting to evaluate based on criteria that are now historical and maybe no longer relevant. Because change and emerging conditions are expected, it is more relevant to review in the context of the actual or future situation, which is to appreciate or value what has turned out to be useful and meaningful outcomes. Which may, or may not, be the same as expected.

So, the difference between determinist and non-determinist vocabulary of evaluation may be that of shifting the focus of review from evaluation based on original success criteria to evaluating what is useful for the present and coming situation. A shift from evaluation to valuation: how can we creatively make the most of what we have?

In complex and uncertain processes and projects, non-determinist logic of coping may provide a more flexible and creative work on the definition of what counts as a result – in some cases it can be expected that the scope, objective and meaning of the project will be changed in a more productive direction in and by the same process as that in which we discover results and progresses, that are there, but were not expected, but can be made sense of retrospectively.

Reader service: How can this distinction between determinist and non-determinist vocabulary of coping be seen in practice when it comes to project evaluation? Several cases from this thesis show where to look for practices, that demonstrates the difference. The competencies development project was based on evaluation and on appreciation of skills in the context of actual work – not on evaluation of skills in relation to a generic competencies profile (Chapter 3.3). The implementing non-determinism project (Chapter 3.3.) is another story about the role of evaluation in coping with complexity with non-determinist vocabularies. In this case, the valuation of the non-planned events and learning was central in turning the project into a success that was different but better than the original goal.

7.12. Summary and conclusions

What is good project management? The fast answer is that it depends, and that it would make sense to operate with some sort of contingency model, if a model is needed in the first place. To summarize I will set up in a schematic from some of the suggested "twists" of the mindset and the approaches in relation to two ends of a scale, that in the "real" world is a continuum, where every project can move along during its lifetime. I hope that I have demonstrated through the reflections over practice, and the cocktail of theoretical perspectives have made a convincing story about different ways to be rational, different ways to obtain order that are not an either-or, but is a question of proportion and of the interpreted quest of the situation at hand.

From complexity theory we know the concepts of stability (or equilibrium state), and of chaos (or far-from equilibrium) and of complexity (or the edge of chaos). From many conversations with project managers I know that these concepts are useful metaphors for understanding changing conditions along the way of a project. In more stable times (and indeed this is a construction) more linear and simple, rationalistic tools have a long, honourable history, probably because they work, but maybe also because they fit with a western myth of being in control of the world. At least it can be demonstrated that it is a rationality that many managers find very hard to give up on.

On the other side, an alternative view of managing in organizations is emerging. I have tried to provide persuasive evidence that this new view seems to have some advantages in situations that we interpret as far-from-equilibrium or complex. The question of this dissertation is about understanding non-determinism in organizations – in relation to complex conditions. This question contains a potential self-contradiction if we think we can implement it (like organisations claiming that we have implemented the learning organisation) ending up in determinist assumptions about recipe knowledge. But on the other hand addresses the concern of many managers: is there an operational alternative to creating order through what we use to call prediction, certainty, goal setting, planning and control?

Social constructionism and postmodernism have contributed by leading our attention to the role of language and conversation in creating realities. When considering an alternative to modernist, normative models for managing projects – of course we will have to deal with the question of change of grammar. We may start a search for a "parlour" of managing complexity and in the table below I resume the result of my attempts to contribute to a language that will make it possible for people living in these confusing times to cooperate in patterns and with a mindset that will not result in burnouts, stress and poor results, but can count for aligned, sensible, appreciative, adaptive and playful working relations that will be sustainable in a world of complex change and diversity.

Determinist logic of coping	Non-determinist logic of coping
Creating consensus	Coordinating multiplicity
Seeking clarity	Construing meaning
Analysing stakeholders	Engaging in stakeholder perspectives
Contracting coalitions of stakeholders	Building partnerships
Action plans	Meaning markers and cues for sensemaking
Implementing plans	Enacting, experimenting and learning
Team building	Networking and partnering
Adjustments are failures	Adjustments are competent acts
Reviews for corrective actions	Reviews for reinforcing what works
Contracts	Contacts
Solving conflicts and dilemmas	Containing anxiety from conflicts and dilemmas
Well organised and managed	Self organised and appreciated
Making decisions makes good actions	Making sense makes good action
Proactive decisiveness	Retrospective responsiveness
Evaluation	Valuation

Fig 7: Vocabularies of coping with stability and complexity

With this table, I end this Chapter and hope that readers feel convinced in the view that project managers and others with responsibility for developmental and change processes, will be better "equipped" if they master both vocabularies and are able to bridge determinist logics and non-determinist logics of action when it comes to dealing with organizational processes in the 21st Century.

In the next and final Chapter I will summarize by some possible, practical implications following from the discussions in the thesis when it comes to consultants working in the field of project management, change management and organizational development.

Chapter 8: Conclusions for practitioners like myself

8.1. This Chapter

In this Chapter, I will summarize conclusions with an address to my own community of practice, which are organizational psychologists and consultants working from a social constructionist perspective with management of projects, change and organizational development. In the introduction to the thesis I stated that my focus would be on two levels: that of the persons trying to cope with complexity in the role as managers in organizations, and the level of consultant-client relationships in the light of complexity. Maybe, and hopefully, the following might be something to consider for my colleagues.

Can something normative be said and argued about how we as consultants and organizational psychologists can engage in our work so that we can maintain the flexibility deriving from bridging determinist and non-determinist coping logics? Can a manager of projects, change and development and/or his/her project group do/be prepared for the unexpected in a meaningful way? What ideas can be introduced on the basis of the case stories, the perspectives and reflections of the previous Chapters of this thesis? These are the questions to be discussed in this final Chapter

The discussion about coping will be structured into three sections:

1) Considerations about being generally *prepared* for what cannot be accurately predicted, but expected.

2) Considerations about dealing with the unpredicted "here and now".

3) Considerations about the question of how in retrospect to make sense and choosing how to go on from episodes of unpredictable change.

Finally, I will briefly discuss the question of bridging the two different logics of coping with organizational consultation.

8.2. Mindsets prepared for non-determinist logic of coping

The mindset with which we engage ourselves in new tasks plays an important role. For each and every consultant task we produce an identity for ourselves besides solving the "official" task. This identity construction is simultaneously a construction of my possibilities and limitations as a consultant as in coping with different challenges of the task. If we want to

explore our preparedness in relation to non-determinist coping, we must also be aware of our construction of identity and the consequences for how our minds are set.

It follows from this that we must consciously ask ourselves the following questions: what metaphors do we use and what stories are we telling ourselves and others about how we are competent? What kind of professionalism are we inviting others into? Are we telling individualist expert-stories about how "I changed that organization" and how "I made him a better leader" or "I developed the management team". Are we in love with expert stories about "This is what I do and what I know exactly how to do" and "I'm doing it this way, because my experience tells me that is the best way?" These kind of stories and metaphors about how I was in control, carry a meaning that is related to a certain professional identity, where what I sell is the answers that I knew in advance, of course, because if not, my story about what "I" analysed, induced and controlled is not very convincing. If this is the case, it follows logically that I have given away my possibility to use my emerging understandings, and thus am handicapped when it comes to coping non-deterministically.

An alternative mindset may follow from seeing oneself in the role of a consultant as a participant in a certain way in organizational processes that cannot be controlled or read meaningfully from an outside perspective. Instead of proving that my approach is right, my focus may be that of caring about what will improve the situation for all involved. The professional identity that is produced may take another road that is more supportive for non-determinist coping. Namely that we enter a process of reflective practice, where the client and I are partners in a continual inquiry (research) where understanding is emerging and takes turns of unpredictable character. The acting unit is "We": the client and I, and we work together appreciating our different agenda (e.g. "you pay, I am paid" or: "you need predictability I need flexibility"), a discussion that is looked at in greater depth in Chapter 3.4.

In this mindset I do not see myself as the one who is responsible, but the relation between me and the client holds the responsibility. This mindset enacts logically more non-determinist coping and flexibility in response to emerging conditions. As a personal comment, the only problem with this approach is that it presupposes the client's preference – or at least acceptance -for this mode, which I unfortunately, do not always find (Chapter 6).

Let me go back to the criteria: "improve the situation for all involved". During the process, the consultant and the client will have to find their way with diverse opinions among the stakeholders of the process. How can this diversity be dealt with in the preparation for non-determinist coping? One idea is to set one's mind for the fact that this diversity is unavoidable. Next, it is productive for the sake of self-reflective critique. If we as consultants in the preparing stage have tried to internalise the different interests and perspectives of the stakeholders, these inner voices will have an effect on our judgments, so that we avoid self-inflated certainty regarding the way we view the situation. Involving stakeholders in inquiries about the future will of course give me some knowledge about certain persons in certain contexts. This knowledge will help in building relations, but also, it will enhance our judgmental power in uncertain and confusing situations where we want to improve the situation for all involved.

A related issue is that of setting the goals for the project, change or organizational development. As has been argued in Chapter 3, these can be talked about in various terms. One conventional way of setting goals in the cooperation between an organization and a consultant

is that of defining the deliverance of the consultant and the conditions concerning the role and deliverances of the client herself (and the price, too). The choice of the way the end of view is talked about is one bifurcation point: if preparation for the unexpected is important, a broad goal in terms of "the difference we will make for whom in the world" is a logical choice, because these kinds of goals can be achieved in different ways. Measuring output at this level is not easy to use as a guiding principle in the middle of the task, so these goals must be supplemented by some predicting work on what signs or indicators that probably will be cues about the meaningfulness of the process. Future inquiry dialogue leads to predefined indicators that replace predefined action plans, and the process can be made more flexible and the manager and the consultant can operate more non-determinedly and thus flexibly.

Some managers argue, that the idea that organizational processes cannot be planned in some situations functions as a "sleeping pillow" that results in poor preparation. If only indicators are prepared, some projects and processes may miss something that will give an early warning that meaning or progress is lacking. There are alternatives to action plans, namely from the ideas deriving from improvisation theory. In this thinking, improvisation is supported by "continuous coordination, where interruptions of patterns or rules" is possible. This coordination is supported by "minimal structures that allow maximal flexibility". So, what can be prepared are the indicators or signs of progress and meaning on the one hand, and preparation of some minimal structure for continuous coordination, which also could be called process planning, on the other. (Chapter 3).

The definition of relationship or roles is a central aspect for the question of being prepared for uncertainty and change. A contrast has been described in previous Chapters between relations based on performance criteria, mistrust and competition and on the other on relations based on mutual trust, support and appreciation of diverse agendas. It has been argued throughout this thesis that the latter kind of relation definition has logic of coping that is a resource in a complex world. In relation to the role of the consultant/organizational psychologist, the relation to the client (system) can on one hand be characterised as a seller-buyer or supplier-purchaser relation, eventually be combined with an expert-novice dimension. In tasks that are embedded in this logic of action, the possibilities for coping with unpredicted change and new knowledge are limited by the detailed contract about approach and outcome. On the other hand, it may be these conversations about deliverances that made the client comfortable in cooperating with this particular consultant.

An alternative definition of relationship is that of a partnership between client and consultant/psychologist. The partnership is built on the perception of a mutual interest in cooperation and in respecting the relation by acting in a way that gives both parties a chance for success. This relationship is based on mutual trust, by which a lot of scenarios that in principle are possible, are neglected, because both parties believe in the other person not doing things that would harm the relationship, not even when there is a benefit on the short term. This was what the discussion of the A- B game was all about (Chapter 3.2).

In other words, it can be argued it is a question of having a dialogue about the task and the cooperation about it that is followed by both parties perceiving it as logical that the other party will NOT act in ways that will be harmful for one self, even if he/she could profit from it in the short run. And this is predictability too, but of an entirely different kind, because it is

based on trust in the other NOT doing things, leaving space for flexibility in choosing the road as we move along.

An understanding of coping with non-determinism should not be detached from an understanding of predictability that can also be found on a non-determinist basis. Predictions are not necessarily meaningless because the future cannot be determined in a strict sense. Organizations are networks of people relating to each other, and people are unpredictable and predictable at the same time. We cannot know with certainty exactly what another person will do, feel and think in a moment from now, but on the other hand we do use a logic that constitutes knowledge about what follows from what. What acts, feelings and thoughts follows typically from what kind of definition of situation.

We use this knowledge when we describe, explain and predict social processes. This knowledge is language based and thus also culturally sensitive (Smedslund, 2004). It is a knowledge that is about logic, not about causality. What makes things unpredictable is that we cannot know from the outside what context or meaning a person will give to a situation, and thus what will be likely that the person will feel, think, do, etc. Another context, another meaning and we have a different logic of action. What a situation means is therefore determined by what follows from it. What follows may be surprising, or it may be what was expected. But afterwards it may be easy to connect judgment of situation and the choice of action in a logical way. Therefore, organizational phenomena like persons, are unpredictable and predictable at the same time, and therefore it follows that it is not nonsense, but makes sense to try to anticipate, as long as you know it is far from correct prediction.

We have now for the purpose of being prepared for non-determinist coping identified two levels of knowledge: the logic that is language based and common sense about what follows from what. And the knowledge that emerges by becoming familiar with another person who becomes predictable to us. A third level of knowledge should also be mentioned and that is the explicit knowledge that is based on general theories and experiences. These theories and other kinds of general abstractions may be valuable as contributions to complex, difficult judgments of situations, as they represent different logics of action.

Focusing on non-determinism, we should not forget that organizational life is highly predictable and maybe a final reflection on being prepared on complexity is worth noting. It is often stated, that globalization and new technologies makes the world more complex and less predictable. But at the same time there is a standardisation trend, where we see multinational chains, brands, quality standard certifiers and technology providers. Therefore, it should not be all that surprising if it turned out that processes and projects were more, not less, predictable than they use to be. And maybe we should explore the potential of alternative ways of prediction - maybe we just predict in the wrong way? Examples of thoughts along these lines are:

Pre-sensing and cognizing:

> *Our research has convinced us that that people have the ability to perceive, understand and act on very complex patterns that they observe around them. Cognizing is cognition or understanding at a very deep level. Cognizing gives us the*

ability to sense and actualize emerging futures. To people who aren't operating at this level, it looks like predicting the future"

"Our hypothesis is that groups of people who cognize well together will win,...cognizing in other words, is a source of competitive advantage"

(Scharmer, 2002)

Synchronicity and Meaningful Chance:

If we know the deepest archetypical pattern behind our present situation, we can to some extent get to know something about how the situation will develop"

(Von Franz, 1980)

Maybe future research will explore the potentials of supplementing rational prediction with non-rational prophecy, aided by understanding of synchronicity and non-linear determinism in complexity theory.

There is work to be done about finding ways to contract between consultant and client that appreciate both the interest of allowing and preparing for non-determinist coping and thus not be too specific on the "how's" and "why's" on the one hand. And that on the other hand also appreciate that clients are economically rational in their quest for assessing return-of-investment before signing any deals. I have tried, but not succeeded yet.

8.3. Continual research and inquiry: Instantaneously dealing with the unexpected

In this section, I will discuss non-determinist logic of coping with organizational consulting when in the middle of chaos or confusion where overview and feeling of control is lost. For many organizational psychologists this is a kind of situation that is demanding, if it is to turn out well. Firstly, let us look at some of the challenges we meet.

When something unexpected happens of a size somewhere between a catastrophe and a surprise, there is usually an arousal, due to the interruption of the anticipated process. This reminds us of continuous sensemaking, including generating expectations and predictions. Only at the moments where sensemaking is interrupted do we become conscious of it, and we get aroused. Arousal has the tendency to affect perception. Peripheral cues may be neglected, and cues related to the most central, rehearsed and habitual responses are extracted. The risk is on one side that important cues are neglected and that actions are taken on a simplistic base. And the risk that follows is that the approach does not fit the new situation or may even be harmful to the future of the project or to some of the involved persons or groups. On the other hand, it is also a risk to search for certainty, where it is not to be found, because you risk ending up in an endless loop of "analysis-paralysis".

The more pressure we experience from the uncertainties and disagreements, the bigger the tendency to fall back on routine practices that previously have given success. And this response may not be the one that we are best off with in the future. So the question is how to

cope in a situation that we are part of, but that are not predicted in any way, in a way so that we will regain some order and control of the process. How can order and predictability be obtained in a way, which is productive in the progressing work on fulfilling the meaning of the task?

The social constructionist concepts of social accounting and restoring practices are useful in dealing with this question. When order is disturbed and expectations are not fulfilled in the interactions between consultant and client system there are two types of logic for restoring practices. A determinist vocabulary of coping constitutes a logic of action where restoring is to find a way to re-establish the order that is disturbed. This logic is expressed through terms like "deviations" and "corrective actions" where the assumptions and the meaning of the task is not affected, but re-installed.

The other vocabulary of coping constitutes a logic where restoring involves considering disorder as a sign indicating that a new understanding is needed, and that the restoring practice called for is a process of collective sensemaking or social construction of a new meaning of the task. The first logic of coping is based on determinism, that we have the right approach, but performed it poorly somehow. The second logic of coping is non-determinist in that it questions the entire approach and maybe also be the meaning of the task. It is this logic that it is my aim to explore a bit further.

One problem for practitioners is that in the middle of tasks, anything may look like a sign of failure and the choices necessarily have to be based on judgment, without the right to regret or maybe without the possibility of having a time-out. How can we think and talk about this in a productive way?

I have found it helpful to think of myself as an action researcher and the relation as a partnership on social construction of meaning. Critical reflection on the discourse that dominates our cooperation is useful and possible through exploring the metaphors, the narratives, the rhetoric of reality and conversational construction forces and practices. Let me introduce a brief example:

The client is an agency under the Danish State and we had met twice and after some difficulty found a basis for cooperation, but there was still no contract and a definition of my part. At this particular meeting we, a group of representatives from the target group and me, were working on preparing a large meeting for 120 people from the academic staff in an organization. I had some reservations about accepting the task of facilitating the large meeting, as my perception was that the members of the group of representatives disagreed on a lot of issues concerning purpose, focus and process.

I was uncomfortable and at a certain point I was desperate and tried to get out of the task and suggested two different ways: that they had an academic lecture and some group discussions afterwards, or setting a scene for some informal conversations among good colleagues about the things that happened in the organizations. In the second suggestion another metaphor was introduced, which constituted a different logic of action: that they were 120 people in a network, not a group. What followed from this change of metaphor was that we could now approach the questions on purpose, outcome and process from different logic, where common decisions were not relevant. Networks are self-organizing on multiple goals, where groups

are organised around a shared goal. Of course, this explanation is retrospective sensemaking – the story that now is told. The story lived involved feelings of confusion and anxiety.

This story illustrates that periods of "miss-fit" between consultant and client words and actions may be approached meaningful by critical reflection on the discourse about the task. I was stressed and felt like saying "Yes, OK so let us do it and hope for the best" (take the money and run) - or "No thanks, but I will recommend you another consultant". But I did not feel I could either, and instead my only way was holding the anxiety that followed the dilemma, and it turned out that this made it possible for the emerging understanding that both of us could live with and work from. The metaphor of the edge of chaos seems to fit here, as well as theories of cognitive dissonance and Gestalt ideas about "trusting the process".

On the other hand, if you remember the story from Chapter 5 about the consultant task about project management in complex contexts, the task was terminated and not reframed, despite my intentions and attempts to do so. We have to accept that there are no guarantees for staying in business if we "trust the process", in some cases the social construction of new meaning does not succeed or in some cases is not even attempted. It was and still is, though, hard for me to think of this story as anything else than a failure. I struggle to keep in the story that it was an example of what is to be expected as a normal sequence for our business. I wonder what difference it would have made for my attempts if I had not been burdened by the feeling of incompetence that follows from the view of the customer that I was of no use in the new situation after the "catastrophe".

What may be helpful though is to think about oneself as a researcher that is also a consultant – an action researcher and reflective practitioner, or as a participant in improvisational music or theatre. This includes acknowledging the fact that not everything can be known and decided from the beginning, but emerges along the process or project. What may be helpful is to think in terms of what can we do to gain more insight in the usefulness of the ideas we have? Try to get away from the pressure of the tyranny of action: what should we DO now? To a question about generating new meaning of the situation: how can we understand our present difficulty in another logic? The key may be to avoid the trap of "making the right decision" and making a decision less risky by seeing it as an entry point, not an expert statement that must be defended. Decision rationality gives way in favour of action rationality in the already terms of Brunsson (1982).

Organizational psychologists and consultants engage in organizational processes we become part of and cannot stand outside of. The things we do we do or not do when in a relation is simultaneously part of co-creating what becomes possible in the future. The way we engage in coping with complex and emerging conditions constitutes a bifurcation point: do we enact a process of restoring the original agreement about the approach, or do we engage in co-creating the task and its context anew? Macro-strategic choices may be made implicitly on the relational micro-level.

For the sake of maintaining client relations that are sustainable to change, surprises and complexity, it should also be remembered that appreciative, trusting relations presuppose that the expectation that all involved behave in a way that allows the relation to continue, is met. If not, the restoring practice has made it much more difficult in the future to adapt to emerging conditions. The input that is necessary for the social accounting process, answers the question

about which actions will confirm and which will violate the mutual trust. Which actions will be sustainable by helping relating in sustainable ways that fits the emerging new conditions, so the client relation is not finalized but reformulated?

I will conclude this section of dealing with the unexpected with giving attention to the difference between certainty and safety. When I am rehearsing with my soul band and it is my turn to improvise, I am a bit anxious because I am to play novel tunes and lines, and therefore the situation is uncertain. But another question is about the degree to which I feel supported by the members of the band, or in other words, do I feel safe, so I can expect to stay a member of the band even if I play ugly? The work on safety is very central in the work of ensembles, which everything else equal makes improvisations look or sound better. Safety in the role as organizational psychologist and consultant follows from experience and from expectations that make improvisation normal - what we have to expect, deal with and try to make a good story about:

> *"The situation calls for improvisation, to act without a plan and without rehearsal."What will actually happen won't be known until it is too late to do something direct about it. All the person can do is justify and make sensible, after the fact, whatever is visible in hindsight"* (Weick, 1998, p.548)

As organizational psychologists we may be more in the right mindset for improvisation if we see ourselves less as conceptual designers and more like "bricoleur":

> *".., someone who creatively utilizes whatever possibilities are available in each unique case to solve the problems..."* (Smedslund, 2004)

What could we suggest for our colleagues from the perspective of the metaphor of the bricoleur? We should as organizational psychologists utilize all kinds of theories and knowledge, not because they are universally correct or true, or even because we have determined that they are the best, but utilize what fits the stones that are laid already (the situation up to the present moment) and are at hand (our total repertoire of theories, models, knowledge, tools, techniques..) and which make it possible to continue the road in a direction that makes sense (future inquiry). This demands a delicate balance between clinging to approaches that we feel confident about, and being critical in choosing the most useful. This balance is there if we assemble something that will make do for the moment, see what happens and make sense of the effect, we see.

Let us now turn to the last aspect of non-determinist coping with complexity: namely that of "justifying and making sensible, when it is too late do something direct about it".

8.4. Re-pairing prediction and expectation: To make sense retrospectively and find out how to go on

Not only project managers are exposed to the challenge of working in organizations, where the expectations of their peers, subordinates and other stakeholders are stressing order, control predictability, planning and rehearsal. Like communities and regions have cultures and languages, so do organizations have a corporate culture or spirit that carries in it a vocabulary

of coping and logics of action. In contemporary society it could also be argued that a global tribe of corporatism constitutes itself with a rather standardized world view of a corporate mind. The sensemaking in which we participate in corporate conversations is common: we are socialized into a corporate common sense. This logic of action functions as a centripetal force, promoting certain expectations or criteria for being a competent person.

Also, organizational psychologists and consultants are to some degree expected to be able to show themselves accountable through demonstration of control and predictability. When changes in plans, goals and ambitions take place as a consequence of emerging and ambiguous conditions, this is not always seen as a sign of competence by the observers. On the contrary, these adaptations are in some environments seen as incompetence, poor analysis and preparation of the process. A crucial thing to do for organizational consultants, though, is to make the changes sensible for the stakeholders retrospectively. When adaptations take place, which could not be foreseen, the job is to provide a story or explanation, so confidence and trust are re-established both regarding the project or process and the client-consultant relational responsibility for managing the project.

How can we know what we want to create before we see what we intend? If you remember the case of the organization wanting to use projects in developing member services, we saw a story about a process of organizational development where the intentions of the different parties changed significantly during the process as a consequence of seeing the preliminary effects of realising the original intention. In that case, we worked with the project stories and metaphors as a way of creating meaning retrospectively of a project that had become something else than planned, but a success anyhow – and, very importantly, that the unplanned was a result of intelligent adaptations to increased knowledge and emerging conditions, and not a result of lousy preparation. Only by reviewing the process on the meaning level did it become possible to talk about the project changes in an appreciative language.

My consultant colleague had a hard time not blaming himself for not having foreseen that the projects had to change for being meaningful – but this only demonstrates how deep as consultants we are woven into the corporate logic of being competent: meaning knowing exactly what needs to be done. The challenge for our profession is how we can enter a cooperation on a task on premises that respect the expectation about predictability, for later on to maintain the trust from the client when things go in another direction. We need to re-pair expectation and prediction: probably something improbable will happen, which of course is somehow a paradox.

The question of how to go on from unexpected changes is related to the sense made of the present situation and the dynamics leading to it, which is the story told about the events. Like in narrative therapy it is said that it is never too late for a happy childhood, the axiom for organizational psychologists may be that it is never too late to appreciate clever coping with complexity. Organizational processes are open to different interpretations and meanings and it follows that what is given meaning as a result, is something that can be affected, also in retrospect. Retrospective sensemaking takes critical reflection on the corporate rhetoric of reality and an appreciative eye on the logic of action that make processes in complex contexts turn out successfully, but that are put in the shadow by corporate rhetoric's of reality.

Like narrative therapy can contribute to a better future for people, appreciating coping achievements may generate a richer view on the future of the organization. A future inquiry that is based on appreciating what "really" went on and not what was expected from the "rhetorically correct" textbook will open up for a broader repertoire for coping effectively with complexity with professional satisfaction.

We can expect that when we succeed in facilitating a reorientation of the task based on retrospective sensemaking, what will follow in many instances is a more positive view of contribution from the organizational psychologist, who will have returning and new customers for organizational psychologists. But it is also a risk that some clients resent this kind of competence, and prefer consultants with full loyalty to corporate rhetoric of reality. You win some and you lose some.

8.5. Concluding remarks on bridging determinist and non-determinist logics of coping

The question of developing a vocabulary for non-determinist coping with complex projects and processes of development and change has been discussed in this Chapter and the previous one. In the former Chapter with the eye on project managers and other managers, and in this Chapter for my own professional group: organizational psychologists and consultants. What remain are some reflections on the bridging of determinist and non-determinist coping with complexity. I will try to do so in this final section.

If organizational life was entirely unpredictable, there would be only chance and luck to build our profession on. Unpredictability should neither be neglected nor overestimated. Persons, groups and organizations are predictive, because we share culture and language and as well a more or less "corporate common sense". We are not caused to act, etc. in certain ways, but we use logic to find our way, when we have defined what is important for us in a given situation in the light of our intentions. As biological machines, we are predictable due to border conditions for the organism, brain function, perceptual apparatus, cognitive capacity, etc. Finally we are predictable when we are in a relation with solid other human beings in a certain context, because if we are not predictable there would not be any relation, no coordination of actions in dealing with the environment. Finally, it may be that we are also predictable because we use the same artefacts: computers with Intel inside, power point presentations, corporate headquarter architecture, individualist transportation vehicles, etc.

Employees, managers and stakeholders are also unpredictable, because we follow intentions, (a free will, if you will) but intentions change as a result of sensemaking based on cues from the world that give indications of the effect of "what we say". We cannot reverse the flow of life - if we do not like what follows from what we do, we are deemed to live with the consequence - social processes cannot be turned back - they are irreversible. Finally, we are unpredictable because of chance, that a lot of circumstances make people, groups and organizations unique.

As consultants working with organizations we have to expect a proportion of both predictability and unpredictability. And we have to expect a proportion of agreements and disagreements among the involved. And following from that, we have to expect a proportion of simplicity and complexity for each unique task.

The social constructionist concept of position may be a useful way to regard this. The distinction between determinist coping and non-determinist coping should not be seen as a discussion about what is generally right or wrong, or not even right or wrong in a particular situation or case. From the viewpoint of socially constructed worlds and meanings, such a distinction may be most usefully thought of as semantic polarities that form a spectrum on which people in dialogue can move from side to side, mixing, holding contradictions and affecting and letting oneself be affected through dialogues of sensemaking (Campbell, 2000).

Bridging determinist and non-determinist logics of coping is thus regarding differences as positions that people can take depending on what is perceived as the need of the situation at hand. It cannot always be "read" in the situation and no one coping approach can embrace all challenges, so we are deemed to make sense together, try out and to wait and see. Determinist approaches are useful sometimes and sometimes non-determinist approaches are more useful, but we can never know beforehand. How can we know how to manage before we see what (follows from what) we cope?

Final reflections and summary

Writing a dissertation

Writing this dissertation has been a challenging and learning experience, which has resulted in the "product" in the form of the present volume, but it has also been a process of learning from the very first moment to the last. It has been out of consciousness in periods, and in some periods I doubted if I would make it. In other periods I have felt it very close, and dreamed about being able to put all other work to one side and concentrate on writing, reflecting and reading, because it is indeed an enriching process for the way I approach the world of my work as a consultant. I have been working within the field of developing project management competencies for 15 years, and as such I am a "seasoned professional" as it was phrased when I entered the programme - or "mature" as it now says about Taos Tilburg PhD programme on the homepage. This maturity was to a large extent embedded in experience based and implicit knowledge-in-action. In retrospective, it makes sense to me to see the dissertation project as a project of making this knowledge explicit – convert it into what Donald Schön would call a theory-in-practice.

On the action level it was especially the introduction of daily, regular reflective practice that did the job. My first conversation with the promoter John Rijsman resulted to my surprise in the homework of reflective practice and documentation (writing), where I had expected that something "academic" like a PhD project would start with homework in the form of reading a literature curriculum. However, the surprise was soon replaced by some aha-experience when my dairy with reflections met social psychology and social constructionist theory in the conversations with the promoter, either it was by e-mail, the phone or campus of Tilburg University. In this way I found my way into looking at my own practice as data, my consultancy work as action research and persuasive evidence as the scientific result.

The persuasive evidence to a large extent concentrates on the vocabulary of coping – or on the language - through which professionals deal with projects and processes in organizations. The object of analysis is the social processes and language games that count for non-determinist coping in projects in particular and in processes of organizational change in general. Through this dissertation I have a dialogue between practice (what counts as data) and theoretical perspectives (what data counts for) towards formulation of some principles that may enrich the repertoire of coping for consultants, project managers and other professionals in charge of organizational change processes. I have not proved that these principles are true, or better than determinist principles, and I would consider such an aim to be absurd, because what is true is always on the basis of a certain tradition within theory – and usefulness is dependent on context.

Validation has taken place on three levels. Firstly, the vocabularies of coping have been analysed on the basis of what follows from them in concrete case stories. Secondly, the vocabularies have been subject to discussions on several occasions with groups of project managers and other professionals, as well as with academics. Thirdly, I have adopted the principles myself in my work as a consultant and am now another consultant than I was when I started working on the dissertation. Validation is provided by seeing the responses that followed from the changes in the way I engage in uncertainty and diversity around consultancy tasks. My future profile as a consultant may develop in a direction of a merged role of

the consultant and the action researcher as a consequence of the learning from the work on this dissertation: that a researching approach, an improvising mindset, and the metaphor of the bricoleur may be a fruitful cocktail for coping non-deterministically as an organizational consultant and psychologist. So, how to enable oneself to cope with complexity? Write a dissertation!

The above final remarks and reflections on my process of education as a researcher are illustrated in the figure below in movements from action to new meaning, to new action, etc.
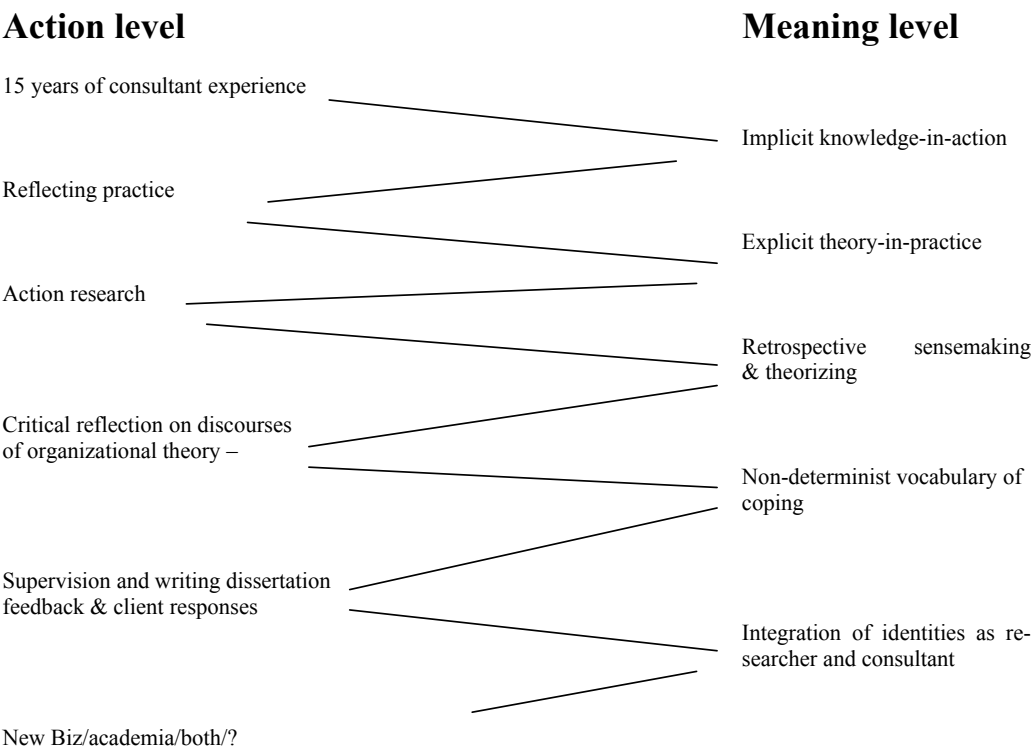
Action level   # Meaning level

15 years of consultant experience

Implicit knowledge-in-action

Reflecting practice

Explicit theory-in-practice

Action research

Retrospective   sensemaking & theorizing

Critical reflection on discourses of organizational theory –

Non-determinist vocabulary of coping

Supervision and writing dissertation feedback & client responses

Integration of identities as re-searcher and consultant

New Biz/academia/both/?

Figure 8: Retrospective reflections on writing a dissertation as a "seasoned/mature professional"

Summary

This dissertation is an examination of the approaches that are used by organizations to deal effectively with projects in particular and change processes in general, when the projects or processes are characterized by complexity, which is defined here as the combination of uncertainty and contextual multiplicity. The examination explores the dominating logic of action that characterizes most handbooks, training programmes and certification body of knowledge. It is demonstrated how this logic of action built on determinist assumptions that are withheld, despite lack of success. In contrast to the vocabulary of coping that is embedded in this kind of approach an alternative, non-determinist logic and vocabulary of coping is introduced, based on a multi-theoretical exploration of examples from experience and case studies from the author's own consultancy practice.

Chapter 1 establishes the "I" of the book through introduction of relevant links to master thesis from 1988 and other professional stories that make it possible for the reader to evaluate the personal and professional background and interest. Furthermore, the Chapter is an attempt to introduce the research question in its context, both when it comes to the subject and to the professional communities into which the dissertation aims to inscribe itself.

Chapter 2 presents the research traditions and methodologies that are used. The reflective practitioner, action research and critical reflection on discourses are the main sources on which the research methods in the work are based. The Chapter introduces the practice of the author as data. The social processes of reality construction that count for managing projects and processes in organisations are examined on basis of these data. Particularly in focus is the contrast between determinist and non-determinist vocabularies of coping, or logics of action.

In Chapter 3 there are five theoretical perspectives introduced and put on stage by examples from practice to illustrate what distinctions the theories enable. The perspectives are multidisciplinary as they draw on economics, organisation theory, psychology, social constructionism, and theories on improvisation. The potential of the theoretical perspectives in developing a context-based and non-determinist understanding and vocabulary of coping with complexity are discussed. Elements are identified that may form part of an alternative approach to generate order, control and effectiveness in dealing with development and change in organizations.

The next three Chapters are examinations and reflections on cases from practice of the researcher in the role as an independent, external organizational consultant and psychologist. The cases are chosen because they were the tasks that the author was working on at the time the dissertation was to be written. Therefore, the cases are not neat exemplary success stories that demonstrate "how successful you will be if you use this approach". Instead, the cases are practice examples as they are in the business of the author, and not excluded if they are less than ideal. The case stories make it possible to develop ideas that are context based, in contrast to ideas that assume that the context can be neglected with no essential loss. Two levels of coping are in focus in the cases: on the level of project/change managers and on the level of consultant client relations.

Chapter 4 presents and reflects on a story about implementing abilities to develop services and routines in a municipality/City Hall. It is a story that can also be seen as a story about

implementing non-determinism, as it was a consultancy task that should support an organizational change from rule-driven towards a task-driven organization. The consultancy task itself had a developmental character and illustrates some of the dynamics that create limitations as well as opportunities when it comes to dealing with uncertainty and multiple contexts.

Chapter 5 presents and reflects upon a story from the biotech sector that was a non-case, until it was decided to include the story anyway, despite the fact that the task was finalized due to dramatic changes in the investment situation of the involved company. The Chapter demonstrates aspects of the dynamic in cases of "radical non-determinism", where relational sustainability in the consultant-client relation is severely challenged.

Chapter 6 is also a story that is a bit odd, but from a world with a practice that has a great explanatory and persuasive power, when it comes to non-determinist coping with uncertainty and multiple contexts. The story is from the building sector where the author has been working with training project managers and is trying to establish a researcher-consultant role in relation to a client. The focus of the story is on the client-consultant relation and on the evidence of non-determinist coping that is demonstrated in modern building approaches like Partnering and so-called Lean Construction.

In Chapter 7 the results of the discussions of the cases are transformed into the suggestion of an alternative and non-deterministic vocabulary of coping, and contrasted to the determinist ditto. The non-determinist vocabulary constitutes logic of action for project managers in particular and change managers in general that are not suggested to replace the determinist one, but only to supplement and hopefully also contribute to the elimination of the hegemony of determinist, context free normative models of project/change management.

In Chapter 8 the focus is on the community of organisational psychological consultants. It is discussed how our profession can maintain its professionalism even when we are coping non-deterministically. Or in other words how can we prepare ourselves, how can we deal with, and how can we retrospectively make sense of situations of uncertainty and multiplicity, where there is a call for non-determinist coping with organisational problems and dilemmas. A couple of new views on predictability are introduced as possible directions for future research on the matter.

Samenvatting

In deze dissertatie bestuderen we welke benaderingen organisaties gebruiken om effectief om te gaan met complexe projecten en veranderingsprocessen, waarbij we hier onder complex verstaan: gekenmerkt door een combinatie van onzekerheid en contextuele meervoudigheid. Bij de bestudering van de dominante actie-logica in de meeste handboeken, trainingsprogramma's en certificeringsdocumenten, stellen we vast dat deze dominante actie-logica gebaseerd is op een reeks deterministische vooronderstellingen waaraan wordt vastgehouden, ook al leveren ze geen succes op. Ingaand tegen de gangbare coping-vocabulaire van die benadering, stellen we zelf een alternatieve, niet-deterministische logica en copingvocabulaire op, die we hebben afgeleid uit de meervoudig theoretische bestudering van enkele ervaringsvoorbeelden en gevalsstudies binnen onze eigen adviespraktijk.

In hoofdstuk 1 introduceren we het Ik-perspectief van ons verhaal door het leggen van een relevante koppeling met onze doctoraal-thesis van 1988, en met andere professionele verhalen van waaruit de lezer onze eigen professionele achtergrond en interesse kan opmaken. We proberen hiermee ook onze onderzoeksvraag in zijn context te plaatsen, zowel wat betreft het onderwerp als wat betreft de professionele gemeenschap waarin we deze dissertatie willen verdedigen.

In hoofdstuk 2 laten we zien van welke onderzoekstradities en methodologieen we gebruik maken. Het blijkt dat onze voornaamste bronnen bestaan uit wat we kunnen noemen 'de reflectieve praktijk', actie-onderzoek, en kritische reflectie op discours. We introduceren onze eigen praktijk als data waarmee we de sociale processen en realiteitsconstructies, die doorgaan als het management van projecten en processen in organisaties, bestuderen. We letten daarbij vooral op het contrast tussen de deterministische en non-deterministische *coping-vocabulaire* of actie-logica.

In hoofdstuk 3 introduceren we vijf theoretische perspectieven en brengen die tot leven door te laten zien welk verschil ze maken bij het kijken naar enkele concrete voorbeelden. Deze vijf perspectieven komen uit verschillende disciplines, want het gaat over economie, organisatie-theorie, psychologie, sociaal constructionisme, en theorieen over improvisatie. We bediscussieren welke mogelijkheden deze perspectieven bieden voor het ontwikkelen van een context-afhankelijke en niet-deterministische vocabulaire en begrip in het omgaan met complexiteit. We identificeren de elementen die onderdeel kunnen vormen van een alternatieve manier om orde, controle en effectiviteit te genereren in het omgaan met ontwikkeling en verandering in organisaties.

De volgende drie hoofdstukken zijn beschouwingen en reflecties over gevallen uit onze eigen praktijk als onafhankelijke, externe organisatieadviseur en als psycholoog. Dat deze gevallen werden gekozen heeft enkel te maken met het feit dat ze zich afspeelden in de tijd dat we deze dissertatie schreven. Het zijn dus geen mooie succesverhalen die moeten laten zien 'kijk eens hoe succesvol je zult zijn als je deze benadering kiest', integendeel, het zijn gewone praktijkvoorbeelden uit onze praktijk, en ze werden niet weggelaten als bleek dat ze verre van ideaal verliepen. Met deze praktijkvoorbeelden konden we daadwerkelijk contextafhankelijke ideeen ontwikkelen, in tegenstelling tot ideeen die veronderstellen dat de context er eigenlijk niet toe doet. We richten ons op twee *coping*-niveaus in deze gevallen, dat van de manager (project of verander-manager), en dat van de adviseur-klant relaties.

Hoofdstuk 4 presenteert en reflecteert op een verhaal over het tot stand brengen van bekwaamheden om diensten en routines te ontwikkelen in het gemeentehuis van een stad. We kunnen dit verhaal beschouwen als een verhaal over het tot stand brengen van non-determinisme, want het ging eigenlijk over een consultatie-job waarbij we de organisatie moesten helpen veranderen van 'regel-gedreven' naar 'taak-gedreven'. Deze consultatie-opdracht had zelf een ontwikkelingskarakter en illustreert zowel sommige van de dynamieken van begrenzing als van mogelijkheden in het omgaan met onzekerheid en meervoudige contexten.

In hoofdstuk 5 presenteren en reflecteren we op een verhaal uit de bio-tech sector, wat eigenlijk gaat over een non-case, totdat we besloten om er toch over te schrijven, ondanks het feit dat de opdracht werd gecanceld als gevolg van dramatische veranderingen in de investeringssituatie van het bedrijf. Hiermee laat het hoofdstuk iets zien van de dynamiek in het geval van 'radicaal non-determinisme', wanneer de houdbaarheid van de relatie tussen adviseur en klant sterk in gevaar wordt gebracht.

Hoofdstuk 6 gaat ook over een wat merkwaardig verhaal, maar uit een wereld van praktijk waarin heel veel uitleg en overtuigingskracht te vinden is voor het non-deterministisch omgaan met onzekerheid en meervoudigheid van context. Het gaat over de bouwsector, waarin we projectmanagers moesten trainen en waarbij we probeerden om een onderzoeker-adviseur relatie op te bouwen met de klanten. Het verhaal richt zich op de adviseur-klant relaties en op hetgeen naar voor komt als non-deterministische manieren van *copen* bij moderne manieren van bouwen, zoals *partnering* en slanke manieren van bouwen.

Hoofdstuk 7 gaat over de mogelijke transformatie van de vruchten uit de case-stories in een non-deterministische *coping-vocabulaire*, afgezet tegen een deterministische manier van spreken. Deze non-deterministische vocabulaire vormt een actie-logica voor verandermanagers in het algemeen, en projectmanagers in het bijzonder, die niet in de plaats komt van de deterministische vocabulaire, maar die deze vocabulaire hopelijk aanvult, waarmee de hegemonie van de deterministische en context-vrije modellen van project- en verandermanagement hopelijk van de baan is.

In hoofdstuk 8 richten we ons op de gemeenschap van de organisatie-adviseurs en organisatie-psychologen. We bespreken hoe het mogelijk moet zijn dat onze beroepsgroep zijn professionalisme behoudt wanneer we een non-deterministische manier van *copen* hanteren. Met andere woorden, het gaat over de vraag hoe we, wanneer de problemen en de meervoudigheid van de situatie om een non-deterministische omgang vragen, een dergelijke situatie het hoofd kunnen bieden en achteraf ook zin en betekenis kunnen geven aan een dergelijke situatie van onzekerheid en meervoudigheid. We lanceren een paar nieuwe gezichtspunten over het verschijnsel van voorspelbaarheid als mogelijke richtsnoeren voor verder onderzoek over deze materie.

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