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Beata Segercrantz

‘... the walls fell down but the blokes just coded ...’

Varieties of stability in software product development
during organizational restructurings

Helsinki 2011

‘... the walls fell down but the blokes just coded ...’: Varieties of stability in software product development during organizational restructurings

Key words: organizational change, organizational restructurings, new product development (NPD), software, discourse, practice, stability, change, subject position, gender, men, time

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Beata Segercrantz
Hanken School of Economics
Department of Management and Organization
P.O. Box 479, 00101 Helsinki, Finland



Distributor:

Library
Hanken School of Economics
P.O.Box 479
00101 Helsinki, Finland

Telephone: +358-40-3521 376, +358-40-3521 265
Fax: +358-40-3521 425
E-mail: publ@hanken.fi
<http://www.hanken.fi>

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1 INTRODUCTION

In the early 2000s I worked as a Human Resource (HR) Manager for an ICT company. I began my HR assignments by interviewing the majority of the personnel in order to get to know the organization, not knowing that I later would use parts of the interview material for research purposes. While working for this company, Q-Software¹, I saw the organization grow rapidly, but I also witnessed a dramatic downsizing process. The company ran out of capital and was not able to pay salaries. The employees were dismissed first temporarily, and later for good. Despite these events, many members were loyal to the organization by coming to work every morning as usual. Even when the company went bankrupt many still continued working on developing and ‘rescuing’ the products. Puzzled by the downsizing process, I began this study in the middle of the process by interviewing the majority of the employees a second time. Further on in the study, I have interviewed these product development experts a third time, making the study a longitudinal one. In addition, as these experts eventually moved on to work in new organizations, I have interviewed their new colleagues.

The interviews conducted generated both ‘expected’ and surprising accounts. As the questions in the interviews were mainly posed in the aftermath of the burst of ‘IT bubble’, not surprisingly all interviewees had experienced organizational changes, some of which had had dramatic effects. The organizational changes experienced ranged from rapid growth from 5 to 45 employees in two years to a downsizing process through which 80 of 100 employees were dismissed. What was perhaps more surprising was that the interviewees often argue that their daily product development tasks were not influenced to a great extent by the far-reaching organizational changes. Yet many of the product development experts said that small changes, such as a change of supervisor, often had a large impact on daily practices.

It is the phenomenon of the construction of stability and change in the context of organizational restructurings that I then set out to explore in greater depth in this study. This seems important since stability may be central to many software product development experts and other IT workers who have to cope with continuous organizational changes in their workplaces. The ICT sector, as an increasingly important actor in, for example, the Finnish economy and society at large, provides a relevant site for studying these issues. This sector has undergone a great number of restructurings and organizational changes in particular during the last decades. Considering the central position of the ICT sector in the Finnish economy as in many (information) societies, as well as the numerous restructurings and organizational changes that have occurred within this sector, it seems relevant to explore how work and its organization have changed (or not changed), how product developers relate their work to organizational changes, and on a more general level how various social actors have experienced, constructed and lived with the transformations.

Despite the potential importance of stability for people constantly confronted with organizational change, issues around stability seem to be a neglected subject of research in both organizational change and product development literature. Furthermore, even when stability is included in the study or theorizing of organizational change, stability typically remains unproblematicized by being referred to only implicitly or approached as an alternative state to change (a state of stagnation or vacuum) (see, for example, Lewin 1951 and studies drawing on this work), as being

¹ Pseudonyms are used for all organizations and participants in this study.

negative or perhaps a result of undesirable resistance from a managerialist perspective (Tsoukas, 2005). Little theorizing and work has been done on the relationship between stability and change as coexistent and coterminous (Sturdy and Grey, 2003). Approaching stability and change in these terms could help us to develop better understandings of how various social actors engage in deconstructing social reality and simultaneously in stabilizing ever-changing organizational realities (Tsoukas, 2005). Moreover, there seems to be a need for studies addressing the interdependent practices of change and stability construction as well as theoretical and methodological development within this research subject. Consequently, this study attempts to respond to this shortcoming in previous research by engaging in a critical debate on product development, organizational change and stability.

To explore organizational change, this study is conducted on the level of daily product development practices to shed light on *how* various restructurings occur in the micro-processes that product development experts engage in. More specifically, as a specific group of actors, influencing and influenced by the transformations in the ICT sector and the economy more generally, software product development experts engage in translating organizational change and product development into action as they carry out their everyday tasks. In so doing, they participate not only in local ongoing processes of change but often also in the reproduction of the same product development practices, hence constructing a sense of stability.

Although the transformations and developments in the ICT sector and IT work are made real in the very micro-processes of daily life, these transformations cannot be fully understood without relating them to broader understandings, or discourses, that give them meaning. Such relationships between local practices of software development during organizational change and discourse beyond the immediate practices may provide important avenues for understanding what occurs during organizational change and what the implications are. This draws attention to how work is understood and taken up in the context of organizational change, to how subjectivities, power relations, gender relations and social division take shape.

1.1. Organizational change

Organizational change is one of the key concepts in this thesis, but how can organizational change be defined? There is no short or simple answer to this question. Helms Mills, Dye and Mills (2009, 4, 9) suggest:

‘change can be defined as an alteration of a core aspect of an organization’s operation. Core aspects include the structure, technology, culture, leadership, goal or personnel of an organization. An alteration or change to any or all of these elements can range from the restructuring of a single department through to a restructuring of the entire company; the introduction of new machinery to a complete change in the way production is organized; a change in the thinking of a group or department to a fundamental revamping of the corporate symbolism; the replacement of a CEO or the introduction of an entirely new management team; the introduction of a new product or service through to a rethink of the fundamental way it does business; and organizational change can range from closing of selected departments through to the expansion of all departments. It is not so much the scale of the change that is important but the extent to which its impact is felt within the organization.’

As organizational change comes in so many forms, not surprisingly there seems to be an almost endless number of typologies and models of organization change. Typically organizational change is categorized as planned, unplanned, emergent, incremental or quantum (Helms Mills, Dye and Mills, 2009). Planned organizational change is usually

referred to as particular techniques or programmes aimed at fixing specific parts of an organization (incremental change) or whole organizations (quantum change). Such efforts are described as consciously prepared, initiated and implemented. Unplanned organizational change is typically conceptualized as change that follows from more 'uncontrollable' conditions, which prevents organizations from initiating and planning change in advance. In these cases, organizations usually adapt to change as it emerges and adopt a piecemeal approach in an attempt to control the situations.

Although the categorizations and typologies of organizational change help us to make sense of change, they also give an overly simplified understanding of organizational change. For example, it is far from uncommon that planned organizational changes provoke a chain of unintended or unplanned changes, as Czarniawska and Joerges (1996) argue. They also emphasize that adaptation to the environment, for example an economic recession, does not necessarily only invoke unplanned organizational change. In such circumstances intentional processes may well emerge. In other words, organizational change is a complex social phenomenon that may take many different forms and unexpected turns. Nevertheless, many writers seem to agree with the quotation above that what is important is the extent to which impacts are felt in an organization. Czarniawska and Sevón (1996, 1-2) point out:

'In times of change, old practices are destroyed and new ones are constructed, which invite the questioning and de-construction of the previous social order. Perhaps this is not a result of change, but rather change itself – change being the periods during which people begin questioning things that were previously taken for granted.'

Here, Czarniawska and Sevón capture some important issues that need to be emphasized; the tension between understanding organizational change as an object (for example, a change programme or organizational restructuring) or as continuous changing practices. This thesis pays attention to both of these issues by exploring their relationship with one another.

Continuous changing practices may follow from various change initiatives as from any discursive resource available to social actors in a particular context. In that sense, change initiatives can be seen to serve as discursive templates that may or may not generate change depending on if and how they are translated into action (Tsoukas and Chia, 2002). From this point of view, change initiatives should not be confused with organizational change as such but rather seen as potentially inviting a questioning of prevailing social orders (Tsoukas and Chia 2002; Czarniawska and Sevón, 1996).

Exploring the space where discursive templates and practices meet may provide a useful site to address the gap between the lived experiences of change and stability, and the theoretical and methodological neglect of issues around stability. In other words, we may gain new insights, both empirical and theoretical, by focusing in more depth on the relationship between constructions of organizational change and practice over time. However, that is not to say that there are any right or wrong ways of understanding and explaining organizational change, instead we must recognize that our understanding of organizational change has crucial implications for how we study this phenomenon.

1.2. Relation to various research fields

This study is first and foremost a contribution to management and organization studies. Specifically, the study contributes to several fields of research within the subject management and organization: organizational change, new product

development (NPD), innovation, information systems (IS), information technology (IT) work, project work, and gender. Many of these fields of research have already gained established positions on the agenda of management and organization studies. Organizational change, NPD and innovation are perhaps even a part of the most studied topics. Hence, it is appropriate to ask why I have chosen this topic for my study. As I will show in this thesis, there are many aspects in, for example, the research fields of organizational change that have not been addressed in a satisfactory way in previous research and need further investigation. Sturdy and Grey (2003, 652) argue that 'there is little evidence of critique or genuinely alternative voices' in the organizational change literature, and the same argument can probably be extended to theorizing and studies in the NPD and innovation field. Thus, my intention is to provide 'alternative' voices to these particular fields of research as well as to related research areas.

Organizational change, as any social phenomenon, can be studied from countless perspectives. Czarniawska and Sevón (1996) argue that the study of organizational change usually begins by consulting existing theories in a search for explanations. Although this research field is vast, certain widely-shared underlying assumptions informing it have been identified. From the point of view of this study, I wish to highlight a few of these.

The dominant discourse of change constructs organizational change as 'inevitable, desirable and/or manageable' (Sturdy and Grey 2003, 659). There seems to be a tendency in contemporary management and organization literature, and perhaps in particular in organizational change literature, to emphasize that we live in a rapidly changing world (Oswick et al. 2005). This has implied that organizational change has been seen as a necessary response to wider socio-economic changes (Oswick et al. 2005). From this it follows that organizational change is often seen desirable and an unalloyed good in relation to the alternative of stability and 'no change' (Sturdy and Grey, 2003; du Gay, 2003); if an organization does not adapt to change it is seen as less likely to survive and succeed (Oswick et al., 2005). In that sense, this dominant discourse of change includes a threat or language of fear (Thurlow, 2007; du Gay, 2003). For example, the discourse of change suggests that 'to be on the cutting edge' organizations should engage in change programmes, while managers should be progressive and manage change in specific ways to avoid failure (Helms Mills, Dye and Mills, 2009). Here we can see that the discourse of change also promotes the assumption that change can and should be controlled and managed. Theories and studies drawing on this discourse are typically rather restrictive and prescriptive concerning how change should be managed, and they usually take a relatively strong managerialist perspective (Sturdy and Grey, 2003) which has generated a number of problematic issues (see, for examples, Helms Mills, Dye and Mills, 2009).

In sum, when consulting existing theories, which draw on and/or produce the dominant discourse of change, scholars often embrace a 'pro-change bias' at the expense of studying and theorizing stability, and view change as 'manageable'. In so doing, they typically use established typologies, structures and various forms of classifications to explore and explain organizational change (Chia, 1999). In this endeavour, typologies and classifications work to abstract and fix organizational change. Moreover, it seems as if the vast majority of the studies exploring organizational change understand and construct organizational change as an object or an abstract ideal. Tsoukas and Chia (2002, 570) explain that from this perspective change is seen 'an accomplished event whose key features and varieties, and causal antecedents and consequences need to be explored and explained.' This can be useful for identifying various types of organizational changes at a particular point in time

(Chia, 1999). Nevertheless, this is a result of a discursive process in and through which social actors with different and sometimes contradicting views and interest negotiate meaning. These processes of negotiation produce dominant understandings or discourses that marginalize others and in that sense have potential power implications (Grant et al., 2005). Since most change literature tends to take a managerialist perspective, this literature is likely to sustain rather than contest particular power relations. However, there are many important issues that typically fall outside the analysis when taking up this dominant perspective. For example, there seems to be little room for exploring and theorizing more nuanced, broader understandings of change, stability, possibilities of stability, power relations, non-managerial perspectives or broader social consequences (Sturdy and Grey, 2003), all of which are tightly intertwined with organizational change.

What are the alternatives if we want to bring forth a broader range of voices? There are several paths to take. As Grant et al. (2005) argue, the dissatisfaction with mainstream theories of organizational change has encouraged an increasing number of researchers to turn to critical theory and postmodern styles of thinking, including social constructionism and discourse analysis as I do in this study. These approaches facilitate various possibilities for drawing attention to issues, sometimes problematic ones, which the dominant discourse of change is silent about. More specifically, these perspectives can provide opportunities to address the identified construction of stability during organizational change and enhance theoretical developments by paying attention to how social actors discursively construct organizational change over time and to various implications associated with such changes. Let me say a few words about how this will be done in this study.

Rather than 'consulting' existing theories to determine what organizational change 'is' and how it should be managed, the adopted approach 'consults' software product development experts on how they themselves understand organizational changes. Hence, this approach is 'analytical' in the sense that it favours sensitivity to empirically grounded understandings of organizational change; it emphasizes issues arising from the empirical data. Moreover, the focus is on how software product development experts come to know and challenge organizational change in differing ways and how meanings and discourses transform. This implies that there is an interest in process, movement and emergence (Chia, 1995), in how social phenomena unfold and transform over time. This focus is explored from the practitioners' perspective, and in so doing attempts to provide a wider range of accounts on organizational change. However, this approach is not only descriptive and analytical but also critical in an effort to use the participants' accounts as discursive resources with critical potential.

Here, I think it is important to highlight that the software product development experts consulted in this study were mainly not managers, although there are a small number of managers represented. Nonetheless, it must be emphasized that being positioned as a manager does not necessarily mean that one takes a managerialist perspective, just as actors who are not managers may draw on managerialist views. Here, an analytical framework provides a useful way for taking these and other complexities surrounding the studied phenomena into consideration.

The adopted approach has certain implications. It makes a commitment to an ontology of becoming (Chia, 1995) by viewing actions, relationships and processes as primary. Moreover, by exploring how people socially construct 'social entities', for example, organizational change, it illustrates 'the precarious local orchestration of material, technical and social relationships which give rise to relatively stabilized configurations

that we *then* assume to be discrete social entities and/or events' such as change initiatives (Chia 1995, 601, emphasis as in the original). To put it differently, this approach helps to explore the micro-processes that social actors engage in, in their daily work, and in doing so provides an opportunity to analyze how various social realities emerge. For example, in exploring micro-processes, it provides an insight into more varied and empirically informed understandings of meanings that social actors ascribe to organizational change and how such meanings are related to work and being at work. This illustrates how social actors take up, or perhaps ignore, a specific change initiative, how they produce stability even when an organization is being radically restructured, how certain understandings of social reality take shape, and how power relations, identities and subjectivities are simultaneously generated. In that regard, my intention is not to argue against change and for stability. Instead I wish to explore the co-existence of change and stability, their many different forms and implications for individuals in contrast to the prescriptive and thus restrictive views in most theorizing of organizational change and product development (Sturdy and Grey, 2003).

1.3. Aim and research questions

Following the reasoning above, the aim of this thesis is to explore the discursive construction of organizational change in the context of software product development from the viewpoint of the product development experts involved. Moreover, this study examines the ongoing micro-processes in which software product development experts engage in their daily work in order to develop an understanding of how organizational change is discursively constructed and translated into action. Hence the research questions of this study are as follows:

- How do software product development experts construct organizational change?
- How do software product development experts construct their work in relation to organizational change?
- What kind of phenomenon is organizational change when seen through the lens of discourse and practice?

To explore the research questions, I will draw primarily on social constructionist and discourse analytical accounts. This offers the possibility to investigate product development during organizational change through the lens of discourse and practice. When talking about practice I refer to this concept as an analytical category. My focus is on everyday work practices and discourses. This approach to product development and organizational change is sensitive to complexity, paradoxes, contradictions, tensions and flexibility around meanings of product development and organizational change, and attempts to contest seemingly coherent meanings of these phenomena.

Often discourse analyses engage in describing or fixing particular discourses at a specific point in time or in exploring the contestation of certain discourses. However, the theoretical ambition and contribution of this study is to develop a deeper understanding of processes and practices through which discourse emerges and is changed (or not changed) over time. In that sense, the study attempts to contribute to theorizing around the ongoing discursive doing of change and stability in particular contexts by emphasizing more explicitly time and fluidity of social reality. In so doing, the study attempts to contribute to the theorizing of change, stability and discourse in

the organizational change and new product development (NPD) literature within the field of management and organization studies.

Although there is a vast body of literature exploring and theorizing organizational change and new product development or innovation (for a broad overview see, for example, handbooks in these research fields, Poole et al., 2004; Fagerberg et al., 2005; Shavinina et al., 2003; Loch et al., 2008), this literature seems to lack nuanced understandings of the everyday lived experiences of social actors in particular organizational settings, who repeatedly have to accommodate organizational change in relation to their work. This is why I am in particular interested in the relationship between discourse and the constructions of product development in relation to organizational change. Moreover, in exploring the research questions, I attempt to produce more nuanced descriptions and thus a better understanding of how certain local conditions of software development take shape, are interconnected through discourse and are ascribed meaning while other alternative paths are excluded, and how organizational change and product development is created through interdependent and dynamic processes that both constitutes and is constituted by prevailing discourses.

In addition, the processes of product development and organizational change are studied as an arena where discourse and subject positions are mutually constructed. Hence, the focus is also on processes by which the product development experts as persons come to be produced simultaneously as product development and organizational change take shape. Specifically, I am interested in how the emergence of certain local conditions of software product development has specific implications for the actors involved, that is, how the local conditions provide limitations and possibilities for action for various actors. Such limitations and possibilities can potentially have implications for agency, power relations and social divisions. In that sense, the study also has clear practical ambitions and implications.

Although I use the term organizational change both in the aim and research question, I will also frequently use the term organizational restructurings throughout this study. This is because the organizational changes that the participants of this study had experienced usually involved various restructurings, such as downsizing, rapid growth and structural reforms, rather than quantum change such as change programmes. Therefore I will refer to organizational change as a broad umbrella of various changes under which organizational restructurings fit as certain types of changes.

1.4. The empirical data

As I will discuss in greater depth in Chapter 4, the focus of the study and the selection of interviewees have both been made step by step as the study has evolved. As I have said, some of the interviews were already conducted before I knew I was going to use the interview material for a doctoral study. These interviews were conducted with the entire personnel of an ICT company while I worked there as the HR Manager. Therefore, I have called these HR and transitional interviews. This interview material, gathered at two different points in time (during rapid growth and during downsizing), added up to 56 interviews. After beginning my doctoral studies, I have conducted another 25 interviews during three different phases.

The study focuses in particular on 12 of the HR and transitional interviews and 22 of the research interviews conducted. These interviews were conducted with persons

working specifically with various tasks related to software product development ranging from planning, specifying, programming, testing and implementing software to co-ordinating projects. Hence, I have chosen to use the term ‘software product development experts’ as this term is broad enough to capture all the various positions the interviewees were involved in. Common to all the interviewees is that at the specific point when the interviews were conducted, each individual interviewee was employed by an ICT company or, as in one case, the owner of a company. In that sense, the interviewees were ‘survivors’ in these particular organizations, while other software product development experts had been dismissed from many of these companies. The findings of this study may have been very different had I decided to interview the dismissed persons². Nevertheless, many of the interviewees had experiences of being dismissed, temporarily and/or for good although they were ‘survivors’ at the moment when the interviews were conducted.

The interview material analyzed was conducted within six different ICT companies. All of these companies, with only one exception, were engaged either solely or partly in new software product development. One company focused mainly on software customer projects. All organizations had a history of organizational changes and restructurings, most of which were related to various states of the market, such as the IT bubble. That is, all organizations had engaged in unplanned and/or planned organizational restructurings, such as, (re)organizing work processes, departments and organizations, and/or processes of growth and downsizing influencing the number of employees within a relatively short period of time.

1.5. Setting the scene: The emergence of the ICT sector

As organizational change is studied here in the context of small and medium size Finnish ICT companies, I want to introduce the reader briefly to how the ICT sector has emerged in Finland and to the broader context in which the participants of the study work.

Industrialization began relatively late in Finland, after the Second World War. Much of Finland remained rural until the 1950s and 1960s after which both urbanization and economic development was rapid. The state first actively supported the industrialization and later also had an important role in building up welfare policy following the post-war reparations. Public services and the welfare society began taking shape in the early stages of industrialization; the most intense period stretched from the 1950s to the 1980s when the Finnish government introduced three reform programmes. Between 1950 and 1974, Finnish GNP rose by five per cent annually and the average income more than doubled. During this period of time Finland became one of the richest third of the European countries. (Meinander, 2006)

Until the mid-1980s, the economy of Finland remained relatively closed, but as the opening up of the Finnish market began, development was rapid. Around this time, a general process of deregulation took place in Finland, and this contributed to a different economic environment. Now, the Finnish economy involved free currency exchange, expanded trade opportunities in goods and financial instruments, and an increased supply of domestic and foreign loans.

² In Chapter 4, I explain in more depth why and how the interviewees were selected.

In the early 1990s, the Finnish economy was severely affected by an economic recession and the collapse of the former Soviet Union, with which Finland had important bilateral trade. Finland experienced the deepest economic recession during its history as an independent nation, and the unemployment rate rose rapidly from 3 percent to around 20 percent. The development of the industrial structure and infrastructure, as well as maintaining the welfare state, was required to overcome this national crisis. (Meinander, 2006)

In 1995, Finland became a member of the European Union (EU) and joined the euro zone in 1999. This of course has influenced the Finnish economy and society on different levels with free mobility of capital, people and information within the EU.

From the 1950s until the economic recession in the 1990s, the forestry industry and traditional metal industry both contributed 30 percent of Finnish industry's share of the annual GNP. As a result of the changes in the Finnish economy, industry and export structure, the electronics and electrical industry has become as important. Today, the electronics and electrical industry, and metal and engineering industries are the most important sectors of the Finnish national economy, together with the forestry industry. There is still a large amount of manufacturing in Finland, while a clear structural change of the industry has taken place from mainly capital, energy and raw material production to technology and knowledge intensive activity, such as, software development. (Meinander, 2006)

The development of the ICT sector and more broadly the information society in Finland is interesting for several reasons. Many interacting factors have contributed to the development, including short-term and long-term processes, for example, changes in industrial structure, technology policy, labour market relations and cultural traditions. During the 1980s, there had been a number of supportive actions, such as strong support in science, technology and innovation policy and education policy, as well as in research and development investments that helped the Finnish economy to recover successfully from the economic recession a few years later. (Heiskanen, 2004a)

The first national strategy document for the information society was published in 1995 (Suomi tietoyhteiskunnaksi 1995). This strategy has been followed by new ones in 1998 and 2006 (Statistics Finland, 2006). Heiskanen (2004a) highlights that the strategy work has been active and dynamic, involving different actors in society and its content has been acknowledged to a great extent in public discussions. Furthermore, social concerns have gained increasing emphasis within the information society strategy debate. Research and development as well as innovation have often been seen as guarantees of the future of the Nordic-type welfare state.

In international comparisons, production by the ICT sector has been shown to play an exceptionally important role in the Finnish economy. The ICT sector includes, according to international definitions, those industries that produce technology products or services related to them. The ICT sector has employed over many years approximately 10 percent of the Finnish private sector. The percentage of the ICT sector's value added of the total value added in Finnish companies is exceptionally high. It is divided quite evenly between ICT manufacturing and services (Statistics Finland, 2006). In 1995, 2 billion euro was spent on research and development in the private and public sectors as well as in education in Finland. One third of this was invested in ICT companies. In 2008, investments in research and development had grown to over 6 billion euro. Research and development expenditure was 3.4 percent of

the Finnish GNP, making Finland one of the few EU member countries to reach the 3% GNP objective set by the EU (Statistics Finland, 2006; 2010).

In sum, the ICT sector has steadily grown and become an important actor in the Finnish economy and society. As Heiskanen (2004a, 7) claims, 'On a number of measures Finland is in the forefront of the development of an information society', due to, among many factors, the competitive and successful ICT industry. This has required large investments and long term commitments to certain policies and strategies involving many actors ranging from politicians and labour organizations to actors in the private sector. However, these processes have been far from straightforward. They have taken shape in relation to the many ups and downs in the global economy which have strongly influenced the Finnish economy.

After the economic recession in the mid and late 1990s, 'the IT bubble' (or 'the dot-com bubble'), as it has been called in retrospect, began to grow in many countries. The IT bubble refers to speculative bubble or a period of time when 'modern myths' (Tapia, 2004) regarding a confidence in various new technologies became popular. As the Internet was created and its users began to increase after 1995, various technologies and services related to it and, for example, other wireless solutions, contributed to enormous expectations for future commercial and business growth. New Internet and ICT companies were founded at a rapid pace. Investors, including both large venture capitalists and private small savers, were prepared to overlook established metrics and made rash investments even in companies that only could show plans, visions or demos as they had not yet developed any products or services. Many ICT companies operated by making a loss in an attempt to grow rapidly and to create a substantial market share to later make up for the losses. The novelty of the growing technologies and belief in future profits contributed to the fact that it was not uncommon for the market value of many ICT companies to exceed many times the turnover and book value of these companies. Even some small companies making no profit were able to make an initial public offering of its stocks, hence earning a large amount of money and turning many of the founders into 'public heroes'.

After reaching its peak in 2000, the IT bubble began to burst. By 2001, optimism in the ICT sector had taken a dramatic turn as the share prices of most ICT companies had fallen substantially and many ran out of capital, causing numerous bankruptcies. Various illegal practices were revealed and legal actions were taken over the coming years. Some companies were sold, restructured and/or reorganized and began a new, perhaps more cautious, journey.

Despite the twists and turns in the market, a strong emphasis on innovation, in particular, technological innovation, has persisted in the Finnish society. For example, the Finnish Ministry of Employment and the Economy state on their website that 'Innovation is a knowledge-based competitive edge, used to the benefit of business, society and well-being' (<http://www.tem.fi/index.phtml?l=enands=2069>, 2010). Moreover, through technology and innovation policy measures the Finnish government strives to enhance the competitiveness of Finnish industry as well as the well-being of society. Thus, the Nordic-type welfare state and the technological innovativeness are still seen as mutually supporting each other (Castells and Himanen, 2001; Heiskanen, 2004a).

The current Finnish government aims to increase research and development funding from approximately 3.5 percent to 4 percent of GNP in the near future. However, it remains to be seen how the present global financial crisis will influence these

developments and goals. For example, Finland is currently in the middle of an economic recession; GNP contracted by 8 per cent in 2009 (http://www.tilastokeskus.fi/til/vtp/2009/vtp_2009_2010-07-15_tie_001_en.html, 2010). According to an analysis by Statistics Finland, this is the largest decrease in output in Finland since 1917 and 1918 (http://www.tilastokeskus.fi/til/vtp/2009/vtp_2009_2010-03-01_tie_001_en.html, 2010). The unemployment rates have increased (8,4 percent in 2010) and the media frequently report about large scale redundancies and bankruptcies.

On the other hand, Finland has sometimes been referred to as an example of a ‘success story’ (while critical and concerned voices are simultaneously increasing). The Finnish national innovation system is often the target of this discussion and it is seen as having promoted a highly educated work force with a strong emphasis on expertise in science and engineering. It is not difficult to find arguments in the public discussions claiming that Finland has a ‘world-class competence’ in technology; Nokia and numerous other Finnish companies have been referred to as cutting edge organizations with skilled, talented, passionate and committed employees. Linus Torvalds, the founder of the Linux-operating system, is perhaps the most known Finnish ‘hacker’. Moreover, it is perhaps fair to say that the public discussion, for instance, in the media often draws up an image of these persons, on the one hand, as rather exciting, skilled, cutting edge, and on the other hand, often implicitly, as important actors for realizing the aims regarding competitiveness, economic growth, and welfare set by the policy makers. This study in a sense contextualizes the voices of a few of these actors who, through their daily work, participate in ‘realizing the innovation system’ on a very micro level.

With this background in mind, this study focuses on the lived experiences of software product development in relation to organizational restructurings. Most of the participants of this study were still in school or studying for a technical degree during the economic recession in the early 1990s. The majority of these persons entered the software industry during the IT bubble; they saw and experienced the rapid growth of the ICT sector; they felt the crash and participated in the recovery of the industry. Most of all, they have worked for a number of years now in a sector that is relatively young and thus have had to search for useful ways of organizing work and structuring organizations. Now, these individuals are likely to be faced with new challenges due to the ongoing financial crisis. Thus, it seems important to explore how individuals who work in ICT companies understand their work in particular in relation to the continuous ups and downs that potentially have had implications for the organizations and the labour market that they work or search for jobs within.

1.6. Outline of the thesis

This introduction is followed by ten chapters. Chapter 2 elaborates on how product development and organizational restructurings are approached in this study, hence developing a specific position for the study. This involves generating a social constructionist and discursive framework for the study of product development during organizational change and a reflection on the implications of this framework for the positioning of the researcher.

Chapter 3 proceeds by addressing previous research concerning the two main topics of this study: organizational change and product development. My aim is not to contribute a comprehensive literature review of these broad research fields; rather my attempt is to introduce some important discussions within these fields of research that

are of relevance for this study. I will also discuss previous research regarding the type of IT work that is involved in software product development as well as how various actors involved in software product development have been categorized. The overall aim of the chapter is to discuss this literature in order to position the thesis drawing on social constructionist and discursive perspectives.

Chapter 4 outlines the research processes and interview material. I discuss how the research process unfolded, how interviewees were selected and the type of research material that constitutes the study. I also describe the participating organizations and interviewees, as the composition of the group of interviewees transpired to be crucial for interpretation of the research findings. The chapter also includes a description of the analysis of the interview material. I illustrate how the selection of interviewees contributes to a great variety of different possibilities for analysis. I then describe how I draw on discourse analysis to analyze a combination of these possibilities. I explain how the analysis is conducted through a multiangled analysis within clusters of individuals.

Chapter 5 to Chapter 9 constitute presentations and analyses of the interview material. Each chapter focuses on the analysis of one cluster of individuals and is named after the organization where the individuals of the cluster work, that is, Q-Software, new.comer, Sissela or EN Systems. Q-Software is analyzed in two different chapters as the data material from this organization was gathered during several interview phases. The analysis of Q-Software is therefore split into different chapters in an effort to illustrate change over time.

Chapter 10 elaborates on some important findings from the analysis of the interview material. The chapter highlights how various mundane product development practices are interconnected with the production of stability and change as well as how stability and change are co-existent. By discussing such relations, the chapter attempts to produce alternative articulations of the discourse of change and discourse of product development by providing some insights into the implications that may follow from them. This involves a discussion of three interconnected issues: time and transformation, subjectivity work, and gender issues.

Chapter 11 concludes with a discussion of the implications. I begin by summarizing the findings from the analysis and discuss them in some detail in order to draw conclusions. I then discuss the adopted approach and engage in theorizing change, stability and organizational change. I also discuss the strengths and limitations of the study as well as future recommendations and implications for research, social actors, and organizations.

2 METHODOLOGY

The Introduction included a brief presentation of the studied phenomenon and the perspective drawn upon in this thesis. This chapter develops in greater depth the perspective from which the research aim is approached and investigated. The chapter begins by discussing some central assumptions and contours of social constructionist inquiry. I examine different theoretical and methodological assumptions which underpin this, as most, social constructionist work. This is done to position the study and set the grounds for the following chapters.

Drawing on the assumptions outlined, I then proceed by discussing discourse and how discourse is intertwined with the social construction of product development and organizational restructurings. The chapter shows how a discursive view on product development may help us to understand how discourse may promote, but also restrict, social actors' relations to software, ways of organizing and subject positions.

The outlined approach has implications not only for the studied phenomenon, but also for the relationship between the researcher and the researched. Therefore, the last part of the chapter concludes the implications of the developed approach for my own subject positions during the different stages of the study.

2.1. Social constructionism

A wide variety of social constructionist approaches has emerged from the influences of a number of disciplines and writers (see, for example, Knorr Cetina, 1994). While some authors see the roots of social constructionism stretching back to symbolic interactionism and Mead's book *Mind, Self and Society* (Mead, 1934), Berger and Luckmann's book *The Social Construction of Reality* (Berger and Luckmann, 1966) is usually seen as one of the most important founding contributions to social constructionism. Whereas Berger and Luckmann's work can be positioned within the discipline of sociology, there have also been some important psychological and social psychological contributions to social constructionism (see, for example, Gergen, 1973). Likewise, social constructionist approaches share many concerns and assumptions with postmodernist and poststructuralist accounts, influenced by, for instance, Foucault and Derrida.

As social constructionism has emerged through a multidisciplinary dialogue, the approach has been adapted to a great variety of topics in various fields of research. Consequently, it is difficult to formulate any distinct descriptions of the approach, as Burr (1995) points out. However, there is a set of common interests and assumptions that can be seen as a foundation to this approach; assumptions that should be understood as open-ended 'working assumptions' under continuous negotiation (Gergen, 1999). Gergen (1999), however, reminds us about that not all scholars who draw on a social constructionist approach agree with all the assumptions. Some put more emphasis on certain assumptions, while others may only embrace specific ones. Nevertheless, if we keep this in mind, it is nonetheless worth taking a look at the common tenets and assumptions shared amongst writers drawing on social constructionism.

In their highly influential work, Berger and Luckmann (1966) argue that reality is socially constructed. Hence, a social constructionist view of reality suggests that reality,

as people experience it, is collectively created in ongoing interaction and talk between people. Over time, through this interaction, people create shared patterns for how to understand and act upon the world. They constantly engage in labelling, naming and categorizing experiences, thus systematically constructing social reality to make life more predictable and liveable (Chia, 2000). In that sense, from a social constructionist perspective, these classifications are typically not seen as determined by how the world is, but rather as useful constructions making it easier for people to co-ordinate actions with each other (Hacking, 1999). To sustain these patterns and understandings of reality they must, however, continuously be recreated and potentially reinterpreted. This invites an anti-essentialist and anti-realist view on reality in the sense that reality is seen as always in flux, and that therefore there is no determined nature of the world or people, nor does knowledge of reality accurately and neutrally mirror reality since knowledge is always constructed from a certain perspective (Burr, 1995).

In line with the suggestions above, the main engagement of social constructionist studies has become to explore *processes* through which people develop knowledge about reality (Gergen, 1985). Attention is directed towards what is viewed as knowledge in a society in order to develop an understanding of the social practices by which knowledge is developed, transmitted and maintained (Berger and Luckmann, 1966). Such engagements reveal how social actors through their everyday actions and practices socially construct specific categories of, for example, people, as well as ways of relating to these categories. Over time, these categories often become so natural to people that they begin to take them for granted, thus reproducing certain social orders. When these categories and following social orders are experienced as natural, they gain the status of an 'independent' or 'pre-existing' thing-like object rather than being seen as a product of social interaction. An important aim of social constructionist studies is to explore and 'reveal' interactions and processes through which certain knowledge about reality emerges and becomes taken for granted (Gergen, 1985).

The line of reasoning above does not, however, only concern everyday practices under study but also science itself. Commonly accepted categories drawn upon in sciences are also viewed as socially constructed, hence always inviting numerous understandings of the categories and particular phenomena studied. Therefore, from this standpoint, both scientific and non-scientific observations of reality should not be seen as unproblematic or 'unbiased' (Gergen, 1985; Burr, 1995). Instead, scholars drawing on social constructionism often aims at questioning (both scientific and non-scientific) taken-for-granted ways of understanding reality thus potentially acting as an important source of social or political criticism (Gergen, 1985). In this endeavour, social constructionist studies aim at showing that the categories used to explain observations of reality are not 'real' divisions (Burr, 1995) but emerge in and through social construction in specific contexts. However, in regards to this I wish to emphasize that there are great differences between how scholars drawing on social constructionism think that different accounts, whether scientific or not, can be more valid than others (Hacking, 1999). This is an important point as it has implications for possibilities to criticize or change oppressive processes and relations (Hacking, 1999).

Social constructionist thinking also leads us to see that the concepts and discourses that we draw on as we act and explain our experiences are historically and culturally specific (Gergen, 1973). The terms we use to account for reality are seen as social artefacts that emerge in ongoing interactions between people and are in this view also products of specific cultures and historical periods dependent on certain prevailing social and economic structures (Gergen, 1985; Burr, 1995); discourses construct and are

constructed in interaction between people and are hence ‘defined’ in and through culture, history and context.

To explore the processes through which one comes to understand the world, social interaction and in particular language in specific cultural and historical periods have become the main targets of concern of social constructionist inquiry (Burr, 1995). Analyzing language is seen as central because the concepts, categories and discourse that social actors draw on to construct meaning are provided by language. As Burr (1995) explains, language is a pre-condition for thought which individuals learn from each other through interaction, beginning from when they as children learn to talk. At the same time, language is viewed as more than just a mechanism through which we express ourselves. Language has a central role in sustaining and contesting constructions of reality; language is a form of action as it constructs reality and attributes it with meaning as people interact.

Although processes of social construction work to create shared patterns and meanings of reality, it is important to highlight that these processes also invite each individual to construct her or his own versions of reality and to potentially contest dominant meanings. Hence, there are always a variety of different versions of a specific phenomenon which in turn invoke a variety of different implications and actions from different individuals. However, rather than constantly creating new versions of reality, dominant versions are often repeatedly reconstructed and hence sustained seemingly unchanged over time. These versions of reality have implications for how various actors in different positions are expected to act and not to act. Thus, they legitimize certain versions of reality and power relations while excluding other alternatives.

In the following chapters, I draw on the assumptions discussed in this section in both an ontological and an epistemological sense (which seems to imply a blurring of the difference between these notions). By this, I mean that my understanding of the social world is informed by an ontology of becoming as I view product development and organizational change as emerging through social, discursive construction and as consequently continuously in flux. From this follows that ontological priority is given to the emergence of reality over time. In that sense, various ‘objects’ discussed in this thesis are viewed as gaining their existence as they are talked about and given certain meanings. Epistemologically, the social and discursive view on reality implies that all attempts to produce knowledge of reality (by the researcher and the researched) are seen as ‘forms of human abstraction emanating from our will to order’ (Chia, 1999, 210). By taking up this position, my attempt is not to search for ‘single truths’, to unmask a false consciousness or to enlighten social actors, but to produce one amongst many possible readings of the phenomena studied in an effort to provide a useful construction (Czarniawska, 2005). Hence, one could argue that my aim is rather pragmatic and perhaps also political. Next, I will engage in sketching out one possible approach to organizational restructurings and product development from this standpoint, while the assumptions also are applied back to the adopted methodology.

2.2. Discourse and product development during organizational restructurings

Social construction, reconstruction and transformation of meaning have been explored in various ways and on different levels. In this section, I will show some benefits from exploring these processes in relation to product development during organizational

restructurings through a discursive lens. From this perspective, ‘discourse is first and fundamentally the organizing of social reality’ (Chia, 2000, 517).

Hardy (2001) views discourse as practices of talking and writing, which brings objects into being, such as organizational restructurings. For example, the dominant discourse of change has constructed change as inevitable and thus often promotes ‘change for the sake of change’ (Helms Mills, Dye and Mills, 2009, 37). More specifically, discourse can be said to constitute a set of texts. Texts may, for instance, be written or spoken language, cultural artefacts and so on (Grant, Keenoy and Oswick, 2001). These texts invoke certain practices in which the material realities of product development during organizational restructurings are generated; the texts produce a certain version of events (Burr, 1995). One could say that discourses are ‘embodied in texts, but exist beyond the individual texts that compose them’ (Hardy, 2001, 26). Moreover, a specific text is a ‘discursive component’ or manifestation of discourse, it is interrelated to other texts which together give clues to the nature of discourse and is in that sense not meaningful on its own (Phillips and Hardy, 2002). However, texts do not only embody discourse; in and through texts, meanings and discourse are also produced and contested. This implies that the context in which texts are located and discourses are generated are important and must be taken into consideration when exploring discourse and discursive effects. Hence, it must be emphasized that the focus of concern is not on texts as such, as in textual analysis for example, but rather on the relations between text, discourse and context (Phillips and Hardy, 2002).

The level of discourse studied can vary considerably between different studies. Different scholars give different levels of attention to discourse as closely intertwined with specific local contexts or with broader (cultural) meanings. Alvesson and Karreman³ (2000) refer to the first version as ‘discourse’ and to the latter as ‘Discourse’. Through this distinction between micro-discourse and mega-Discourse, we can see how the study of discourse may help us to explore the highly local language use between, for example, product development experts in a specific context at a specific point in time, or broader relatively generalizable patterns beyond, for instance, the dominant Discourse of change. Alvesson and Karreman (2000, 1134) explain:

‘A Discourse, or rather indications of it, shows up at a large number of sites in more or less different ways and is, methodologically, treated as being of a more or less standardized nature. The idea is that it is possible to cut through the variation at the local level through summaries and syntheses that identify over-arching themes operating in specific situations. Overall categories and standards then tend to be privileged in the treatment of empirical material. ... This is, of course, accomplished at the expense of paying attention to the complex social practices and variations at the local level. Close-range studies focus on these. They emphasize the need to take social context and interactions seriously. ... it means that the richness of the material and considerations of uniqueness makes general patterns less visible and also somewhat beside the point.’

Yet, many studies do not take either one of these extreme positions and can therefore typically be located somewhere on a continuum between them. However, Alvesson and Karreman (2000) argue that it may be problematic to address micro and macro levels of discourse in the same study as the study of Discourse, they believe, starts from established understandings of the phenomenon studied, while the study of micro discourse typically view discourse as more emergent. They argue that due to the different starting points, the incorporation of both levels of discourse in the same study may produce tensions. Nevertheless, despite their cautiousness, Alvesson and

³ This author spells his name Kärreman although his name is spelt Karreman in this article. Hence anyone wishing to find his work may have to make searches with both spellings.

Karreman (2000) do not discourage such efforts but encourage continuous reflection on how we climb the discursive ladder towards Discourse.

Jokinen and Juhila (1999) view discourse as always produced in local practices and at the same time as connected to prevailing broader Discourses. Therefore, they claim that discourse analysts must consider how to approach this interconnection rather than chose a narrow focus. To them, the mutual focus on discourse and Discourse is more a question of timing, in the sense that, both can be examined but at different stages of a study. At the same time, Jokinen and Juhila (1999) seem to agree with Alvesson and Karreman (2000) that discourse is typically studied as emergent and Discourse on the basis of established understandings of the phenomenon studied, but they also argue that this may not be the case in all discourse analyses. More specifically, they show that the study of established understandings may produce emergent findings that contest established notions. Likewise, the study of discourse can potentially invite deconstruction of broader Discourses. Therefore, as Jokinen and Juhila (1999) show, there seems to be interesting potential for addressing discourse at different levels in the one and same study. Phillips and Hardy (2002) even argue that it is precisely the ability to connect micro-processes to broader discourses that distinguishes discourse analysis from other methodologies and methods and that forms one of its most important contributions.

In Chapter 3, I will return to how this thesis deals with different levels of discourse. At this stage, it may be enough to conclude that by exploring discourses that software product development experts draw upon to bring certain organized states into existence (Potter and Wetherell, 1987) we can attempt to understand how they produce order and predictability to make social reality 'more liveable' (Chia, 2000). Looking at discourse in particular contexts provides insights into how product development is '*made to work*' during organizational restructurings (Tsoukas and Chia, 2002, 578, emphasis as in the original) as social actors locally take up specific actions; we may also be able to link these accounts to broader Discourses although this is not the primary target of concern here.

It is also important to acknowledge that any event or object is typically addressed by several discourses, each highlighting different aspects, which implies that the event or object potentially is constructed in numerous ways. Certain contexts are assumed to provide a wide range of discourses while other contexts may provide a very limited number of discourses to draw upon. Likewise, different actors do not seem to have equal opportunities to make use of discourses in specific contexts (Potter and Wetherell, 1987). Some voices gain more legitimate positions while others are marginalized or silenced (Grant et al., 2005), for example, depending on the hierarchical position, gender, age and education of a person (Burr, 1995). This implies that in the local conditions of product development there are always a number of discourses that construct specific version of NPD projects while excluding other. Hence, the discursive production of projects also appears to potentially have suppressive effects (Hodgson and Cicmil, 2007). Moreover, prevailing discourses that shape product development have implications for how social actors in different positions involved can or should act. Discourses are therefore seen to be tightly intertwined with how product development and organizational restructurings emerge and how actors are addressed in these processes; they act both as resources that actors can draw on in their interaction with others and as discursive constraints.

Likewise, discourse is also viewed as continuously contested, resisted and modified in discursive practices. Hence, actors are seen both as users and manipulators of

discourse (Burr, 1995). This means that discourse and social reality are viewed as dynamically produced. It is precisely through exploring these micro-processes of dynamic production that we can develop an understanding of the becoming of software development during organizational restructurings (Chia, 1999; Tsoukas and Chia, 2002).

2.2.1. Discourse and the construction of multiple realities

When exploring the micro-processes of software product development, in particular during organizational restructurings, we can expect to come across a complex web of interrelated discourses. As a variety of heterogeneous discourses 'come together' in a specific context, multiple realities are simultaneously shaped. For instance, we can assume that when software product development experts engage in carrying out their work, they do not only construct meanings around their work and organization but also around other social phenomena, while such social phenomena also give shape to product development. Moreover, texts and discourses are linked and interdependent in a system or chain of diverse texts and discourses (Hardy, 2001). From the point of view of this study, I wish to highlight three key aspects that seem to be closely related to product development and organizational restructurings; in important ways they construct and are constructed by these phenomena. These aspects that surround product development and organizational restructurings are:

- products and relations to products
- ways of organizing
- subject positions

2.2.1.1. Products and relations to products

The first key aspect, products, contributes in numerous ways to interesting and complex relations in software product development and organizational restructurings (Case and Pineiro, 2009). One obvious goal of software product development is to create an IT product or service. To achieve this, product development experts have to rely on IT and sometimes also develop own IT-based tools to be able to carry out their work tasks. In addition, the ways of organizing product development and organizational restructurings may involve the adoption of certain IT, for example, project management methodologies are typically only feasible with the IT that support these processes (Case and Pineiro, 2009). In this respect, IT and various software products play important roles in software product development in many different and complex ways.

The relations between people and IT, or humans and non-humans, have been theorized and explored in diverse ways, some leaning towards technological determinism, others drawing on social determinism (Heiskanen, 2004a). In this study, IT and humans are viewed as mutually constructed; technology is neither seen as an autonomous force shaping social development nor as 'neutral' and prone to social shaping (Heiskanen, 2004a). Instead, humans and non-humans are viewed as emerging as a consequence of their relation with one another (Doolin and Lowe, 2002). Therefore, the focus is on how particular relations are constructed and performed in specific local conditions (Doolin and Lowe, 2002).

2.2.1.2. Ways of organizing

By 'ways of organizing', I refer to how work is organized, structured, co-ordinated and so forth. Following the line of reasoning developed in this chapter, I am interested in exploring discursive resources that various social actors draw on as they construct 'rules' and 'guidelines' that structure product development. Such ways of organizing construct and are constructed by power relations and have therefore potential political effects. In that sense, ways of organizing in a particular context not only serve to bring off smooth interactions in order to achieve set goals but also create and maintain certain power relations and possible tensions. Lindgren and Packendorff (2009) argue that project organizations, as the organizations included in this study could be categorized as, often constitute complex processes of power even when they are understood as flat and decentralized organizations.

Project management methodologies, NPD and change models, as well as organizational charts, easily come to mind when one thinks of how work is organized in a particular organization. For example, many organizations have 'official' organizational charts that organizational members may (or may not) use as discursive templates (Tsoukas and Chia, 2002) when attempting to make sense of how to organize daily practices. NPD, change and project management models can in similar ways be used for such purposes. However, organizational charts and various models are not treated here as functional plans that invoke intended ways of organizing, but rather as resources that may introduce new ways of organizing with certain power implications. A change programme or NPD model does not therefore represent specific ways of organizing. However, such models may act as discursive templates that contribute to 'new beginnings' of various discursive practices through which the models are reinterpreted, sometimes institutionalized or perhaps alternatively ignored (Tsoukas and Chia, 2002). It is therefore such micro-processes of change, institutionalization or 'ignoring' that we should focus on, if we want to develop a better understanding of what occurs in product development during organizational restructurings regardless of whether these processes emerge from established models and/or from more informal negotiations. Such inquiries can provide insight not only into how these ways of organizing are 'accepted' but also ignored, contested and resisted (Tsoukas and Chia, 2002).

2.2.1.3. Subject positions

The third aspect raises issues around subject positions. Software product development projects and software products should not be understood as arising in the acts of 'pre-existing' social actors (Chia, 2000). Rather social actors are also seen as products of discursive practices (Chia, 2000). Moreover, as software product development experts engage in their work, they simultaneously engage in positioning the self and others, they take up certain subject positions (Davies and Harré, 1990). Consequently, software product development and organizational restructurings can be important sites for the discursive production of the 'content' of subjectivities. As, for example, Case and Pineiro (2009) illustrate in a study of software developers, software development can be an important arena for constructing subjectivities and identities. Therefore, I think it is important to look in more detail at subject positions and positioning.

The concept of positioning can be useful for developing an understanding of how certain dominant discourses of product development and organizational restructurings address social actors such as, for example, women and men differently, and how particular actors gain voice and others are silenced or ignored.

Various scholars drawing on a variety of theories and disciplines have produced a range of different understandings of the 'production and content' of ourselves as persons. I am interested in exploring a view of the self as 'a performance constantly constructed and reconstructed by the multiple discursive practices of society' (Gherardi and Poggio, 2007, 31). Hence, the discursive practices, that is, all the diverse ways in and through which social actors construct realities, are of great interest here (Davies and Harré, 1990). In particular, the discursive and gendered practices through which actors develop a sense of themselves are emphasized.

From the point of view of this study, people are seen to develop language use through social interaction. According to Davies and Harré (1990), this process provides people with certain categories that include and exclude specific individuals or groups, for example, in terms of gender. They argue that while learning these categories, people simultaneously participate in discursive practices that attribute the categories with specific meanings, for example, what it may mean to be a gendered person. Hence, such practices also involve participation in the discursive construction of meanings specific to certain subject positions, including different implications for those persons who are seen as 'belonging' to the categories. In addition, participation in discursive practices involves positioning the self in relation to different categories, for example, as a white male software expert, and thus positioning also involves a process through which the self is differentiated from the other (Davies and Harré, 1990).

The line of reasoning above implies that discourses address individuals as certain persons, such as young, educated, male, and so on, in discursive practices (Burr 1995, 142). More specifically, in our daily enactments we are constantly addressed by a variety of different discourses which implies that depending on time and space we may (or may not) take up a variety of different subject positions, and consequently the processes of positioning involve a production of a diversity of selves. One could say that we live in a flow of changing positions, some of which we may take up 'temporarily' while others become more 'permanent' ones; some of which we find unproblematic while others are experienced as contradictory, some of which we accept and/or identify with, others that we resist and/or dis-identify with, some of which we are relatively aware of, others that we draw on unintentionally. Nevertheless, despite the diversity of selves and potential contradictions, people understand themselves as the sum of various subject positions and tend to view themselves as historically continuous and unitary. However, the suggestion here is that these practices are ongoing, and so who one is is constantly in a state of flux, and any definition depends on those discourses available to and taken up by a person and others within a specific practice (Gergen, 1999).

Negotiating subject positions and including (or excluding) others in certain categories may involve homosociality (Lipman-Blumen, 1976). The concept of homosociality has been drawn upon by different scholars in a variety of ways. In this study, homosociality is referred to as a preference or desire for company of the same sex. Moreover, the notion of homosociality offers an example of, for instance, how men in specific contexts position themselves and others in ways that on the one hand create relations, friendships, solidarity and/or closeness and, on the other hand, excludes women and many men, hence producing social divisions. In other words, gender positioning and homosociality is related to power relations and have implications for, for example, practices in software development and gender subject positions.

When a person takes up a certain gendered subject position, she or he will experience the world from that point of view, through the discourses available within that position

(Davies and Harré, 1990). This is not, however, a straightforward or non-political achievement. What needs perhaps more emphasis here is the social aspect of positioning concerning how subject positions emerge through the negotiation and interaction between various social actors. That is, an individual is positioned by and offers positions to others in webs of relations, thus inviting particular ways of being. This has gendered power implications; the discursive practices of positioning, the acceptance and resistance of gendered subject positions, are constructed by discourse, and discourses may address different actors in different ways. This in turn constrains and shapes individuals in different ways or provides them with different possibilities to 'negotiate voice'. In other words, in drawing on discourses, social actors with various interests and views negotiate meaning, which results in the construction of dominant discourses and the marginalization of other meanings. Dominant discourses imply power relations as the possibilities to gain voice are dependent upon how one is addressed in discourse as a gendered being. Such effects potentially also go beyond the immediate local context.

The perspective taken in this study, which suggests that reality is socially constructed, also has very specific implications for the view on discourse in relation to positioning and gender. Discourse is not only seen as constituting gendered subject positions, but is also itself constructed through processes of positioning and gendering. Moreover, as social actors draw on discourses, they simultaneously potentially modify them. The discursive view of positioning taken here then suggests that social actors take up specific subject positions within discourse, and that this is achieved through the interaction between discourse and human agency (Bergström and Knights, 2006). Thus, in this view, social actors are seen as both products of discourse and manipulators of discourse, as constituted by gender discourses and as producers of gender discourses. What is of interest in this study is to see how certain actors speak from certain gendered subject positions, how they adopt and assign positions to each other through gender relations and what power implications follows from such practices.

2.3. Positioning the researcher

The social constructionist and discursive approach adopted for the research topic has specific implications for how the relationship between the researcher and the researched is viewed. The research process, as any social process, is seen as a socially constructed practice or as a co-production between the researcher and the researched. In this process, the researcher and the researched both create subject positions for themselves and for each other, thus offering each other particular parts in the 'story' that is being co-produced (Davies and Harré, 1990).

Neither the researcher nor the researched has only one specific position, but rather a diversity of shifting selves. Moreover, the researcher can draw on different subject positions even within the same study. For example, when framing a study the researcher engages in discursive practices that shape what she or he can do, what questions are posed etc. This also includes implicitly or explicitly inviting the researched to engage in the study in particular ways. While 'gathering' and constructing the empirical data, the researcher may shift between various positions such as 'an expert in management and organization', 'a non-expert in software development', a woman, a person of a certain generation, and so on. When representing the empirical material in the research report, the researcher is again likely to take up different positions as the re-teller of narratives told. In other words, research is a social practice

in the same way as the practices that the researcher is studying; the research and findings emerge through interactions and discursive practices in which identities and subject positions are drawn upon and constructed. In addition, in these practices the researcher (and the researched) is also part of a larger set of relations (Johansson, 2008), that is, a research community with certain conventions, guidelines and rules through which the social subject is translated into a research subject (Hardy, Phillips and Clegg, 2001). In that sense, the researcher is part of the audience for various academic texts and a re-teller drawing on them in the process of generating new 'knowledge'; the audience and the co-constructer of the narratives told by interviewees; a social actor with a particular audience in mind; and a social actor acting in a particular cultural setting just as any other social actor (Juhila, 1999). As Burr, (1995, 160) concludes:

'No human being can step outside of her or his humanity and view the world from no position at all ... The task of the researchers therefore becomes to acknowledge and even work with their own intrinsic involvement in the research process and the part that this plays in the results that are produced.'

Shifting positions imply differing perspectives on the world. Here, social constructionist accounts, as drawn upon in this study, do not seek to privilege the researcher's voice and perspectives over the voice of the researched as more truthful (although central in this thesis), but should be read as one of many possible readings of the phenomena studied. In contrast to most mainstream studied and critical theory, the aim is not to 'provide direction and orchestration' (Alvesson and Deetz, 2005, 96); rather, this study encourages a search for useful readings of various social phenomena, which may produce change when placed in motion in certain contexts (Burr, 1995). Therefore, various actors who potentially take up the research findings in ongoing relations are seen to be in key positions regarding how these findings or conceptual resources are translated into action in local conditions. From this, it follows that the research can be seen as a potential political act (Hardy, Phillips and Clegg, 2001). However, in bringing about change social constructionist accounts emphasize the *social* aspects of processes of construction, which implies that transforming established constructions is a complex social achievement and not a simple choice to be made. The role of social constructionist studies and thus the researcher then becomes to illuminate the discursive becoming of certain effects with the objective of facilitating conceptual resources to transform, for example, suppressive effects.

When understanding the relationship between the researcher, the researched and the wider context outside the immediate research setting as outlined above, the subject positions of the researcher can be analyzed in various ways. One possibility is to analyze in quite some detail how the researcher is constructed in the study. However, for the purpose of this study, it may be enough to emphasize the line of reasoning in this section and to point out some relevant positions taken in the study.

My choice of research topic has been influenced by my previous experiences of organizational change and organizational restructurings as well as of working in an ICT company. While conducting interviews with the entire personnel during a period of time when I was an HR Manager in an ICT company, I was perhaps mainly positioned by the interviewees as the HR manager, as a colleague and by some as a friend. However, already before I had conducted all the interviews I had taken a new career path and become a researcher. Hence, there was a transitional period during which there was a shift in my positioning from a 'practitioner's professional identity' to an 'academic professional identity', informed increasingly by discourses of organization studies. Yet, the interviewees probably continued to relate to me as an HR manager

although I had become a researcher. When I returned to the field few years later as a researcher to interview some former colleagues from the ICT company I had worked for, I was still positioned to varying degrees as a former colleague with shared experiences of organizational restructurings, but the interviewees also referred to me on several occasions as a researcher. The other interviewees, whom I had never met before, naturally foremost saw me as a researcher and scholar in organization studies.

When taking up subject positions as an HR Manager and as a researcher, I found myself talking at times as a scholar in organization studies and at other times as 'non-expert' in software development. Likewise, the interviewees sometimes spoke from the position of a software product development expert and occasionally as 'non-experts' in organization studies. Hence, we moved back and forth between the positions of being experts and 'non-experts' depending on in which direction the interviews went at specific points in time. Therefore, there was often a simultaneous mutual learning and an avoidance of accounts drawing on difficult expert jargon.

Furthermore, the discursive practices that we engaged in during the interviews constituted typically the interviewee and me as belonging to the same social categories (generation, nationality, ethnicity, stage of life, parent) and at other times certain differences were apparent (gender, education, first language). In sum, throughout the study, I have been positioned in multiple ways, influenced by previous experiences, the research community I have worked within and by the inclusion in or exclusion from some social categories.

3 APPROACHES TO ORGANIZATIONAL CHANGE AND PRODUCT DEVELOPMENT

As suggested in the introduction, the organizations that participated in this study have repeatedly undergone various organizational restructurings. In this section, I will therefore proceed by exploring how organizational restructurings, organizational change and organizational change management have been approached in previous studies and theorizing.

Product development and innovation are interesting from the perspective of organizational change as these seem to form sites for ongoing attempts at restructuring. Therefore, after discussing approaches to organizational change I move on to explore how product development and innovation have been studied and theorized. I also look into the type of work that software product development may involve and how the persons who carry out this work have been described and categorized.

Finally, at the end of the chapter I position the thesis in relation to previous research and elaborate in more detail the adopted approach to stability and product development during organizational restructurings. This includes a discussion about various methodological issues in an effort to show the possibilities and directions that the adopted approach provides.

3.1. Research on organizational change and restructurings

As noted by many scholars (see, for example, Van de Ven and Poole, 1995; Pettigrew et al., 2001), organizational change and change management (Sturdy and Grey, 2003) have perhaps become part of the most studied topics in management and organization studies during the last two or three decades. Organizational change and organizational change management have been studied and theorized in various ways; organizational change has been approached as episodic events and/or as ongoing processes. Some scholars have assumed that organizational change can be carefully planned, controlled and managed while others have argued the opposite, emphasizing fragmentation, disorder and plurality. Many have taken as their interest a focus on change programmes and intentional organizational restructurings, whereas the constant and sometimes 'unintentional' reconstruction of organizations has attracted the attention of others. A list of various fields of interests and approaches to them could be made much longer, but such an attempt could easily become an overwhelming task. In this section, I will not attempt to offer an exhaustive literature review of studies of organizational change, organizational restructurings and organizational change management. Instead, I will discuss some works and traditions that may help to make sense of some important debates and transformations within this field of research.

Although research on organizational change has increased substantially the last few decades, organizational change has been an enduring quest in management and organization studies for much longer (Van de Ven and Poole, 1995). Kurt Lewin's work (see, for example, Lewin, 1951) on organizational development is often regarded as the foundation for many mainstream rationalist and managerial theories and studies of organizational change. It is perhaps his model of three steps, 'unfreezing, moving and freezing' (Lewin, 1951), that has been most influential (Weick and Quinn, 1999). In this three step model successful change is seen to include the unfreezing of a relatively stabilized present level of, for example, group life, which then moves to a new level.

Following this, the new level is refrozen and group life is again ‘stabilized’ (Lewin, 1951). Weick and Quinn (1999) argue that this model still continues to inform dominant organizational development and change studies as well as theories today. Analyses of such studies have illustrated that organizational change and restructurings are treated as discrete events or objects with specific beginnings and endpoints (Oswick et al., 2005) to show how one structure or behaviour replaces another. Hence, organizational change is understood in episodic or synoptic terms; by illustrating that an organization has moved from state A to state B, such studies could be said to produce snapshots of organizational life at different points in time, hence privileging points of stability rather than the processes of change between the different states (Tsoukas and Chia, 2002; Beech and Johnson, 2005). Moreover, stability is viewed as the normal condition of organizational life, which implies that organizational change is seen as the exception (Tsoukas and Chia, 2002).

Most studies of organizational change development and change also seem to be built on the assumption that organizational change is unavoidable, desirable and controllable. As Oswick et al. (2005, 383) point out ‘In recent years it has become increasingly difficult to find mainstream management textbooks that do not make an obligatory reference in their introductory preamble to the fact that we live in a turbulent and rapidly changing world’. Often it is taken for granted that organizational change is unavoidable if various organizations are to survive in such a turbulent world (see Toffler 1970, for a thorough and ‘early’ discussion of the world as increasingly changing and out of control, including undesirable effects). Moreover, organizational change has typically been linked to this view of the world as a necessary and desirable response to rapid socio-economic changes (Oswick et al., 2005); resistance to change is consequently seen as irrational (Sturdy and Grey, 2003). This approach to organizational change typically offers prescriptive accounts for managers regarding how to plan, control and carry out (unfreeze-move-freeze) organizational change (Sturdy and Grey, 2003; Doolin, 2003). Unsurprisingly, the greater part of this literature is dominated with attempts to formulate universal models and patterns to predict and efficiently manage organizational change and restructurings.

This approach to organizational change has been criticized for being managerialist (see, for example, Sturdy and Grey 2003; du Gay, 2003). This has indeed led to other voices being taken into account in theorizing organizational change, but nevertheless, usually still with the objective of overcoming resistance and improving management of employees (Sturdy and Grey, 2003). Thus within this framework, agency is typically theorized as expert-centred in the sense that certain social actors, for example, consultants or managers, are privileged by being attributed with an ‘unbiased’ role of offering knowledge of change interventions and change tools (Caldwell, 2005). Caldwell⁴ (2005) argues that in the mainstream organizational development tradition autonomy is therefore centred round specific models and the change agent, leaving other social actors with little agency (see also Tsoukas, 2005).

⁴ Caldwell (2005) discusses agency from the perspectives of four competing disciplinary discourses on agency in relation to organizational change. He calls them the rationalist, contextualist, dispersalist and constructionist discourses and shows how literature drawing on these different discourses has differing epistemological and ontological implications. Caldwell claims (2005, 86) ‘these four discourses can be defined as forms of language, meaning and interpretation representing and shaping relatively coherent social, cultural or disciplinary fields of knowledge and practice that embody contextual rules about what can be said, by whom, where, how and why’. Moreover, these discourses provide specific and different possibilities for exploring agency and organizational change rather than a unified understanding of these notions.

Although marginal, some alternatives to the mainstream organizational change literature have emerged over time. For example, Pettigrew, Woodman and Cameron (2001; see also, for example, Pettigrew, 1985, 1997) offer an alternative approach to organizational change, even though they seem to share certain assumptions with mainstream organizational change literature. Pettigrew et al. criticize the research field of organizational change for lacking a thorough understanding of ‘the dynamics and effects of time, process, discontinuity, and context’ (Pettigrew et al., 2001, 697). Rather than focusing on organizational change as a discrete episode, they suggest that we ought to explore the process of *changing*, in particular in relation to multiple contexts that give form to and are formed by organizational events. Various levels of contexts, each including multiple interconnected processes, are seen as influencing organizational change and action. To develop an understanding of such complex change processes, the interaction between context and action over time becomes important. Here Pettigrew et al. are specifically interested in continuous change processes and continuity rather than in exploring change as a movement from state A to state B. They argue that by adopting processual and temporal analyses of continuous change it is possible to identify patterns and structures of processes of organizational change, for example, the relationship between change actions and performance outcomes.

Continuous change, in Pettigrew et al.’s terms, seems to imply a focus on ongoing, evolving and cumulative processes rather than on discontinuous, intentional and planned interventions, although this does not seem to be Pettigrew et al.’s intention. Here, context is privileged in the sense that it is conceptualized as a presupposition of processes of changing, and simultaneously context is seen as temporal, unfixed and in a state of becoming (Caldwell, 2005). Here, Caldwell (2005, 96) criticizes Pettigrew et al.’s approach to organizational change for putting ‘too much emphasis on choice and liberal individuals, while failing to theorize the nature of decentred agency’ as the focus is primarily on continuous transformations rather than on ‘path dependent processes’. Caldwell (2005, 94, emphasis as in the original) also argues: ‘Ultimately, Pettigrew [1987, 1997, 2003] wants organization change defined by the perpetual transcendent temporality of processual contexts, rather than organizational change that is a temporal interplay of continuity and discontinuity, systems and processes, determinism *and* choice’. Constructed as such, a counterpoint against certain rationalist discourses and not encompassing for instance both continuity and discontinuity (Caldwell, 2005), Pettigrew et al. seem to reproduce rather than challenge rationalist discourses. In addition, the emphasis on formulating general patterns can be seen as reinforcing rather than contesting the production of ‘universal’ explanations over historically relative accounts (Sturdy and Grey, 2003). Some critique has also been targeted at Pettigrew et al.’s tendency to produce accounts in favour of managerialist views rather than questioning managerialist voices (for example, Sturdy and Grey, 2003).

Nevertheless, the major contributions of the work of Pettigrew et al. and other scholars drawing on contextual and processual discourses are at least the emphasis on organizational *changing*, on the importance of the context of processes of change, and on micro-politics between social actors in organizational change (Doolin, 2003). In addition, this work has contributed to embedding agency in context and organizational change processes (Caldwell, 2005).

Weick’s work on sensemaking (Weick 1979, 1995, 2001) provides an alternative perspective on studying organizational processes. Sensemaking in Weick’s terms refers to how individuals make retrospective sense of their experiences and creations. Social reality, for instance, organizational change, is seen as an ongoing accomplishment in

which people attempt to order disorder and to make particular situations rationally accountable. In this endeavour individuals produce and maintain images of a wider reality, which provides social actors with temporary directions for action. Weick (1995) uses seven 'properties of sensemaking', which together provide a framework for exploring what sensemaking is, how it works and where it potentially may fail. Moreover, the properties help us to explore how individuals make sense of organizational change in and through a process that is (1) grounded in identity construction, (2) retrospective, (3) enactive of sensible environments, (4) social, (5) ongoing, (6) focused on and by extracted cues, and (7) driven by plausibility rather than accuracy.

Weick's work has served as a source of inspiration for many studies of processes of organizational change. Drawing on the sensemaking perspective, Helms Mills develops a critical sensemaking view on the process of organizational change (Helms Mills, 2003). While Weick gives context little attention and assumes that all social actors have relatively equal possibilities to 'negotiate voice', Helms Mills takes these issues into account in her framework. More specifically, by drawing on Weick's work on the social and psychological properties of sensemaking but by taking a more critical stance in exploring organizational change, Helms Mills (2003) opens up new possibilities for exploring processes of change. She focuses on the social and psychological properties people use to understand the process of change and by doing so addresses issues of power relationship and context, allowing us to understand why certain voices are heard over others. Moreover, she shows whose notion of change goes forward in a particular context and why change is more or less important at different points in time rather than addressing the success or failure of organizational change. That is, how the decision to implement change is determined, what types of change programmes are selected in a particular organization, what occurs when a particular programme is adopted and how the programmes are understood, accepted and resisted by the different social actors involved. Hence, Helms Mills offers a more critical sensemaking account by arguing for an organizational change framework that explores powerful discourses, issues of identity and unequal distribution of power. In that regard, while mainstream studies of organizational change typically focus on the adoption, implementation and outcomes, critical sensemaking provides a framework that helps us to explore the 'reasons' behind these issues (Helms Mills, Dye and Mills, 2009).

Czarniawska and Sevón (1996), as well as Czarniawska and Joerges (1996), offer yet another view on organizational change by challenging dichotomies such as intention/deterministic and stability/change, however, without a strong emphasis on issues around power relations. Czarniawska and Joerges (1996) claim that in contrast to most scholars of organizational change, who typically chose to search for either universal laws through 'objective' explanations or the unique through 'subjective' interpretations, they wish to focus on both intentional and contingent effects that give form to change. By questioning the view of organizational change as either planned interventions or as environmental adaptation, the focus is turned onto social actors and their continuous sensemaking as they relate ideas to actions. Here, the aim of the social scientist becomes to listen to organizational actors as interpreters and to produce stories of how organizational change unfolds. However, the objective of producing such stories is not to present prescriptive accounts, but to talk back to organizational actors in order to open up possibilities for various conclusions.

In exploring organizational change as continuous sensemaking or translations, Czarniawska and Joerges (1996) focus on the materialization of ideas, or how ideas travel. More specifically, they are interested in how ideas turn into things, how things

again turn into ideas and how similar ideas often materialize in similar organizations around the same period of time. To explore this, Czarniawska and Joerges foremost draw on Latour's 'model' of translation (Latour, 1986). In this 'model', ideas are viewed as emerging as local knowledge through acts of communication. This means that for an idea to take shape over time an increasing number of social actors have to be persuaded to begin translating the idea for their own use (while others ideas are perhaps ignored or go unnoticed). In this process, the idea may become materialized as collective actions. This, however, requires that the idea is first objectified, for example, into a design or a model at a specific place and moment so that it then can travel between local places and moments as well as travel into globalized time space. Czarniawska and Joerges refer to globalized time space as translocal, which interconnects localized time/space so that global and local are seen as a continuum and not in terms of a dichotomy. Moreover, for an idea to become objectified various signals, often meant for non-local communication (on a translocal level), are shared within a wider context.

When numerous signals are sent out through a collective translation process the signals may produce a fashion which challenges existing institutions and thus generates change. Yet, as fashion may be repetitive it simultaneously produces order and uniformity if we take a long-term view. More specifically, when the same idea is collectively repeated, reconstructed and preserved, it slowly achieves an institutional status. This can provide social actors in specific organizations with a sense of stability, order, control and identity. Therefore, fashion seems to always unfold in relation to 'stability', while existing institutions on the other hand potentially give room for new ideas that challenge the institutions. In addition, institutional patterns that emerge from repetitive translations of fashion help other actors, for example, in other organizations, to take up the ideas and in turn translate them into their local actions. When an idea has arrived at a new place, been translated into an object and into actions, it may produce 'new' ideas and a new journey begins. In sum, the process through which ideas travel between local and translocal time/space is spiral.

We can see how Czarniawska's and Joerges' (1996) view of organizational change, as travels of ideas, is about both contingent and controlled or planned processes. By focusing attention on processes of translation we can see how planned organizational change and restructurings often also involve ideas that have not 'intentionally' been introduced, ideas that might strongly shape how organizational change unfolds. Planned organizational change or restructurings are likely to generate various unintended and (un)desirable consequences. Czarniawska and Joerges (1996, 47) conclude 'the concept of translation is useful to the extent that it captures the coupling between arising contingencies and attempted control, created by actors in search for meaning'. Likewise they also point out how the adaptation to the environment may produce various intentional processes as social actors construct meanings for unfolding realities. For example, we can assume that the burst of the IT bubble in early 2000s, invoked various intentional processes as organizations struggled with surviving and finding new ways of organizing.

The main contribution of Czarniawska's and Joerges' work (1996) is not only that they go beyond the conventional oppositions and dichotomies of, for example, change and stability, but that they also manage to address broader social patterning in which organizational change and restructurings unfold. In addition, as Sturdy and Grey (2003; see also Doolin, 2003) point out, Czarniawska and Joerges provide an insight into how both linguistic and material objects are important for understanding organizational change. In so doing, they develop a useful framework for grasping the complexities of organizational change but they do not, however, seem to emphasize

power relations and critical analyses as, for example, Helms Mills does in her critical sensemaking approach. Rather than taking a position as researchers to explicitly raise specific critical concerns, Czarniawska and Joerges seem to advocate an approach that give the audience quite a lot of room for translating the theorizing and findings into action, potentially as critical resources.

Putting perhaps more emphasis on the linguistic dimensions of organizational change (although increasingly opening up opportunities to embrace material aspects), organizational discourse analysis has gained a growing interest in recent years among scholars in organizational change (see, for example, Grant et al., 2005). Despite partly different focuses, most discourse analyses on organizational change can be seen to share similar assumptions to Czarniawska and Joerges (1996). However, discourse analysis should be seen as a broad approach drawn upon in a variety of ways by different researchers for different purposes to shed light on differing topics (Alvesson and Kärreman, 2000; see also, Heracleous and Barrett, 2001). For example, discourse analysis has been used in relatively analytical ways without particular attempts to facilitate a critical understanding of asymmetrical power relations, inequalities and so on. However, discourse analysis has also frequently been used for critical purposes to address such issues. That is, discourse analysis can be used for managerialist purposes but can also serve as an important means for specifically problematizing such views, thus serving very different groups and individuals.

Grant et al. (2005) highlight some important ways in which various discourse analyses may contribute to our understanding of organizational change. To begin with, Grant et al. point out the advantages of understanding organizational change as socially constructed in ongoing processes of interaction between social actors (Berger and Luckmann, 1966). As social actors interact, they draw on for example, interrelated sets of meanings, texts, symbols, images and metaphors which bring objects into being. Moreover, they draw on discourses that are available to them in that specific context. In this undertaking, they socially construct realities such as organizational change. Grant et al. (2005, 8) explain that 'discourse analysis allows the researcher to identify and analyze the key discourses by which organizational change is formulated and articulated', that is, discourse analysis explores the constructive effects of language (Phillips and Hardy, 2002).

Yet, the discursive practices in and through which organizational change is socially constructed potentially also modify discourses; discourses are also continuously in flux (Chia, 1995) and emerge through processes of negotiation (Grant et al., 2005). In other words, social actors with various views and possibilities to exercise power negotiate meaning, which leads up to the construction of dominant meanings or discourses but in the act of doing so also simultaneously marginalizes other voices (Grant et al., 2005). In order to explore how certain dominant discourses emerge and what their implications are, certain discourse analyses encourage considerations of discursive interactions at different levels and different times to develop an understanding of the complex interplay of various contexts, local conditions, discourses and texts (Grant et al., 2005). Here, agency is often decentred in discursive practices (Caldwell, 2005), while it must be recognized that various authors put different degrees of emphasis on discourse in relation to agency, thus holding different views on possibilities for the individual to exercise some choice. Nevertheless, despite the variety of different discourse analyses (or perhaps thanks to the diverse works) the strength of this body of literature is its potential to question organizational change as merely predictable, desirable and controllable (Sturdy and Grey, 2003). This is done by exploring organizational change as a political arena and by bringing forward, for example, alternative and non-

managerial voices, although it must be emphasized that discourse analysis can and has also been used for very different ends, bringing forth more dominant voices.

To conclude, the literature on the topic of organizational change, organizational restructurings and organizational change management is vast (Van de Ven and Poole, 1995) and has changed over time. Oswick et al. (2005) point out how the discourse of organizational development that gained much attention through the work of Lewin (for example, Lewin 1951) has had to make room for discourses related to change management that construct change more as an ongoing process than as a temporally bounded process. Pettigrew et al. (2001) also show how notions of context, action, continuous processes and time have entered into the study of organizational change. Yet, many of these studies, although attempting to contest mainstream understandings of organizational development, change and restructurings, still seem to co-construct traditional views on change instead of offering alternative voices. However, for some time now there have been signs of emerging alternative voices represented for example, by approaches drawing on translation and discourses (Sturdy and Grey, 2003). I will return to this specific terrain of research later. Now, however, let us turn to a specific and interesting arena for organizational change and organizational restructurings, that of software product development.

3.2. New product development and innovation

In the previous section, I explored various ways in which organizational change, organizational restructurings and organizational change management have been studied and theorized. Now, I shall proceed to discuss software product development and innovation⁵ as this particular context is especially relevant in studying organizational change and restructurings; various organizational restructurings ranging from rapid growth to dismissals, redundancies and bankrupts as well as other structural reforms have frequently taken place in companies working with software product development during at least the last two decades. The organizations that the interviewees of this study had worked for serve as good examples of this.

New software product development is typically carried out in projects. There are several established approaches to NPD, which have focused on exploring various processes of NPD projects. More specifically, much mainstream NPD research has investigated how such projects are managed and how NPD processes can be improved. During the last three decades, it has been argued by different writers (for example, Cooper, 1990) that NPD involves processes that can be carefully managed. Cooper (1990) claims that effective NPD projects often are divided into predetermined stages; at the end of each stage there is a quality evaluation to ensure that all predetermined objectives have been met before the projects moves on to the next stage. Further, it is argued that managing NPD projects through these stages involves adopting a specific process that takes into consideration factors that have been shown to drive successful NPD performance (Cooper and Kleinschmidt, 1996). Such clearly structured models are built on the assumption that successful management of NPD projects requires prevention of uncertainties and changes, as well as careful planning by determining the product concept, design, production, and market introduction at the outset of an NPD project (Iansiti, 1995).

⁵ The ideas that I draw on in this section, were initially developed in a research note (Segercrantz, 2009).

Since the late 1990s, some mainstream NPD literature has increasingly drawn attention to how product development in many industries is carried out in highly dynamic and uncertain business environments (for example, Bhattacharya, Krishnan and Mahajan, 1998; MacCormack, Verganti and Iansiti, 2001). For example, companies developing software may have to deal with frequently-changing technologies and customer preferences making traditional NPD models, such as Cooper's model, difficult to adopt in the software development industry (Iansiti, 1995). How changes and uncertainties during a development project may be taken into account has been approached in various ways. Eisenhardt and Tabrizi (1995), for example, elaborate on how NPD processes can be accelerated. Such 'compression models' advocate fast product development to compress predetermined process stages, which are assumed to be predictable, implying that uncertainties can be kept at a minimal level (Kamoche and Cunha, 2001). Hence, the competitive advantage of a firm is assumed to be determined by the speed of NPD through planning, rationalization of specific stages and reduction of uncertainty. The compression models are based on similar assumptions to traditional NPD models, although the compression models put greater emphasis on time. The waterfall model, which sometimes is applied in software firms, can be seen as a version of the traditional and the compression NPD models, in which the process of development proceeds sequentially from one completed and perfected stage to another, like a waterfall.

Dissatisfaction with the NPD models discussed has led some writers to explore flexibility (Iansiti, 1995; MacCormack, Verganti and Iansiti, 2001) and improvisation (Kamoche and Cunha, 2001). Flexibility refers to the development of models in which different product development activities overlap (Krishnan, Eppinger and Whitney, 1997). For example, if a development process is structured into three phases such as (1) the concept development of the software product, (2) the implementation, and (3) the testing, these three stages overlap in flexible models, while such stages follow each other sequentially in traditional models (MacCormack, Verganti and Iansiti, 2001). This implies that successful NPD processes are seen as responsive to new information concerning the market and technologies throughout the project by including change as an ingredient in NPD but yet putting emphasis on certain structures and process designs (Iansiti, 1995). Models advocating improvisation in NPD support the idea of less structured development activities to improve innovation and to ensure 'self-organizing' in projects (Kamoche and Cunha, 2001). In new software product development, agile software development methods, such as the Scrum model, serve as an example of a more flexible or improvising NPD framework, drawing on cross-functional and informal self-organizing. Such software development models advocate a process built on repeated full software development cycles through which small functioning features or product increments are frequently delivered, for example with intervals of one or a few weeks. The product increments are then demonstrated to the stakeholders, for instance, customers, hence making the process adaptive to quick changes, which may arise from new requirements that are difficult to predict before the work has been started.

As illustrated, many mainstream accounts on NPD have been rather prescriptive. The objective has often been to find best practices for managing optimal NPD processes. Recent mainstream debates on NPD continue to address related issues, such as the optimal level of formalization of NPD processes, efficiency, speed, project management, team work, creativity, successful innovators, adaptation of models to different environments, design driven NPD, benchmarking and NPD in global settings (see, for example, *Journal of Product Innovation Management*).

The NPD models discussed do not provide a comprehensive classification of product development models, but the discussion does point out some common understandings of NPD. The innovation research field is in many respects closely linked to NPD studies; sometimes these research fields even overlap or complement each other. Innovation is a broad, complex term (see, for example, Fagerberg, 2005, 4-9). It has been used in differing ways, for example, referring to various outcomes and processes, of which one is the development of new products (O'Shea, 2002). Moreover, although the innovation field explores the development of new innovations or products, it has a much broader agenda. Fagerberg and Verspagen (2009) summarize the three main areas of the field of innovation research as being: the role of innovation on long-term economic development, the contexts of innovation, and the national systems of innovation. Let me briefly suggest how these sub-themes of the innovation research fields can be related to NPD literature and studies.

First, drawing mainly on Schumpeter, a large body of innovation studies explores how innovation drives economic and social development. From this perspective, NPD is an important factor and force, even a necessity, for long-term economic growth. The role of new product innovation is seen as bringing in novelty to the market to drive growth and avoid 'stability'. Successful innovation has been said to cluster and increase in specific sectors causing changes in structures, production, demand and organizations as well as creating differences between companies, regions and/or countries (Fagerberg, 2005). The growth of IT is perhaps a good example of this; certain innovations have clustered in specific sectors and acted as an important source of economic growth.

The second main research area of the innovation field overlaps more with the NPD literature reviewed above. This research area explores the context of innovation, aiming at explaining various aspects of innovation, for instance, factors that influence investment in new product innovation, sources of innovation and NPD, differences in how innovation is operated in various sectors, and organizational competencies influencing learning and NPD (Fagerberg and Verspagen, 2009).

The third major innovation research field takes a more holistic perspective on innovation and new product innovation by examining how central actors in innovation interact, in particular in relation to broader social, institutional and political factors, such as national innovation systems (Fagerberg and Verspagen, 2009). Here, for example, the Finnish national innovation system is an interesting research topic with certain influential actors comprising a complex and extensive network within education, research and product development, and knowledge-intensive business and industry who actively co-operate with international actors in an effort to enhance sustainable and balanced social and economic development.

These research topics are investigated from a variety of perspectives and disciplines, of which management and organization studies is just one (Fagerberg, 2005; Fagerberg and Verspagen, 2009). As Fagerberg (2005) argues, there is no single discipline that can study all aspects of innovation. He exemplifies this by arguing that scholars in economics have foremost studied the allocation of resources to innovation and its economic effects without theorizing and exploring the processes of innovation. The study of the innovation processes, which perhaps best fits under the second major innovation sub-theme, has instead been taken up by researchers in sociology and organization and management studies (Fagerberg, 2009). Hence, this stream of research is of particular interest from the perspective of this study (although it could be

argued that management and organization studies have a lot to offer to other topics around innovation issues).

Anderson et al. (2004) argue that when exploring innovation, management and organization studies typically focus on various factors that influence innovation. For example, within this stream of research characteristics, such as (1) individuals' personality, motivation, cognitive ability and job characteristics, (2) team structure, climate, member characteristics, processes and leadership and (3) organizational structure, strategy, size, resources and culture, have been explored and identified as facilitators of innovation (see overview of innovation studies by Anderson et al., 2004). These factors are viewed and examined as supporting or hindering successful innovation.

Both NPD and innovation literature have increased substantially over time, but this literature has not gone uncriticized. For example, rather than primarily focusing on factors that influence innovation, as the majority of innovation studies do, Anderson et al. (2004) suggested that innovation research ought to also examine how innovation influences various outcomes. As they state, the focus on factors influencing innovation 'leaves the reader with the inaccurate impression that innovations are the final end-product of previous processes which end abruptly at some predetermined point' (Anderson et al., 2004, 160). Anderson et al. (2004, 160) continue by arguing that:

'An alternative conceptualization of innovation processes is that they are cyclical, longitudinal, iterative, and recursive in nature. Indeed existing innovation research can be fundamentally criticized for its largely inaccurate portrayal of innovation in organizations as being static, snapshot, linear processes that display a discrete end-point of the innovation or innovativeness as measured by the researchers themselves.'

As we can see Anderson et al. (2004) advocate a broader or perhaps more complex approach to innovation that problematize the strong focus on factors that influence innovation up until a specific point in time and hence acknowledges how innovation also is a source for multiple processes and practices. This is an important remark that this study attempts to take up, although perhaps not in the sense that Anderson et al. (2004) suggest.

We can also see, that Anderson et al. (2004) refer to innovation as both products (presumably in a broad sense) and as processes of innovating. Both uses of this notion by innovation scholars often seem to involve a focus on the form of innovation as relatively fixed; the focus is on fixed product or innovation forms including certain characteristics at particular points in time rather than on continuous micro-changes (O'Shea, 2002). Even NPD and innovation processes are usually understood as entities, with certain characteristics; the aim of NPD and innovation models becomes to describe the characteristics of various processes. More specifically, the notion of process is often treated as a number of different stages that lead up to certain outcomes or effects (Chia, 1995). For example, NPD and innovation processes are often viewed as consisting of assessment and concept development, product development, validation and commercialization (Cooper, 1990) and are thus articulated in rather static terms by being picture as sequential, linear and 'isolatable' from other entities. The assumption is that these processes can be relatively carefully described and hence also planned, co-ordinated and controlled, which has resulted in numerous best practice and prescriptive accounts and models (O'Shea, 2002). Such models of NPD and innovation have focused on reducing product development costs, accelerating processes and improving product quality by describing how successful NPD and innovation should be organized. Ultimately, the objective of these accounts seems to be to help practitioners

to choose the ‘right model under the right conditions’. In this endeavour the prescriptive or best practice accounts tend to emphasize reason, which is assumed to culminate in progress through increased human control of the world leading up to, for instance, new products (Prasad, 2005; Parker, 1992). In other words, much NPD and innovation literature presupposes that improved models of processes and projects are likely to lead to progress. Through increased empirical knowledge about different characteristics of NPD and innovation, it is assumed that structures of the world, including product innovation, can be found; structures that leave little space for margins or deviation from rules of reason (Bauman, 1992). Only increased precise predictions are assumed to produce effective NPD and innovation projects, and formulating the predictions requires ‘finding’ a single best account or sometimes a limited number of related accounts (O’Shea, 2002).

O’Shea (2002) views the tendency towards ‘best practice’ accounts in innovation research as potentially problematic. He argues that we should recognize the plurality of accounts that are silenced by the dominant best practice accounts. By focusing more on innovation as movement rather than as just fixed points, on how meanings around innovation unfold through a process that create multiple meanings, he claims we can open up a variety of possible paths for the future while best practice accounts tend to close various possibilities by offering specific options. Moreover, best practice accounts assume the future is known and that innovation is a linear progression towards this end, while O’Shea suggests that we should work to open up a diversity of possible futures and views innovation as a movement between points of tension. This would, for example, provide possibilities to explore various consequences of NPD and innovation on individuals, which the best practice and prescriptive accounts seem to pay little attention to. As Hodgson and Cicmil (2007), point out the dangers and cost of standardization in organizations have been neglected, including impacts on subjectivities. Moreover, complex ways in which individuals respond to dominant discourses of organizations seem to be under-explored in this literature (Thomas and Davies, 2005). To conclude, the suggestion to explore NPD, products, innovation and innovating as continuous movement seems to hold some promising potential for developing an understanding of how software development unfolds and of subsequent implications. I will discuss this in greater depth in the end of this chapter, but first I shall discuss the actors and type of work involved in these processes.

3.3. The creators and the creating of software

Now that I have discussed the research fields of organizational change, NPD and innovation, it is time to discuss in more detail the type of IT work that is involved in software product development. More specifically, I am interested in both how various social actors involved in software product development have been categorized in previous research and how the type work carried out by them has been described and approached.

3.3.1. The creators of software

The development of software typically involves various professionals, experts and groups of people, as in the case of this study. All the persons that participated in this study were or had been involved in developing new software products, though their tasks varied to some degree from planning and designing to testing and implementing software. In addition, it is important to point out that persons engaged in software

product development can work in a variety of different industries and ‘formal’ and ‘informal’ organizations, in both the private and public sectors. They may work for insurance, forestry, media and telecommunication companies; in hospitals, education, universities, the military or perhaps for software providers, as the participants of this study, to mention a few organizations in which we can find people working with software development (Case and Pineiro, 2006).

Defining the participants of this study, and moreover their occupation, is not a straightforward task; it may even be problematic (Alvesson, 2001). Several different concepts have been used in previous research, all highlighting different aspects of the positions these persons may take up in their work.

On a general level, concepts such as ‘information worker’ and ‘knowledge worker’ have been used. These concepts have often been drawn upon in debates regarding the emerging information societies and global high-skill economy in advanced countries in which manufacturing jobs decrease and service jobs increase (Pyöriä, Melin and Blom, 2005; Kolehmainen, 2001). It has been argued that, for example, the expanding service sector has implied increasing knowledge-intensive occupations and jobs. In this debate, the concept of the knowledge worker has been central and yet also ascribed different meanings. Although all work requires knowledge and skills, typically the ideal type knowledge worker has been characterized as having a high level of formal education and skills which are continuously further developed in the workplace, and in addition she/he uses information technology as a part of various work processes (Pyöriä, Melin and Blom, 2005).

The list of characteristics of the knowledge worker could be extended considerably further, ranging from the producer of value-adding knowledge to the creative and independent problem-solver (see, for example, Kolehmainen, 2001, 2004) but as Alvesson (2001) and Pyöriä, Melin and Blom (2005) emphasize, such an attempt may prove to be problematic. Viewing the knowledge worker as a discrete and uniform category implies drawing a line between knowledge workers and non-knowledge workers, a task and category that is likely to be contestable in many ways (Alvesson, 2001). Nevertheless, Alvesson (2001), in addition to Pyöriä, Melin and Blom (2005), still sees the concept of the knowledge work(er) as useful if drawn upon in a more critical way and as a more open ended category, for example, to explore ambiguities and (power) implications following from established ways of understanding knowledge workers, or to perhaps develop an understanding of the differences and differentiation between people working for ICT companies and persons working for more routinized service and industry organizations.

As shown, the concept of the knowledge worker is relatively broad and has been applied to developing a deeper understanding of a great variety of different professional or occupational groups working within the information society. Social actors in software product development can be seen as a specific category of knowledge workers, which has emerged with the increased ‘demand’ for expertise and professionalism in the information society. Yet, we must remember that the same occupational title may invite a variety of different positions and involvements (Blom and Pyöriä, 2005).

Social actors in software product development have also been referred to as IT, ICT or IS (information systems) professionals, specialists or experts. These concepts and occupations may be seen as quite different from a practitioner’s point of view; for example, as one participant of this study pointed out, developing information systems can be very different from developing new software products. However, academic

studies and theorizing within management and organization studies do not always draw as clear distinctions since IT, ICT and IS work(ers) are seen to overlap or to be comparable. More specifically, a clear distinction may not be necessary if we focus on the process of creating technology rather than on formalized models or specific end products or services. Nevertheless, some distinctions have been made between the notions of professional, specialist and expert.

Tiainen (2002; see also Kolehmainen 2001, 9) argues that the relatively generally used terms 'IT professional' and 'IS professional' are problematic in at least two ways. First, the profession of IT or IS professionals differs from other traditional professions, such as the professions of lawyers or teachers, which rest upon certain educational qualifications, institutional status and control (Pyöriä, 2005; Tiainen, 2002; Alvesson, 2001). The educational background of different social actors in software product development is on the other hand typically more diverse. In addition, Tiainen (2002) emphasizes that the organizational status of these persons is less stable when compared to more traditional professions. Tiainen (2002) also criticizes the use of the term 'professional' as 'it figuratively increases the position of those called as professionals and lower[s] the position of those who are not – in this case, the users of ICT' (Tiainen, 2002, 16). Tiainen (2002) chooses to use the term 'specialist' to emphasize that the participants of her study are specialized in a specific field (IS or ICT). Likewise, other authors (for example, Kolehmainen, 2001) prefer to use the term 'expert' to explore and sometimes problematize certain features of those actors involved in shaping and creating technology. However, even with these terms we still do not escape contestable distinctions, such as the distinctions made between specialists and non-specialists or experts and non-experts, which may have very specific implications for agency; who is seen as important and who is seen as unimportant (Heiskanen, 2004b). Nonetheless, I would like to argue that although the task of categorizing is ambiguous, depending on how we use the terms they can be useful, in particular if we manage to include their ambiguous features by considering, for example, how we come to see some social actors as experts and what the implications consequently are (see, for example Alvesson, 2001).

3.3.2. The creating of software

Let us move on to discuss the type of work that software product development experts engage in and how this work has been approached in previous research. The focus is mainly on how IT work has been approached in some management and organization studies although some literature comes closer to the research field of (software) engineering.

Knowledge work (as a broader term than IT and software development work) has been described and explored in various and sometimes contradicting ways. There seems to be an agreement amongst most scholars that the emergence of the information society has involved certain transitions in, for example, work and ways of organizing within numerous sectors and organizations. However, it looks as if there is more disagreement around the interpretations of why and how these transformations have occurred and continue to do so; what the possible implications are; and how these phenomena should be studied.

In his review of knowledge work literature, Pyöriä (2005) found that knowledge work has been seen as building on extensive formal education and expertise. This type of work has been found to involve IT use, non-routine work, autonomous and yet also

team work, interdisciplinary co-operation, creativity, innovativeness, problem-solving, flexibility, continuous and rapid learning, designing and planning central aspects of one's own tasks, decision-making and/or temporal, short and atypical employment. Although the conceptualizations of knowledge work are controversial, as Pyöriä (2005) points out, the nature of IT work, including software product development work, can in many respects be seen as knowledge work. For example, Kolehmainen (2001, 2004) describes work in high-tech IT service firms within the software industry as requiring complex problem-solving organized as project-based work, hence suggesting connections to knowledge work.

As the list of views on knowledge work and IT work suggests, this type of work often seems to touch upon issues dealing with unpredictability, uncertainties and complexity in a growing high-skills economy. For example, the harshening global competition and market pressures call for flexibility, creativity and abilities to deal with ever-changing tasks and goals. The software industry has in particular been described as erratic in nature, causing challenges to planning, time schedules and budgeting (Pineiro, 2003). But how has this been approached in various studies?

According to Pineiro (2003), mainstream studies of software programming (and perhaps also IT work in general) assume that this type of work is an objective instrumental activity which can and should be optimized and made efficient in order to overcome the problems arising from the erratic nature of programming and to achieve certain results successfully. Moreover, viewing IT work from this perspective involves efforts to increase ordering and control in work processes. Unsuccessful software development projects are seen as a result of insufficient project management or techniques (Pineiro, 2003).

Unsurprisingly then, project studies typically focus on exploring and finding the key to successful project based work, for example, in software development. There are, of course, various fields of research that attempt to do so, but project studies are interesting for several reasons from the point of view of this study. First, project-based work has increased and even become the dominating way of structuring and organizing work in a wide range of sectors and industries (see, for example, Cicmil et al. 2009; Lindgren and Packendorff, 2006), and today software product development is typically carried out in project settings. Therefore, IT work and software development work form an interesting field of study from the perspective of project studies.

Simultaneously, as project-based work has increased so has also research in project work and professional associations such as the Project Management Institute, the Association for Project Management and the International Project Management Association (Cicmil et al. 2009; Packendorff, 1995; Clegg and Courpasson, 2004). This has had specific implications for the type of work software product development experts carry out. Over time, project-based work has increasingly been viewed as an efficient alternative to standardization and bureaucracy (Clegg and Courpasson, 2004) to deal with continuous change and unpredictable work in the context of uniqueness and temporariness (Cicmil et al., 2009); to bring about creativity and innovativeness; and to meet many of the requirements of knowledge work. In addition, project management has increasingly been seen as a particular methodology, tool or technique for accomplishing objectives efficiently and on time, but also as a way of organizing and structuring. Such ways of organizing work emphasize the flexible structures of the project while simultaneously imposing more permanent structures to 'professionalize' project management and to construct managerial control (Cicmil et al., 2009; Clegg and Courpasson, 2004). Consequently, we can see a crucial paradox here in the sense

that project work is both seen as an alternative to standardized and bureaucratic work and as a form of work that draws on sophisticated methods that invite standardization and specialization (Cicmil et al., 2009).

The emphasis on optimizing and controlling project-based IT work through increasing specialization seems to invoke a reified understanding of project work; project work becomes an unambiguous instrumental activity. More specifically, work is viewed as a controlled activity that is only carried out to reach certain outcomes, for example, the utility of a new software product (Pineiro, 2003). While such mainstream understandings of project work may produce useful methodologies that improve productivity, the approach typically implies that the heterogeneous unfolding processes of project work are ignored, including broader consequences on different actors. The actual doing of IT work (Pineiro, 2003), the micro-processes and becoming of project work, are ignored, as are the tensions and ambiguities involved. Hence, one could argue that many mainstream studies of project-based IT work have produced instrumental and functionalist understandings of IT work.

In contrast to many mainstream studies of project work and IT work a marginal but growing body of literature explores unfolding, emergent processes of IT work as interesting and important in themselves rather than dealing with IT work as an instrumental or functional activity. IT work is understood as more than just specific humans and technology brought passively together; it is a process in which humans and technology are mutually constructed. Therefore, the aim becomes to analyze how such processes unfold, as well as construct and change actors, both human and nonhuman. Such analyses involve exploring material, technical and social relations through which IT work is constructed. Thus, information technology and other material things relevant in IT work are suggested to have both social and material properties (Orlikowski and Robey, 1991).

There are several approaches that also highlighted the importance of critical interpretations of existing social conditions and relations in knowledge work, project work and IT work (see, for example, Alvesson, 2001) and what doing and being at work may mean and imply (Heiskanen et al., 2004; Pineiro, 2003). For instance, increasingly, various studies are taking a critical stance in relation to IT work by exploring power relations and resistance (for example, Case and Pineiro, 2006), sometimes also including analyses of wider sets of relations and discourses in society which may have framing, constraining and alienating tendencies (Doolin and Lowe, 2002). The growing research field of critical project work has explored, for instance, not only the implications of project work in the workplace but also what the consequences of such work may be in the project workers' life in general (Lindgren and Packendorff, 2006). From this perspective, project work is shown to be an arena for control, political struggle, dedication, stress and gendering, with consequences for identities, action and practices (Lindgren and Packendorff, 2006; Hodgson and Cicmil, 2007).

Similarly, studies taking various gender perspectives to IT work have been concerned with questions related to gendering processes in IT work, such as the gendered 'nature' of discourses of technology and gendered labour divisions (Doolin and Lowe, 2002; Blom and Pyöriä, 2005; Lohan and Faulkner, 2004; Gherardi and Poggio, 2007). Together, these critical studies show some of the costs and dangers following from IT work, which typically are given little attention in mainstream studies of IT- and project work (Hodgson and Cicmil, 2007).

To conclude, studies of the creation of software often focus on different, sometimes, contradicting issues. The growing criticism of IT work as an unambiguous instrumental activity seems to provide a debate into which this study can provide new insights, in particular, regarding work restructurings over time and their implications for the software product development experts involved.

3.4. A reversal of ontological priorities

As I have shown so far in this chapter, depending on the perspective we take, 'organizational change', 'product development', 'innovation', and 'IT work' may mean very different things to us. Common to studies and theorizing in the research fields of organizational change, NPD and innovation seems to be an understanding of organizational change and NPD practices as objects existing 'out there' with certain characteristics such as (in)effective process stages. From this it follows that organizational change and NPD are seen as discrete entities, which are given priority in analysis in the sense that the researcher tries to 'capture' organizational change or NPD in order to accurately represent and explain them. This in turn is done to, for example, improve performance. Such efforts seem to imply that action, relationships and ways of organizing are seen as secondary accomplishments, that is, organizing and action are assumed to come into existence through, for example, an initiated NPD project. Chia (for example, 1995) has argued that this type of social inquiry relies on an ontology of being since it tends to deal with organizational change as 'a result' or organized state.

Alternatively, we can do a reversal of ontological priorities by drawing on the social constructionist and discursive approach developed in Chapter 2. Rather than seeing, for example, change and NPD projects as invoking actions and organizing, we can explore how social actors through their actions socially construct various projects. This means inquiry into continuously changing practices through which organizational restructurings and product development are ascribed with meaning and hence are created, maintained and/or altered. Furthermore, this involves turning the research interest towards ever-ongoing social processes and questioning organizational restructurings and NPD as concrete entities with inherent attributes and tendencies. Such engagements privilege an ontology of becoming, that is, the continuous social construction of social reality, as Chia (1995) argues.

I will now turn to discussing in greater depth how I adopt an ontology of becoming and an epistemology that favours social and discursive construction. Drawing on social constructionist and discourse analytical perspectives I sketch out a framework for how organizational restructurings and product development will be approached in this study by paying particular attention to discourse, practice and stability. As I will show, my approach differs in many respects from the mainstream approaches to organizational change and product development discussed previously in this chapter, while it instead finds inspiration from discursive and social constructionist theorizing, as well as from certain post-structuralist, postmodern and critical accounts that have problematized the mainstream approaches.

3.4.1. Organization, change and stability

'A discursive perspective to organizational change is particularly sensitive to both the need to stabilize an ever-changing experience and to capturing on-going change'. (Tsoukas, 2005, 101)

In order to develop an understanding of various complexities in and around both organizational change and product development, stability and continuity may need a greater and a more explicit emphasis. As shown earlier in this chapter, stability has indeed been included in theorizing and analyses of organizational change and NPD, but dominant discourses of change typically construct organizational change, stability and continuity as alternative states. For example, Lewin's model of change (1951), as do many contemporary mainstream studies of change, explores change in terms of steps. Such models are built on the assumption that there is a stable state that is first unfreezed, then changed and finally refreezed, that is, made relatively stable again. In that sense, these models of organizational change view stability as the normal and primary condition, which in turn is occasionally interrupted by moments of change, thus making change the exceptional state (Tsoukas and Chia, 2002; Chia, 1999; Anderson, 2005). Likewise, most NPD models theorize product development in terms of stages through which product development proceeds step by step.

These NPD and organizational change models which assume stability and change are alternative states have been criticized for certain theoretical difficulties, for example, for giving ontological priority to stability and yet for being silent about it and the possibilities of stability (Sturdy and Grey, 2003; Tsoukas and Chia, 2002). More specifically, these models do not only treat change and stability as alternative states but typically also attempt to capture change in static terms. They theorize, explore and describe change as an accomplished, 'fixed' event in an effort to contribute to the debate on organizational change although they foremost produce 'static' snapshots of organizational realities by drawing on ontology of being (Chia, 1995). This is not to say that these models cannot show how an organization has moved from one state to another, but such efforts fail to address the complex micro-processes through which change occurs. In addition, these models seem to be built on a pro-change bias (Sturdy and Grey, 2003) and a pro-innovation bias (Rogers, 1983), which assume that change and product development is desirable, inevitable and 'controllable'. As Sturdy and Grey (2003, 652) conclude, 'no-one, it seems, argues that stability or continuity is either possible or desirable'. In the shadow of the pro-change bias stability is treated as a state in which nothing happens; a state of being that is seen as unimportant or as problematic. The dominance of these assumptions contributes to a common neglect of potential undesirable consequences of change, product development and their management (Sveiby et al., 2009).

To open up alternative ways of exploring social phenomena such as organizational change and product development, the notions of organization and organizing (Weick, 1979) can be useful. The concept of organization is often used to refer to specific organizations, for instance companies, as in the case of this study. However, the notion of organization can also be used as a verb for explaining how disorder is ordered in certain local conditions, for example, within and around certain organizations or companies. In this sense, organization is not referred to as a determined entity with certain characteristics (for example, a successful ICT company). Instead organization can be seen, according to Chia (1999, 224), as 'an act of arresting, stabilizing and simplifying what would otherwise be the irreducibly dynamic and complex character of lived-experience'. Moreover, from this perspective organization refers to ongoing acts of organizing and fixing reality (Weick, 1979). Reality, in turn, is viewed as constantly in

a state of becoming in and through the ongoing processes of organizing and is therefore complex, fluxing and shifting (Chia, 1995). This is crucial as it leads us to see that through everyday actions product development experts constantly engage in ordering and stabilizing realities such as NPD and organizational restructurings and in doing so simultaneously also reconstruct these realities; organizing implies ordering product development, and yet organization emerges from ongoing processes of change and social construction. As Tsoukas and Chia (2002, 577) express it, 'organization aims at stemming change but in the process of doing so it [organization] is generated by it [change]'.

The line of reasoning above implies that change and stability are not alternative states, but rather interrelated, coexistent and coterminous, as Sturdy and Grey (2003) point out. Tsoukas (2005) emphasizes that we need to be sensitive to both the processes of stabilizing and changing in order to develop understandings of organizational change. He argues (Tsoukas, 2005, 102-103):

'Stability is important indeed but rather than stability being a property of the world, it is a symbolic construction generated by actors themselves through the way they talk of the past practices, habits and routines. And rather than change being a response to rewards and punishments or being effected through "retaining" the mind as if the mind was an abstract disembodied entity, change is produced through the ways people talk, communicate and converse in the context of practical activities, and collectively reassign symbolic functions to the tasks they engage in and the tools they work with.'

As will be seen in the analysis of this study in Chapters 5-9, this is an important insight. Acts of organizing work to fix meaning around specific social phenomena, such as NPD, so that these phenomena become object-like-things, symbolic constructions, enabling social actors to talk about them. In that sense, social phenomena tends to become taken-for-granted by social actors and thus often viewed as relatively stable (Anderson, 2005). However, being social constructions and effects of ongoing complex organization, these objects cannot be fully static, although social actors consider them to be so (Anderson, 2005).

Exploring product development during organizational restructurings, from this perspective, implies then a focus on organizing – the ongoing and mundane everyday practices of product development in which reality is shaped. The primary focus is on how social actors engage in acts of organizing through ongoing processes of interaction, and how they take up certain ideas (and not others) and translate them into action in the course of carrying out product development. An idea may concern how to structure a product development project, how to reorganize or divide a department or perhaps how to carry out a downsizing process. Some ideas, such as an NPD model or a change programme, may be translated into action; others are ignored or remain as merely plans. In these processes, some ideas may invite radically new ways of acting; others may only produce minimal modifications and a sense of stability. Large scale change interventions are not necessarily always translated into action and institutionalized. They can also generate different, perhaps even contradicting, effects than those expected. On the other hand, more 'insignificant' initiatives may sometimes facilitate dramatically new ways of acting. Small ongoing modifications may seem invisible and insignificant but can still produce significant changes over time. In sum, the continuous interactions invite social actors to engage in both processes of stabilizing and processes of changing social reality, and in these processes the production of minimal and radical change may occur in unexpected and surprising ways. This is why it seems relevant to focus on the daily practices in and through which social actors reweave beliefs, actions and so on. Exploring such practices in which micro-change unfolds can be done by

engaging with product development during organizational restructurings as a discursively constructed object (Grant et al., 2005).

3.4.2. *Locating the study on methodological dimensions*

The discursive construction of software product development during organizational restructurings can be studied in various ways. Even the approach outlined in the previous section can be adopted in various ways, depending on how certain methodological issues are emphasized. In this section, I discuss how different methodological issues are approached in this study⁶ by drawing on the work of Jokinen and Juhila (1999). Jokinen and Juhila (1999) sketch out four different methodological dimensions. By analyzing specific methodological issues in different studies, they illustrate how various studies differ from each other and more importantly what the implications are when certain methodological choices are made. I will examine these methodological dimensions in an effort to locate this study in more detail on these dimensions.

Each of the four methodological dimensions is described in terms of a hypothetical distance. Jokinen and Juhila argue that all dimensions are always present in a specific discourse analysis, but a study can lean more towards one of the ends or be in the middle. The focus may also vary during the study, as mine does. In this section, I will therefore discuss how I move on the dimensions at different stages of the study. The methodological dimensions are summarized in Figure 1.

Figure 1 Methodological dimensions in discourse analysis (Jokinen and Juhila 1999, 55)

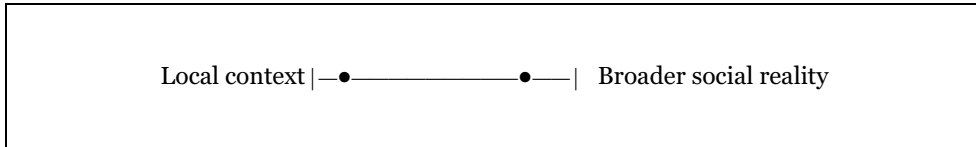
Local context	—————	Broader social reality
Meanings	—————	Processes of meaning-making
Rhetoric	—————	Responsiveness
Critical discourse analysis	—————	Analytical discourse analysis

In the following, I will use the methodological dimensions as a map to position my study, to show the various possibilities and directions provided by the chosen approach. The first dimension, **local context – broader social reality**, highlights that meanings and discourses are always produced in a local context or in micro-processes (Jokinen and Juhila, 1999), for example, in the interaction between social actors such as product developers. Hence, explored meanings around product development and organizational restructurings are always tied to a particular local context. However, such meanings are not seen as meaningful on their own; they gain their meaning through their interconnections to broader systems of texts, discursive practices, processes of meaning-making and language use. This requires reflection regarding how to approach the interconnection between the local context and the broader social

⁶ The ideas that I draw on in this section, were initially developed in a working paper (Segercrantz, 2007).

reality. In the analysis of this study, I focus on the local context in which meaning is constructed. The first dot in Figure 2 shows where on the dimension my study is positioned during the analysis, while the second dot illustrates that I also connected the findings of the study to broader issues.

Figure 2 Local context and broader social reality in the analysis of the study



As illustrated, the broader social reality is 'left aside' during the analysis. The choice of emphasizing more the local context than the broader social reality in the process of analysis has certain implications. More specifically, in the analysis my main interest is limited to the interview material, which is not framed in a strict sense, for example, by an external or explaining theory. Rather, my aim is to enable being sensitive to surprises and to the richness of the texts. This is because if a phenomenon is approached by looking at it with categories or explanations defined in advance, there is a danger that the phenomenon studied disappears. For example, looking at organizational restructurings from the view point of established perspectives could make us blind to how such phenomena unfold and how meanings emerged in particular contexts or to what the potential implications are. Consequently, my intention is to let the interviewees define organizational restructurings from their point of view and to allow them to elaborate on implications following from restructurings in an effort to invite a wide range of accounts, both dominant and marginalized ones (Jokinen and Juhila, 1999).

The approach to the analysis, that puts emphasis on the local contexts, also implies that the broader context outside the interview material is only discussed briefly in the beginning of the study, that is, to the extent that it is necessary to help the reader understand the analysis. However, by drawing on a discursive and social constructionist view, the study still attempts to explore the relationship between local contexts and the broader social reality in which the local context is embedded (Phillips and Hardy, 2002), but this is done after the analysis in the discussion and conclusions. The exploring of the relationships between the local context and broader social reality is perhaps one of the most important contributions provided by social constructionist discourse analyses. The methodological dimension above illustrates this interconnection by highlighting that the question is not perhaps so much about where on the dimension a study is located but rather about timing; when the study focuses on a particular local context and when it is related to broader issues or vice versa (Jokinen and Juhila, 1999).

The second methodological dimension concerns the relationship between **meanings and processes of meaning-making**. More specifically, some discourse analyses mainly focus on the content in the analysis of texts, such as accounts, discourses, identity or categories. That is, the research interest is on the type of meanings people produce when talking and writing. Yet, in line with what has been said earlier, such meanings only gain their meaning in relation to the local practices of interaction in which they are produced; meanings are ultimately also language practices rather than abstract objects detached from specific contexts. When emphasizing this issue, the target of concern moves along the methodological dimension towards the processes of

meaning-making. From this point of view, the focus is on how language constructs various social phenomena (in contrast to reflecting or revealing reality) (Phillips and Hardy, 2002). Therefore, specific meanings and the practices through which they are produced are always interdependent, despite differences in emphasis in various analyses. In that regard, this methodological dimension highlights interdependence and simultaneously helps us to make an analytical separation between the meanings and their productions, so as to make us aware of what we are focusing on in the analysis. This study explores both meanings and the process of meaning-making; therefore, I have positioned the study as a dot in the middle of the second methodological dimension. (Jokinen and Juhila, 1999)

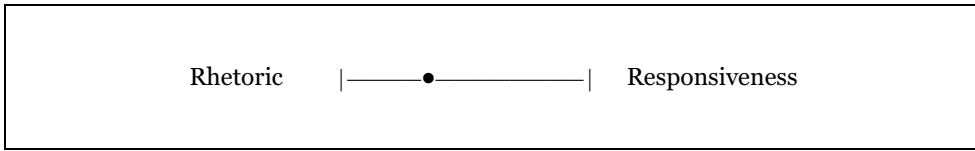
Figure 3 Meanings and the process of meaning making



In line with the research questions outlined in Chapter 1, we can see that this study explores how complexity, paradoxes, contradictions, tensions and flexibility around meanings of organizational change and product development are produced and transformed over time. Moreover, the focus is on how software product development experts use language to construct product development and organizational restructuring. However, I am also interested in how such constructions have implications for the experts involved. For example, the analysis explores how the interviewees construct ways of organizing as well as subject positions in relation to these organizations. In that sense, the study also explores meanings, such as subject positions, although subject positions and other constructions are viewed as shifting, always in flux, contestable and emerging in and through language practices (Jokinen and Juhila, 1999).

The third methodological dimension deals with accounts as **rhetorical and responsive**. Analyses of both rhetorical and responsive accounts help us to explore processes of meaning-making in specific local contexts. Hence, this methodological dimension is interrelated with the two previous dimensions.

Analyses of rhetorical accounts aim at understanding how specific meanings or social realities are produced in certain local conditions in a convincing way to persuade an audience to accept the meanings. Analyses of responsive accounts focus on how different social actors in particular contexts interact and respond to each other, hence constructing together specific meanings and social realities. Thus, both dimensions help us understand interactive language usage, but in different ways. However, both rhetorical and responsive aspects are likely to 'appear' in most data materials. Although some texts may be better suited for either a rhetorical or a responsive analysis, it is not primarily the text but rather the research questions that suggest the type of analysis that should be undertaken, which may also include both ends of the dimension. In Figure 4, I have positioned this study a bit closer to the 'Rhetoric' end of the methodological dimension.

Figure 4 Rhetoric and responsive accounts in discourse analysis

As illustrated in Figure 4, this study explores both rhetorical and responsive accounts. Since the research questions of this study focus on how software product development experts construct product development in relation to organizational restructurings, the questions invite an analysis that puts emphasis on how certain realities are constructed and not others. More specifically, the analysis leans more towards exploring ‘rhetorical ways’ in which the interviewees construct various realities to exclude others. However, as the data consists of interview material, I also to some extent attempt to analyze how the interviewees and I interactively constructed shared meanings, that is, how we responded to each others’ accounts in building certain realities.

Finally, if we accept the social constructionist assumptions that have been discussed earlier, this study should be seen as one voice amongst many. The social constructionist approach, as understood here, does not privilege the researcher’s voice as more ‘truthful’ than the voices of the researched. Hence, the aim of a study is not to produce a specific answer to how certain conditions should be organized. Instead various actors who potentially take up the research ‘findings’ in ongoing relations are seen to be in key positions regarding how the conceptual resources are translated into action in local conditions. To bring about change, social constructionist accounts emphasize the *social* aspects of processes of construction, which implies that transforming established constructions is a complex social achievement and not a simple choice to be made. The role of social constructionist studies then becomes to reveal the discursive becoming of certain effects with the objective of facilitating conceptual resources for certain social actors to transform, for example, suppressive effects. By unmasking the becoming of certain effects we can produce new alternatives for the future (Gergen and Thatchenkery, 1996). This objective forms a sharp contrast to most mainstream NPD and organizational change literature, which typically aims at formulating one or limited prescriptive options for the future to produce preferred effects (O’Shea, 2002).

To open up new options for future action, some social constructionist studies adopt a rather analytical approach while others take a more critical starting point. Hence, **critical discourse analysis and analytical discourse analysis** form the fourth and final methodological dimension. A critical approach may, for example, begin by assuming an existence of asymmetrical power relations. Various practices in and through which these relations are maintained and justified are critically explored often to achieve change. However, analytically-oriented social constructionist studies put more emphasis on empirical data and issues arising from it, and it therefore avoids formulating specific presumptions at the outset of a study. Rather than seeing these two approaches as two extreme examples, Jokinen and Juhila (1999) suggest that a study often moves back and forth on this dimension and can thus be both analytical and critical, depending on the stage of the study. For example, critical discourse analyses may well embrace an ‘analytical’ analysis to problematize adopted established concepts to allow for surprises and more nuanced understandings. Likewise, analytically informed studies may produce critical findings and hence not only illustrate the becoming of a particular effect but also facilitate a critical account following the analysis. It is my intention to adopt such an approach here to develop a better

understanding of how product development projects are discursively organized in certain contexts (see also Segercrantz, 2009). Hence, I have marked two dots in Figure 5; one at each end of the dimension to mark a movement from an initially analytical approach towards a more critical account at the end of the study.

Figure 5 Critical discourse analysis and analytical discourse analysis



As has become apparent, my ambition is not to develop a prescriptive account, but following an ‘analytically informed analysis’ I attempt to provide a critical discussion of the findings. An important beneficial implication of this effort is the possibility to give voice to a broader array of accounts, perhaps previously deprivileged ones, and address some consequences of organizational restructurings for different social actors. Therefore, my aim is to be as open as possible to different constructions of product development during organizational restructurings in the analysis, but after the analysis move towards a more critical account.

In the analysis, I explore how certain meanings are both explicitly and implicitly constructed. Moreover, I explore texts in which the interviewees explicitly construct meanings around product development and organizational restructurings by analyzing how they draw on certain discourses. Such accounts follow, for example, from questions that specifically refer to product development and organizational restructurings. However, the analysis also examines how the interviewees simultaneously and implicitly construct, for example, themselves as persons or their relations to IT even when they are not explicitly asked to do so.

4 THE RESEARCH PROCESS, MATERIAL AND ANALYSIS

This chapter describes the research process, data material and analysis of this study. First, I show how the research process followed abductive reasoning; how I conducted interviews during four different interview phases and, following this, gradually specified the objectives and the focus of the study. Having described how the interview material was gathered, I then also describe other sources of data material beside the transcribed interviews. I proceed by discussing in more detail my view on the interviews and what type of conclusions can be drawn from them. I also provide the reader with some information about the interview questions, gaining access to conduct interviews, ethics while interviewing, the interviewees and the organizations. I end the description of the interview material with a summary.

Finally, I account for the analysis of the research material. I focus on how the discourse analysis of this study was conducted, how the particular selection of interviewees provided various possibilities for analysis, and how different layers (organizational restructurings, organizational settings, and interview phases) in the analysis are interrelated. I also present a structure for the following five chapters where the analysis is carried out.

4.1. The research process: Abductive reasoning

At the beginning of this thesis, I briefly suggested that the research topic and questions of this study have emerged step by step as the study has progressed. This has implied adopting an abductive approach. The notion of abduction was initially introduced by Peirce in 1958 and has since then been taken up by many researchers, for instance, in management and organization studies. Abductive reasoning refers to combining and adding to induction and deduction. In short, deduction starts out from theory while induction prioritizes empirical data (Alvesson and Sköldbörg, 1994). More specifically, deductive reasoning moves from theory to testing and explaining what is being assumed by the theory. Thus, the role of empirical research is to test existing ideas (Coffey and Atkinson, 1996). Inductive reasoning, on the other hand, assumes that a set of specific empirical cases and observations can reveal regularities and generate general conclusions or laws. In that sense, induction involves distilling laws and theories from a number of observations, and thus the findings only include a summary of what the observations already contained (Alvesson and Sköldbörg, 1994). Coffey and Atkinson (1996) hence argue that neither deductive nor inductive reasoning appear to provide satisfactory possibilities to generate new ideas. Abductive reasoning, however, seem to open up promising possibilities for empirical research to engage in generating ideas and more flexible movements between empirical data, theory and various research processes (Coffey and Atkinson, 1996).

Alvesson and Sköldbörg (1994) explain that abductive reasoning starts from empirical data in a similar vein as induction, but differs from induction by relating the data to previous research and theories. For example, previous research and broader concepts, as also our own experiences and knowledge, can be used as a source of inspiration for the analysis of data. Here, the emphasis is on developing an understanding of the phenomenon studied, in contrast to explaining it in a deductive way. Moreover, the aim is not to disconfirm theories, but to draw on them in an effort to produce new configurations of ideas (Coffey and Atkinson, 1996), that is, to move between theory and empirical data throughout the research process so that both elements can be

reconstructed in relation to one another (Alvesson and Sköldbberg, 1994). Johansson (2008, 12-13) concludes that this implies that:

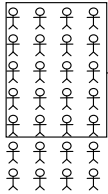
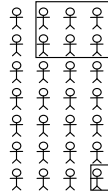
‘the notion of abduction [is] appropriate with regards to describing the progression of research, as well as with regards to the stance of the researcher not being a dispassionate bystander. ... Conducting research is to a large extent about making judgments regarding how to best go about doing it. There is no single correct answer to be found “out there” or in the literature.’

I agree with Johansson (2008) that the notion of abduction seems to capture the progression of this study, in which I have not been a ‘dispassionate bystander’, but rather actively given shape to the study. Let me show how I have adopted the abductive reasoning and illustrate my role in it.

The research process of this study can perhaps best be described as ongoing movements between reading existing literature, conducting interviews, analyzing and writing in order to gradually specify the objectives and the focus of the study. As mentioned in the introduction, my research interest arose when I in 2001, as a HR manager, conducted 56 interviews with the majority of the employees in an ICT company. These interviews were carried out during two phases; first during rapid growth (phase 1A) and later as the company was going through a downsizing process (phase 1B). Intrigued by the strong enthusiasm and commitment towards work during rapid growth as well as during downsizing (many continued coming to work every day as usually even after having been dismissed), I began my Ph.D. study while conducting the second half of the downsizing interviews. Therefore, I have called the phase 1A interviews ‘HR interviews’ and the phase 1B interviews ‘HR and research interviews’.

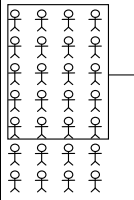
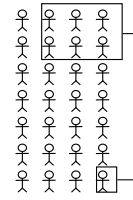
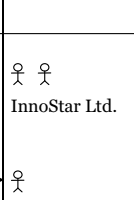
Figure 6 summarizes the details about these interview phases. Read from the top down, the figure illustrates (a) the types of interviews I conducted, (b) the number interviewees during each phase, (c) the departments the interviewees worked in, (d) the organizations the interviewees worked in, and (e) that some interviewees were interviewed more than once. I have marked persons who have been interviewed again in another interview phase with a box and arrow. The arrows show in which phase the new interviews were conducted.

Figure 6 Interview Phase 1A and 1B: HR and research interviews

	PHASE 1A HR interviews	PHASE 1B HR and research interviews
Number of interviews (interviews per department)	28 (- sales 3 - marketing 9 - administration 2 - product development 14)	28 (- sales 7 - marketing 4 - administration 3 - product development 14)
Interviewees and their organizations	 Q-Software	 Q-Software

Having conducted these interviews, I focused on elaborating on issues arising from them during my first year as a Ph.D. student; I conducted a literature review and participated in doctoral courses. By the end of my first year as a doctoral student, I decided to conduct three interviews (interview phase 2) with individuals working in ICT companies to reflect on the findings from the first interview phase. One of the interviewees had been interviewed once before in interview phase 1B. In these interviews, I wanted to reflect on the interrelationship between various social actors' relations to work and organizational restructurings to understand how various organizational changes unfold. For example, why had some person at Q-Software been so committed and passionate about work and others expressed dissatisfaction? Although perhaps not providing many answers, the three interviews did help me to narrow down my research topic and are therefore referred to here as 'transitional research interviews' as shown in the last column in Figure 7.

Figure 7 Interview Phase 2: Transitional research interviews

	PHASE 1A HR interviews	PHASE 1B HR and research interviews	PHASE 2 Transitional research interviews
Number of interviews (interviews per department)	28 (- sales 3 - marketing 9 - administration 2 - product development 14)	28 (- sales 7 - marketing 4 - administration 3 - product development 14)	3 (- management 1 - marketing 1 - product development 1)
Interviewees and their organizations	 Q-Software	 Q-Software	 InnoStar Ltd. Piranha Solutions

What did I discover through the transitional interviews? The analysis of the interviews and a simultaneous literature review helped me find a useful way of approaching organizational change as well as decide whose voices I wanted to include in the study and for what purposes. This meant that the focus of my study was narrowed down to software product development during organizational restructurings. Let me explain in greater depth how I came to formulate the focus in these terms.

The analysis of the interviews showed that various organizational changes were talked about as ongoing and intertwined; as constantly present as a ‘non-stop rollercoaster’ taking companies up and down, shaking departments and boundaries. Moreover, organizational change was not addressed as specific events following each other chronologically one by one, but more so as a movement between points of tension involving a variety of interrelated changes. For example, organizational change was constructed as a process of rapid growth involving various process such as restructuring ways of organizing with implications for actions taken when the recession, triggered by the burst of the IT bubble, began which in turn evoked other changes and so on. Hence, I decided to approach organizational change not as specific ‘isolated’ or pre-defined episodes, for example by asking the interviews to talk about ‘change 1’, then about ‘change 2’ and so on, but rather as various ongoing and interrelated processes.

Exploring ongoing unfolding process of organizational change seemed to potentially require a longitudinal approach and/or paying attention to issues of transformations over time (Roberts, 2004). In addition, this seemed to require an analytical approach (Jokinen and Juhila, 1999) that invites actors living by these organizational changes to relatively broadly describe their experiences and constructions; an approach that would give enough room for the interviewees to describe and elaborate on various organizational changes they had experienced.

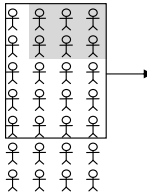
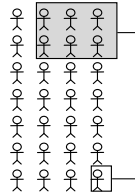
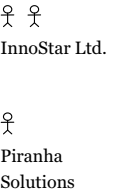
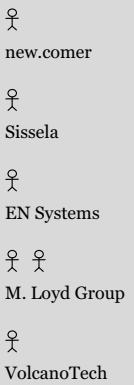
Since I already had interviewed some persons twice during interview phases 1A and 1B, it seemed sensible to continue on the same track and aim at interviewing these same persons a third time. The question then became which of these persons to interview; randomly chosen actors from different departments or actors with shared project experiences? To enable an analysis of diverse perspectives on the same phenomena, person working on the same projects were chosen (see also Lindgren and Packendorff, 2006) and this implied limiting the study to particular processes or activities. Since the study was conducted in the ICT sector, it seemed justified to limit the focus to software product development. Case and Pineiro (2006, 754) describe software product development and its effects in the following terms:

‘Computer technology is ubiquitous in the contemporary world. ... Complex (post-)industrial societies could not function without the intricate web of computer networks that facilitate everything from personal banking, word processing, personal organizers through to financial trading ... At the heart of the proliferating pursuit of ICT utility and performance, however, lies a very human story; one that, to the casual observer, might seem at odds with the cold, calculating performativity of the digital technologies upon which the various ‘applications’ rely. It is the story (or more properly, stories) of those who write the programs – the source code of computer applications – and their concern for self-expression through what they describe explicitly as the ‘art’ of software design and coding.’

In common with Case and Pineiro (2006), I am interested in ‘the very human story’ behind software products, however not only from the perspective of programmers but also from other software development experts’ point of view. I am interested in how these persons engage in describing various daily practices and how these practices are affected over time by organizational changes.

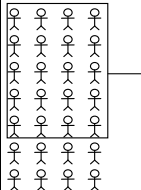
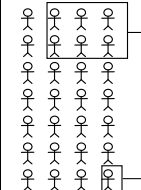
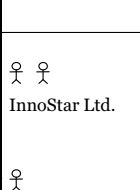
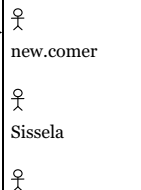
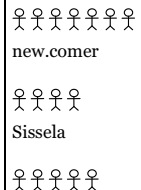
Therefore, to obtain a longitudinal dimension to the study, approximately three years after having conducted interview phase 1, I decided to ask the six core product development experts that I had interviewed twice before (during phase 1A and 1B) if I could interview them a third time. They all agreed to participate in the study. These interviews constitute interview phase 3 and are referred to as the ‘core research interviews’ since they are crucial for how the research design has taken shape. The details about the phase 3 interviews are summarized in the last column in Figure 8. The three different shaded areas illustrate the three stages during which the same core software product development experts have been interviewed.

Figure 8 Interview Phase 3: Core research interviews

	PHASE 1A HR interviews	PHASE 1B HR and research interviews	PHASE 2 Transitional research interviews	PHASE 3 Core research interviews
Number of interviews (interviews per department)	28 (- sales 3 - marketing 9 - administration 2 - product development 14)	28 (- sales 7 - marketing 4 - administration 3 - product development 14)	3 (- management 1 - marketing 1 - product development 1)	6 (- product development 6)
Interviewees and their organizations	 Q-Software	 Q-Software	 InnoStar Ltd. Piranha Solutions	 new.comer Sissela EN Systems M. Loyd Group VolcanoTech

To bring more depth to the study, I felt I needed to do more interviews drawing on the same themes and questions as used with the six core interviewees in phase 3. Three of the six core interviewees did not have colleagues involved in new software product development, but the other three helped me to get access to conduct 16 interviews with their new product development colleagues. The colleague interviews constitute interview phase 4 and are named 'colleague research interviews', as shown in the last column in Figure 9.

Figure 9 Interview Phase 4: Colleague research interviews

	PHASE 1A HR interviews	PHASE 1B HR and research interviews	PHASE 2 Transitional research interviews	PHASE 3 Core research interviews	PHASE 4 Colleague research interviews
	March 12-23, 2001	October 16 – December 4, 2001	August 2, 2002 – March 12, 2003	October 13, 2004 – April 19, 2005	January 21 – March 24, 2005
Number of interviews (interviews per department)	28 (- sales 3 - marketing 9 - administration 2 - product development 14)	28 (- sales 7 - marketing 4 - administration 3 - product development 14)	3 (- management 1 - marketing 1 - product development 1)	6 (- product development 6)	16 (- product development 16)
Interviewees and their organizations	 Q-Software	 Q-Software	 InnoStar Ltd. Piranha Solutions	 new.comer Sissela EN Systems M. Loyd Group VolcanoTech	 new.comer Sissela EN Systems

As the figure above illustrates, this study consists of 81 interviews conducted during four different phases in Finnish ICT companies. Drawing on abductive reasoning it was not until after phase 2 that the focus was limited to product development. Most of the interviews during phase 1 and phase 2 were conducted with persons who were not software product development experts. Therefore, most of the interviews from phase 1 and phase 2 are treated as a resource for reflection and transition, with the exception of the 12 interviews conducted with six software product development experts during phase 1A and 1B. In other words, most of the interviews from phase 1 and phase 2 are excluded from the main analysis although they helped me to understand the context of the studied phenomena and to formulate the research questions. However, they do not contribute to answering the research questions of the study as these interviews did not directly deal with the daily routines of software product development.

Together with 12 interviews with software product development experts from phase 1A and 1B, phase 3 and phase 4 form the main focus of the analysis. Hence, the main analysis consists of 34 interviews with 22 software product development experts.

However, the analysis in phase 1A and 1B does not only involve readings of the interview material but also reports and documents as well as memories. I will return later to issues around the analysis of these interviews, but before that I want to describe the research materials in more depth as well as the interviewees and the organizations they worked in.

4.1.1. Notes, reports, documents and memory

The data material of this study does not only consist of transcribed interviews. In common with the other phases, I conducted interviews during phase 1A and phase 1B at Q-Software. However, Phase 1A and phase 1B are different from the other phases in particular ways. Unlike the other interviews, these interviews were not recorded and were therefore documented through my notes on the basis of which I, as the HR Manager, wrote reports to the management team. As an employee of Q-Software, I also had access to company documents such as marketing and sales material. Other important sources, that should not be disregarded, are my own experiences and observations as an employee and HR Manager during phase 1A and phase 1B, some of which I made notes of after having decided to begin this study.

In the analysis of phase 1A and phase 1B, I will draw on all these sources of data; company documents, interview notes, reports, notes, and memories. The company documents are only used for background information regarding the company and products and are not analyzed in depth. The interview notes could be said to come close to being fieldnotes. These fieldnotes are viewed here as having emerged interactively between the interviewees and me in a process that involved co-construction (in contrast to being understood as 'recorded' or 'captured' data). I elaborate more on this view on interviews in the next chapter. However, I wish to emphasize that notes taken during interviews and interview transcripts are to some degree different. Fieldnotes usually include less detail than transcribed interviews, but they can also cover issues that the researcher 'sees', rather than hears. One could perhaps argue that fieldnotes involve 'analysis' since the researcher cannot write down everything that is said and thus has to categorize and prioritize already in the actual interview situation. The reports and notes I wrote after the interviews can be seen as expanding what was documented in fieldnotes during the interviews (Silverman, 2001).

Related to the various fieldnotes and reports are issues of memory. Since I was working at Q-Software while conducting the phase 1A and phase 1B interviews, I have personal experiences of some of the organizational restructurings that the interviewees spoke about and that I analyze later in this thesis. Therefore, I think my memories of these experiences are important, in particular, when analyzing the phase 1A and phase 1B data material. They are important because when working with the Q-Software data I draw on different subject positions than in the other cases; I have a different understanding of what was talked about in the interviews, as a result my experiences and memories potentially have implications for this study. This, of course, has required working with and developing awareness of my relations to the different research situations and interviewees. More specifically, it has been far from easy to decide how to turn my experiences from Q-Software into useful data, both from a methodological and an ethical point of view. I use these memories as a resource to analyze and reflect on the conducted interviews at Q-Software, and so I do not use my memories to analyze primarily my experiences of organizational restructurings, although I wish to emphasize my relations to the settings under study.

4.1.2. Perspectives on interviewing

In the analysis of the interviews conducted during the research process described, I will mainly adopt a discourse analytic approach. Yet, typically, 'naturally occurring data' produced by social actors in the normal course of life is prioritized in discourse analyses as such data is seen as shaping discourses constituting the phenomena under study (Phillips and Hardy, 2002). Naturally occurring data refers to texts that 'exists independently' of the researcher, for example, archival reports, e-mails and newspaper articles (Silverman, 2001). However, it may sometimes be difficult to draw a clear line between when a researcher has or has not provoked the data (Silverman, 2001). For example, should the phase 1 interviews, that were conducted as part of my tasks as HR manager (in contrast to research interviews) be seen as naturally occurring data or not? Nevertheless, research interviews are usually not understood as naturally occurring data but as material instigated by the researcher (Phillips and Hardy, 2002). That said, Phillips and Hardy (2002, 72) argue that interviews can be an important source for discourse analysis by opening up possibilities to explore the social context of the 'primary' texts and issues that are difficult to gain insight into from other sources. Developing an understanding of how software product development experts relate their work to organizational restructurings over time could perhaps have been studied in other data settings. However, interviews seemed to provide the most useful way of elaborating in greater depth on these issues as it allowed me to ask questions around issues that are difficult to observe in other ways.

Interviews can be and have been approached, analyzed and viewed in a number of different ways. Different epistemologies have important implications for how research interviews are understood. These differences have been discussed by various authors (see, for example, Silverman, 2001; Gubrium et al, 2002; Alvesson, 2003) as 'ideal-typical positions' on interviews. Hence, these positions do not provide a comprehensive categorization of approaches to research interviews. Rather, the attempt has been to highlight certain views on interviews; therefore, one must recognize that many researchers position themselves in between the various positions.

Researchers taking positivist approaches to interviewing tend to view interviews as a technique for capturing 'facts' in an attempt to produce explanations and predictions of the social world (Alvesson, 2003). Drawing on this approach, interviewers usually emphasize structured and standardized interviews (Silverman, 2001). Pre-established protocols, rules, procedures and questions are typically used to provide empirical knowledge of the object or social phenomenon studied (Alvesson, 2003). The object is understood as a relatively stable and an identifiable entity independent of human perception and the assumption is that there can only be one, or restricted, truth(s) concerning it; results are thus seen as relatively universally generalizable and not as context specific (Silverman, 2001). Here, the task of the researcher becomes to contribute to the increments in knowledge by using interviews as a channel representing or mirroring reality. This requires finding efficient and unbiased interviewing methods. Knowledge arising from this process is considered to have been generated by 'the rationality of the researcher', which implies that the researcher's voice is prioritized above others' (for example, the interviewees') as more 'truthful'. The researcher must ensure neutrality and objectivity of the process by taking distance from the interview situation and the interviewees by acting in a uniform way with each of the respondents (Rubin and Rubin, 2005). The interviewee is foremost viewed as a mediator of certain facts (Silverman, 2001), but the researcher should ensure that potential inaccurate or superficial responses are minimized or eliminated by adopting certain techniques.

In an effort to highlight authentic accounts of subjective experiences rather than, as positivist, 'discover facts', some researchers have been suggested to have taken up an emotionalist (Silverman 2001) or a romantic (Alvesson, 2003) position. 'Emotionalists' or 'romantics' typically conduct open-ended and in-depth interviews, which do not follow as strict interview structures (Gubrium and Holstein, 2002). Their aim is to explore the individual subject (Gubrium and Holstein, 2002) and the respondent's lived experiences in which emotions are acknowledged as an important aspect (Silverman, 2001). Researchers drawing on this position have been critical of the objective in positivist interviewing to separate and distance the researcher from the interviewee and the interview situation (Ellis and Berger, 2002). Instead, the interviewer is encouraged to help the interviewee to express her or his 'genuine voice' (Gubrium and Holstein, 2002). It is argued that this can be achieved by making the interviewee more comfortable to share information, for example, by allowing the interviewer to be an active and emotionally involved subject of the interview situation (Ellis and Berger, 2002), yet not a manipulator of the interviewee (Silverman, 2001). The interviewee is viewed as a person whose subject potentially can be accessed through the interview provided that her or his voice is not externally constrained (Gubrium and Holstein, 2002). Hence, the relationship between the interviewer and the interviewee is understood as ideally active and collaborative, emphasizing emotions and trust so that in-depth shared understandings can be achieved.

Although the emotionalist or romantic position and the positivist position at first glance may seem rather different, they share certain crucial underlying assumptions. Both positions seem to be concerned with documenting reality 'out there', hence aiming at finding efficient ways for capturing reality and picturing it accurately; the interview is used as a technique with which the researcher attempts to avoid and minimize bias. Perhaps most importantly, the interviewees' accounts are treated as 'simply representations of the world' (Silverman 2001, 95). Therefore, these positions have been accused of neglecting 'the interview situation as a socially and linguistically complex situation' (Alvesson 2003, 14). However, scholars, such as, Weber (2004) argue that this criticism has, at least partly, been taken, too, far. As he comments, although many researcher believe that research objects have inherent qualities, most accept that these qualities can only be explored through 'constructed' theories and frameworks.

Researchers drawing on a localist position (Alvesson, 2003), on the other hand, explicitly emphasize interviews as part of the realities they describe and not as a mirror of the social world; a position that comes close to the position taken in this study. More specifically, interviews are not used as a technique or a procedure that reports realities outside the interview situation (Silverman, 2001; Gubrium and Holstein, 2002). Rather, localists regard interviewing as knowledge production (Alvesson, 2003), or as social practices that the interviewer and interviewee engage in. The interview becomes an arena where the interviewer and the interviewee interactively create meaning; a site where various context specific accounts are generated. In other words, the interviewee is not seen as reporting details about her or his experiences but as constructing and transforming them in the process of giving account for them in the interview. Thinking about such accounts in terms of 'true' and 'false' becomes inappropriate since reality, it is argued, can be understood in multiple, even contradictory and conflicting ways. This also implies that the researcher is not given the same powerful position as in studies taking up positivist or emotionalist positions, since the localist approach does not consider the researcher's voice to be more 'truthful' than the interviewee's voice. Yet, there has been increasing attention paid to conducting interviews to allow more

diverse, previously marginalized, voices to come forth, in particular in studies drawing on postmodern thought (Fontana, 2002).

As we can see, the localist position push our attention towards considering how certain realities are constructed in interviews, although researchers drawing on this position to varying degrees also focus on realities constructed in these situations. Consequently, both Silverman (2001) and Alvesson (2003) ask if interviews can tell us anything about any other reality than the interview situation itself if we accept the assumptions informing the localist position. In other words, can the interviews conducted in this study suggest anything about how software product development experts construct organizational restructurings and their work outside the interview situation? There is no simple or single answer to this question. Rather, how one answers this question may depend on, for example, general theoretical or methodological assumptions made, how the interviews are structured and carried out, the topic and interviewees as well as the venue of the interview.

My attempt is to take up a localist perspective and to potentially try to say something beyond the immediate interview situation. As Phillips and Hardy (2002) claim, discourse analyses focus on connecting texts, such as interviews, to discourses, while locating them in a specific historical and social context. In that sense, an important aim of discourse analysis is specifically to look for clues to discourse in the interviews (while also recognizing that interviews construct discourse). Hence, talk in interviews is seen as related to discourse outside the immediate interview situation, although it is difficult, if not impossible, to say to what extent. However, Phillips and Hardy (2002) emphasize that the topic and level of analysis may be crucial for the possibility of connecting what is said in the interview to discourse and realities beyond the interview. For example, interviews can be useful for studying subjectivities and positioning as individuals may construct themselves and draw on discourses in interviews in similar ways as in other social arenas. Likewise, talk in interviews can show how social actors discursively relate work to organizational restructurings with implications beyond the interview.

Indeed, drawing on a localist positions and yet attempting to use texts produced in interviews as broader than talk in just the interview situation can be seen as taking us back to the concerns of positivists and emotionalists (Alvesson, 2003; Silverman, 2001). However, what often seems to be specific for many studies drawing on the localist position is the abandoning of grand theorizing, the acknowledgment of the ambiguities and contextuality of meaning, the interest in fragments of everyday occurrences, the recognition of interviewing and researching as a political exercise and the rethinking of the relation between the interviewee and the interviewer as co-constructors (Fontana, 2002). Yet, conducting interviews is hardly about taking up 'either this or that position'; it involves finding a useful way for exploring the phenomenon studied by combining various possibilities and positions (Weber, 2004). As Weber (2004) claims, despite differences between various positions, we may benefit from moving beyond the labels, and rather focus on developing deeper understandings of the assumptions underlying our research.

4.1.3. Interview questions

Drawing mainly on a localist position from a discourse analytic and a social constructionist perspective (see Chapter 2), the interviews in this study were conducted as semi-structured interviews. Following an abductive approach, the interview guide

and questions varied to some degree between the different interview phases and therefore the questions were not identical in all interview phases (see appendix 2). Likewise, following the adopted approach emphasizing plurality, I did not stick to the questions in a strict manner, as I wanted to invite the interviewees to talk broadly about issues they felt were relevant concerning the phenomenon studied.

The phase 1A questions concerned HR-related issues such as competences, the leadership and management of the company, the company vision and the recruitment process. I had a list of themes, rather than specific questions, that I discussed with each interviewee. The responses to the interviews were in general very positive; virtually all employees seemed enthusiastic about work and sharing these feelings. When conducting phase 1B, I used an interview guide with questions that were grouped under four different themes concerning the downsizing process, experiences of it, various needs for support and other issues brought up by the interviewees. Now, the response to the questions concerning downsizing seemed to vary more, ranging from expressions of anger and fear to a desire to fight for the products and company or downplaying potential threats.

The phase 2 transitional interviews totalled only three and aimed at elaborating on the previous HR and research interviews in an effort to prepare new questions for conducting the main research interviews. The questions prepared for the interviews varied slightly but did put more emphasis on organizational restructurings and their implications for work tasks and relations to work.

Throughout the phase 3 and phase 4 interviews, I mainly followed the same interview guide. Based on my experiences from the phase 3 interviews, the questions were only slightly specified for the phase 4 interviews to make them clearer and thus 'easier' to comprehend. However, I was cautious about changing the questions in a manner that would have made it difficult to conduct the same analysis in the different interview phases. Each interview began with some small talk about my educational and professional background as well as research interests. Then, I asked the interviewee about her or his position in the current organization and previous work experience both in product development and other positions. After that, I proceeded by asking the interviewee to talk about her or his first as well as the most successful and unsuccessful product development process. Then, we moved on to talk about the organizational changes the interviewee had experienced. Finally, I asked how the interviewee had experienced product development during these organizational changes. Although all interviews followed the same interview structure, the questions were formulated so as to allow the interviewees to relatively 'freely' discuss their experiences. When unexpected issues arose, I also allowed for detours from the interview guide.

The interviewees' responses to the interviews were typically positive. Many said that they repeatedly had had to work in the context of organizational restructurings but that they rarely had 'consciously' reflected on these issues. The interview provided a possibility to do so, which some found was interesting, while others commented that it was difficult to do. Another repeated comment was that the questions were very 'easy' because they foremost touched upon mundane everyday practices. Some even wondered if the mundane accounts would be of any use for the study and if they could provide me with some more 'interesting' information. But the mundane everyday accounts were exactly what I had set out to hear about. My intentions were not to explore exceptional or unique organizational restructurings; instead my aim was to contribute a better understanding of the daily product development practices during organizational restructurings. As Silverman (2001, 300-301) claims, in qualitative

research we should ‘avoid the assumption that research is only newsworthy if it reveals what is hidden or secret’ and ‘recognize that what is usually of most interest is what is unremarkable to participants’. Following this argument, I have conducted interviews which emphasized ordinary, daily conversations on product development and organizational restructurings.

4.1.4. Gaining access to conduct interviews

Gaining access to conducting the interviews was perhaps exceptionally easy. Conducting the first interviews was part of my work tasks as an HR Manager at Q-Software. Within a few days after I had begun working in at Q-Software, I sent an e-mail to the whole organization to introduce myself and to invite each member of the organizations to a personal interview as I wanted to get to know the personnel and gain an understanding of HR-related issues. The majority of the personnel, 28 persons, agreed to be interviewed by replying to my e-mail or by contacting me personally.

A few months later, when a downsizing process was initiated at Q-Software, I conducted a second round of interviews to gain insight into how the organizational members were coping with the downsizing. To do so, I first had to get permission from the CEO, after which I sent an e-mail to the whole staff of the organization. Some persons replied and agreed to an interview by e-mail, others agreed face-to-face, for example, during informal talks as we bumped into each other in the corridors or in the kitchen.

Access to the three interviews conducted during phase 2 was negotiated by phone. My aim was to reflect on the issues that had emerged through a preliminary analysis of the phase 1 interviews at Q-Software, and thus I was interested in interviewing someone from that organization. I phoned one of my former colleagues from Q-Software who agreed to meet. The two other interviewees worked for an ICT company with a similar background of organizational changes to Q-Software. I learnt about this organization through a research colleague, who helped me to gain access.

The selection of interviewees for phase 3 followed from the analysis of the three interviews in phase 2. The analysis of the phase 2 interviews had given me the insight that I wanted to conduct a longitudinal study with software product development experts. Since I already had interviewed six software product development experts twice at Q-Software, I wanted to interview these persons again, who now were working in new organizations. All these persons said they were happy to participate in the study when I called them.

I gained access to the phase 4 interviews through the phase 3 interviews. Three of the core interviewees from phase 3 agreed to each try to arrange access for me to interview approximately five of their current colleagues in the new organizations they had begun working for. They all discussed the issue with their supervisors, and following that I sent an abstract about my study to some of the organizations. After that, I was given e-mail addresses for the colleagues. Many of the phase 4 interviewees replied by e-mail, while I phoned those who did not in order to set a time for the interview. Three of the colleagues who were asked to participate in the study, all from the same organization, did not want to participate in the study.

4.1.5. Details of the interviews

The phase 1 interviews took approximately 30-60 minutes. The interviews were mainly conducted in the interviewees' first language: Finnish, Swedish (my first language) or English. A few interviewees did not have any of these languages as their first language, and therefore the interviews were conducted in English. As the phase 1 interviews were not initially conducted for research purposes, these interviews were not recorded. However, I made notes for each interview and summarized the findings in a report after both interview phase 1A and phase 1B. The phase 1A interviews were conducted at Q-Software in informal settings such as in the staff room or a nearby cafeteria. The phase 1B interviews were conducted in my office, typically with the door closed due to potential sensitive issues discussed around experiences of downsizing.

The phase 2 interviews ranged from 60-90 minutes and were all conducted in Finnish, the first language of all interviewees. The interviews were recorded and transcribed in detail; one by myself and two by a professional transcriber. All three phase 2 interviews were conducted in different locations; one at a lunch restaurant, one in a meeting room at the interviewee's workplace and one in a meeting room at the department where this study was conducted.

The phase 3 and phase 4 interviews took between 40 minutes and two hours. The average interviews lasted for 65 minutes. All interviews were recorded and transcribed in detail, including short breaks, laughter, coughing and so on, which resulted in 926 transcribed pages (1.5 line spacing). A few interviews were transcribed by me, but the majority of the interviews were transcribed by a professional transcriber. Immediately after each interview, I made notes about my own thoughts regarding the interview. Again, the interviews were conducted in the interviewees' first language Finnish or Swedish, with only one exception when we spoke English. The phase 3 and phase 4 interviews were mainly conducted at the interviewees' workplaces in either the interviewees' own office rooms or in meeting rooms. One interview was conducted by phone. One of the organizations requested to have the interviews in a meeting room at the department where I worked, since these interviewees were outsourced and the interviews could not be held at the customer's office.

4.1.6. Ethics in interviewing

Interviewing individuals concerning their personal experiences of certain phenomena naturally requires that the researcher takes certain ethical issues into account. From the point of view of this study, it was important to gain informed consent from the participants of the study (Silverman, 2001). First, I had to retrospectively ask some of the interviewees if I could use the phase 1A and 1B HR and research interviews for research purposes, which all interviewees generously agreed to. Second, before every research interview I asked for the interviewees' consent to record the interview and provided the interviewees with information about the study to ensure that the interviewees knew for what purposes the interview material was gathered. This involved signing a written 'research agreement' to clarify for what purposes the interview was going to be used and to guarantee the interviewees confidentiality and anonymity (see appendix 1).

However, due to the 'analytical' nature of the study that emphasizes sensitivity to issues arising from the interview material, new directions of interest emerged after I had conducted the interviews. Hence, I have had to consider how these issues may affect the

participants, that is, how writing about these persons can be done in a way that respects the interviewee and yet illustrates the findings (Jyrkinen, 2005). This has of course also been an important issue throughout the analysis and writing up of the study, in particular because the study constitutes a relatively particular data setting. In discussing this setting, it has been important to avoid issues that may reveal the organizations and the interviewees both to the ‘normal’ reader and to those readers who have insight into the data settings (for example, the different participants of the study). I have used pseudonyms for all interviewees and organizations. Since all but one of the interviewees in the main interview material were men, the woman has also been given a male pseudonym. Moreover, in writing this thesis, it has been important to consider the implications the study may have on the interviewees in their workplaces.

The presenting of research findings may also have broader implications and political effects. Moreover, the voices that are allowed in the study may have specific power implications; an issue the researcher should acknowledge. Here, researchers drawing on social constructionist and discourse analysis often emphasize the importance of allowing typically silenced voices into the study in an attempt to introduce new discursive resources with critical and political potentials. Phillips and Hardy (2002, 84) state that:

‘we should be aware of the political aspects of research and acknowledge that we construct knowledge through the research process. In this way, we come full circle and acknowledge that, as users of language, we use it to construct what passes for knowledge.’

In that sense, we should ask: What voices do we want to bring forth? What may the potential power implications be?

4.2. The interviewees

The total number of participants in this study is 54, but as already explained the main analysis consists of 34 interviews with 22 software product development experts. In this section, I will describe these interviewees.

First, it must be emphasized that at the specific points when the interviews were conducted with the ‘core and colleague interviewees’, they could be seen as ‘survivors’ of downsizing and other organizational restructurings. When contacted by me, no one of the interviewees was unemployed. This is something the reader must bear in mind. Yet this is not to say that the interviewees did not have experiences of the darker side of organizational restructurings. Many of the interviewees had indeed experiences of dismissals and bankruptcies. It is rather the current position as survivors in the organizations the interviews worked in at the moment of the interview that I wish to highlight here; a position that well may have implications for the findings of the study.

Common to all the experts interviewed was that they worked in various ways with software product development, for example as Interaction Designers, Software/IT/Technical Architects, Senior Technology Officers, Software Engineers, Senior Consultants (testing), Senior Technology Specialists, Development Managers or Product Development Managers/Directors. I have decided to use the term ‘experts’ because all the interviewees were, as the titles show, experts in something related to software development.

The way in which the interviewees were selected in the study, as described in the beginning of this chapter, meant that, for example, gender, age, ethnicity, nationality

and education were not used as selection criteria of the interviewees. As Table 1 illustrates, this contributed to an interestingly homogeneous group of interviewees, which has to be emphasized before I proceed.

Table 1 Information about the interviewees

Inter- viewee	Organiza- tion	Wo- man	Man	Age	Marital status	Child- ren	Education	Nationality
1	Q-Software	0	1	32	Single	no	HSC*	Finnish
2	Q-Software	0	1	32	Married	yes (2)	Master's degree	Finnish
3	Q-Software	0	1	33	Married	yes	M.Sc.Tech.	Finnish
4	Q-Software	0	1	30	Single	no	HSC (M.Sc.Tech.)**	Finnish
5	Q-Software	0	1	31	Married	yes (2)	M.Sc.Tech.	Finnish
6	Q-Software	0	1	31	Divorced	yes (1)	M.Soc.Sc.	Not Finnish
7	new.comer	0	1	31	Married	yes (2)	HSC (M.Sc.Tech.)	Finnish
8	new.comer	0	1	29	Married	yes (2)	HSC (M.Sc.Tech.)	Finnish
9	new.comer	0	1	30	Married	yes (1)	M.Sc.	Finnish
10	new.comer	0	1	29	Married	yes (2)	M.Sc.Tech.	Finnish
11	new.comer	0	1	29	Single	no	HSC (M.Sc.Tech.)	Finnish
12	new.comer	0	1	34	Married	yes	HSC (M.Sc.)	Finnish
13	new.comer	0	1	27	Married	no	M.Sc.Tech.	Finnish
14	Sissela	0	1	31	Partner	no	HSC (Master's degree)	Finnish
15	Sissela	0	1	33	Single	no	HSC (Master's degree)	Finnish
16	Sissela	0	1	23	Partner	no	HSC (Master's degree)	Finnish
17	Sissela	0	1	36	Married	yes (2)	Master's degree	Finnish
18	EN Systems	0	1	34	Single	no	Bachelor's degree	Finnish
19	EN Systems	1	0	35	Married	yes	HSC (Master's degree)	Finnish
20	EN Systems	0	1	30	Married	yes	HSC (M.Sc.Tech.)	Finnish
21	EN Systems	0	1	27	Married	yes	Bachelor's degree (Master's degree)	Not Finnish
22	EN Systems	0	1	42	Partner	yes (1)	HSC (M.Soc.Sc.)	Finnish

*HSC=higher school certificate

** (degree)=degree in brackets indicate uncompleted studies

As Table 1 shows, 21 of the 22 interviewees were men. It is also striking how homogeneous the interviewees are in terms of age, as most of interviewees were around

30 years old and thus of the same generation. The interviewees had similar ethnic and national background; all interviewees were white, and only two were not Finnish. Most interviewees had a completed or a partially completed Master's degree in subjects related to technology and/or engineering. These similarities need emphasis as the composition of interviewees raises many further questions concerning the implications of gender, age, generation and other social categories for product development, subjectivities, power relations, and so on. Moreover, in the analysis of the interview material we need to keep in mind that when the interviewees talk, they take up certain subject positions which to some extent shape their perspectives on reality. For example, being positioned as a white, Finnish, 30-year-old male with a technical education is likely to provide a person with particular views in specific contexts. Although all these social categories are important, not least due to their links to each other, they can be difficult to study simultaneously. Therefore, I will in particular focus on gender issues in this study.

Gender issues are important since the field of software development in Finland, as in many other countries, is a male-dominated environment, perhaps to the extent that the presence of gender seems to become invisible thus maintaining a culture of gender-neutrality in this sector. Hence, the homogeneous composition of the group of interviewees (and their work environment in general) in terms of gender and other social categories is important to consider when exploring the research topic. Of course, gender can be explored and taken into account in numerous different ways. For example, here gender could be explored as a category or the analysis could focus on the construction of individuals within particular categories. I will, however, discuss later how individuals or groups of individuals in a gender category talk about various issues around product development and organizational restructurings. In doing so, I attempt to show how the interviewees simultaneously talk (or do not talk) about gender.

To conclude, the interview material seems to provide a good means for exploring the phenomena studied through accounts of the mundane everyday lived experiences of those persons, mainly men, who live it (Thomas and Linstead, 2002) in order to develop an understanding of the practices in which software product development, as mainly men, develop specific relations in particular contexts of software development and organizational restructurings. The framework adopted suggests that social categories such as gender and gender relations are discursively constructed and simultaneously construct discourse, that the interviewees constantly are addressed in discourse as gendered persons and that discourses of gender are always in flux.

4.3. The organizations

As a result of the selection of interviewees, eight ICT companies participated in the study⁷; Q-Software, InnoStar Ltd, Piranha Solutions, new.comer, Sissela, EN Systems, M. Loyd Group and Volcano Tech. However, the interviewees were asked to talk about all organizational restructurings they had experienced, including at former employers. Therefore, the data includes accounts on many more organizations.

The companies studied developed and/or implemented software solutions for private and public organizations. More specifically, the accounts analyzed in this study referred to organizational restructurings that had occurred in organizations that offered their

⁷ The basic organizational demographics are presented here relatively briefly, in order to guarantee the organizations and interviewees confidentiality and anonymity. Considering the presented configurations of interviewees and organizations more specific demographics could be too revealing.

customers PC, internet and mobile devices, applications and services, group communication software, Internet-based software products for the financial sector and software mobility solutions.

The smallest organization employed two persons and the largest had over 500 employees. However, most were small and medium size organizations. The number of employees in the organizations analyzed was approximately 2, 15, 45, 80, 90 and 500.

All firms were privately owned, most by the management and employees, some backed by investors. One firm was in family ownership.

All firms were Finnish. Three companies had more than one office in Finland. Another three companies had offices abroad and six had foreign customers. Several firms had employees who were working at customers' offices for longer periods of time.

4.4. Summary of the interview material

The abductive reasoning in this study has, as I have shown in this chapter, contributed to a rather complex set of data, conducted during four phases and mainly consisting of interviews but also other sources of data. Some of the interviews have been transcribed; others have been documented through notes and reports. Some phases address organizational restructurings that I have personal experiences of: others I have only learnt about through interviewing. In Figure 10, I have summarized some important detail about the interview material, showing the periods of time when the interviews have been conducted, the type of interviews, the aims and background of the interviews and also the contribution of the interview phases to the overall study.

Figure 10 Summary of the interview material**Phase 1A (March 12 - 23, 2001): HR interviews**

Background and aim: The interviews of Phase 1A were conducted in Q-Software, a company where I recently had began working as HR Manager at that time. Q-Software was growing rapidly in terms of employees while I was conducting the interviews. The aim was to develop an understanding of HR-related issues such as competences, the leadership and management of the company, the company vision and the recruitment process.

Interviews: I conducted 28 HR interviews with the majority of the employees from all departments of the organization (product development, sales, marketing and administration). The interviews were not recorded, but I made notes during the interviews, and wrote reports for the management team on the basis of the notes.

Contribution to the study: The interviews conducted in Phase 1A contribute to the study by showing how the organizational life in an ICT company was constructed during rapid growth.

Phase 1B (October 16 – December 4, 2001): HR and research interviews

Background and aim: Q-Software went through a downsizing process only a few months after I had conducted the Phase 1A interviews. Therefore, I decided to again interview as many as possible of the employees of Q-Software concerning the downsizing process. I began my doctoral studies while I was conducting the Phase 1B interviews. Consequently, I worked both as a doctoral student and HR Manager while conducting these interviews.

Interviews: During Phase 1B, I conducted 28 HR and research interviews with people from the product development, sales, marketing and administration departments. 20 of these interviews were conducted with the same persons as in Phase 1A. Again, the interviews were not recorded, but, as in the previous phase, I made notes and wrote a report on the basis of the notes.

Contribution to the study: The interview material from Phase 1B shows how a downsizing process is experienced by people in the middle of an organizational crisis. Since 20 of the 28 interviewees had been interviewed once earlier, in Phase 1A, this phase adds a longitudinal dimension to the study.

Phase 2 (August 2, 2002 – March 12, 2003): Transitional research interviews

Background and aim: The aim of Phase 2 was to reflect on the results from Phase 1 and, on the basis of these reflections, formulate the research aims and questions of this study.

Interviews: Phase 2 consists of three interviews with persons working in ICT companies. First, I interviewed a Senior Consultant from Piranha Solutions, who also was interviewed once earlier in Phase 1B during an employment with Q-Software. Then, I interviewed the Product and Marketing Director and Chief Operating Officer from another ICT company, InnoStar Ltd. All three interviews were recorded and transcribed.

Contribution to the study: As a result of analysis of the three interviews, the research aims and questions of this study were formulated and the focus of the study was narrowed down to software product development during organizational restructurings.

Phase 3 (October 13, 2004 – April 19, 2005): Core research interviews

Background and aim: The first part of the main interview material of this study was collected during Phase 3. The aim was to obtain an in-depth insight into product development during organizational restructurings.

Interviews: I conducted six interviews with product development experts, who also had been interviewed three to four years earlier during Phase 1A and during Phase 1B. In other words, this was the third time these product development experts were interviewed within the context of this study. When the Phase 3 interviews were conducted, the interviewees worked in five different ICT companies, namely, new.comer, Sissela, EN Systems, M.Loyd Group and Volcano Tech. All interviews were recorded and transcribed in detail.

Contribution to the study: Phase 3 has a central position in this study. The same software product development experts are interviewed a third time, bringing in a time dimension to the study and a number of options for the analysis.

Phase 4 (January 21 – March 24, 2005): Colleague research interviews

Background and aim: The second part of the main interview material was gathered during this phase. The aim of Phase 4 was to further explore the same issues concerning software product development during organizational restructurings as in Phase 3.

Interviews: During Phase 4 I conducted 16 interviews with software product development experts. They were new colleagues of three of the six core interviewees interviewed in Phase 3. The interviewees worked for new.comer, Sissela and EN Systems. The same questions were asked as in phase 3, and all interviews were recorded and transcribed in detail.

Contribution to the study: The interviews conducted in Phase 4 contribute to the overall study by extending the interview material and hence help to develop a deeper insight into product development during organizational restructurings than Phase 3 could on its own.

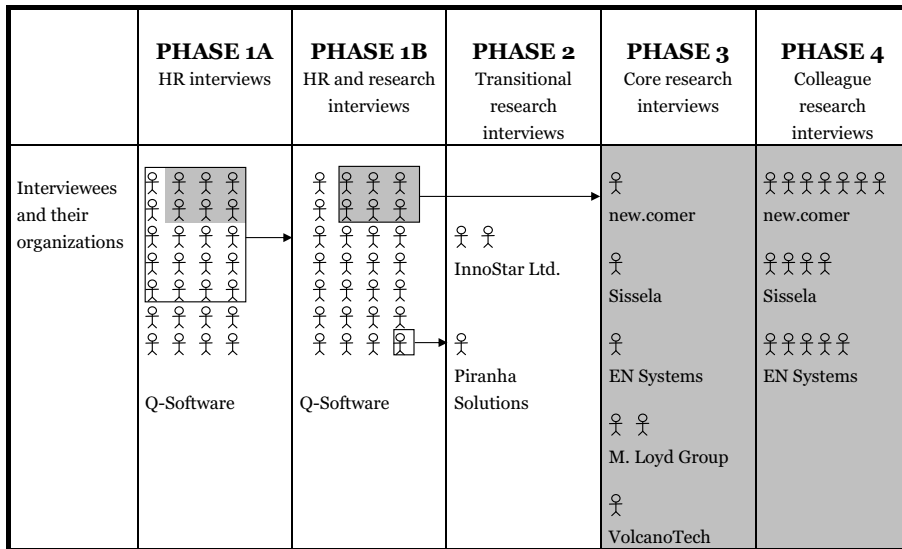
4.5. Analysis of discourse in product development and organizational restructurings

To analyze various discursive practices around software product development during organizational restructurings, I draw on discourse analysis. Discourse analysis as organizational analysis (Chia, 2000) has increased for some time now (Hardy, 2001). This increasing number of studies drawing on discourse analysis provides a rather broad variety of different forms of analysis. An important reason for this is that discourse analysis is typically drawn upon as a methodology rather than as a specific method or technique. Moreover, discourse analysis, with a specific view on discourse, text and context (see Chapter 2) provides a critical and powerful way to study *how* social reality is produced. This analysis illustrates how various discourses, as structured bodies of texts, constitute social phenomena. Therefore, discourse analysis offers a framework for understanding various discursive practices that produce social phenomena as well as suggestions for how to study discourse, yet without providing any standardized methods or techniques (Potter and Wetherell, 1987).

Conducting discourse analysis, then, involves choosing between various techniques that the researcher considers to be the most appropriate for exploring the phenomenon under study. In that sense, discourse analysis provides possibilities for creativity which has, however, led to some criticism regarding a lack of rigour (Phillips and Hardy, 2002). Yet discourse analysts (for, example, Potter and Wetherell, 1987, 168) have argued that too systematic or mechanic methods 'is precisely the wrong spirit for discourse analysis' as such methods are typically used in attempts to formulate 'unitary or general explanations' while discourse analysis focuses on nuance, contradictions, vagueness, multiple meanings and so forth. A focus on such issues necessarily means that the analysis must be 'tailor-made' for the specific study, implying that the analyses vary from study to study. This in turn suggests that the researcher must convincingly and carefully report on the 'tailor-made' research design, which is what I shall attempt to do next. My focus here will be rather practical since I already have discussed the epistemological and ontological assumptions informing this study and analysis in Chapter 2, that is, my view on the discursive construction of social reality. Therefore, I will focus on how the interview material can and has been analyzed. In so doing, I concentrate on the main analysis of the interview material but wish to emphasize that analysis also takes place while reading literature, conducting interviews, reporting findings et cetera. Hence, I am not claiming that the analysis was a specific stage separated from the other stages in the research process (Coffey and Atkinson, 1996; Tallberg, 2009).

As I discuss the process of analysis, I refer to the analysis of specific parts of the interview material. In Figure 11, I have marked with grey shades the interviews that were *included* in the main data analysis, in order to also show which interviews were *excluded* from this stage of analysis.

Figure 11 Interviews included in the analysis



4.5.1. Possibilities for the analysis

An examination of Figure 11 in the previous section does not only illustrate which interviews were included in the main analysis. The figure can also help us to see various possibilities concerning units of analysis. Moreover, the specific selection of interviewees in this study contributed to a great number of different possibilities for the analysis of the interview material, which would not have been possible to achieve with a random selection of interviewees. The perhaps most obvious unit of analysis is the individual; the interviews were conducted with the interviewees as 'one-to-one interviews', and thus the interviews could be analyzed at this level. However, as we can see, that selection of interviewees contributes to interesting configurations of people, which potentially can provide possibilities for various useful analyses. The configurations of the interviewees connect people through shared experiences of organizational restructurings, projects and products. Therefore I did not wish to disregard these possibilities that the research design opened up. Rather than using the individual as the unit of analysis, there seemed to be several possibilities to analyze:

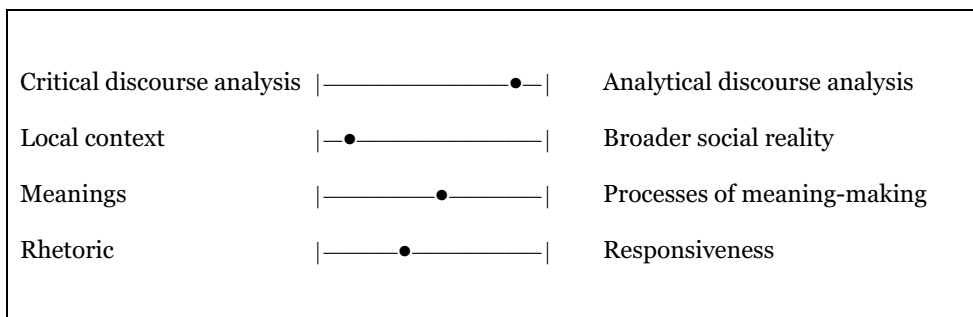
- the six core software product development experts accounts at three different points in time (phase 1A, phase 1B, and phase 3);
- the six core software product development experts as one group;
- the new colleagues as another group;

- the interviews at an organizational level by dividing the interviews into groups on the basis of the companies the interviewees worked in;
- the interview material by phase; and
- groups by comparing them.

All different options seemed to provide valuable sources for analysis. Therefore, I adopted a combination of some of the options. The interviewees were divided into four clusters of individuals; the core software product development experts formed one group and their new colleagues three, according to the companies they worked in. This provided the possibility to analyze how the groups of individuals who had shared experiences of same projects and organizational restructurings constructed these phenomena. It also contributed to potentially analyzing nuances both within and between different organizations. In addition, the forming of these clusters provided an opportunity to analyze the accounts of the core software product development experts at three different points in time.

In taking a relatively analytical approach to these units of analysis, in contrast to a critical starting point, I was cautious not to impose established logics of, for example, asymmetrical power relations, at the outset of the analysis. My aim was to be as open as possible to different issues and micro-processes emerging in the interviews. This contributed to both certain limitations and advantages. On the one hand, as I have suggested before, this approach contributed to certain challenges as the approach implied that new research interests emerged throughout the study, and so explicit constructions of, for example, gender were lacking in the interview material. On the other hand, despite the challenges arising from the adoption of an analytical approach, the analysis of implicit constructions provided possibilities for the exploration of taken-for-granted issues. More specifically, the analytical approach has offered a way of analyzing issues that perhaps otherwise would have gone unnoticed.

The analytical approach to the analysis, with an emphasis on sensitivity to surprises and the richness of the interview material, also implied that the focus was turned to the production of realities in specific local contexts. This is not to deny the idea that the broader social realities and discourses surrounding the studied phenomena are not important. Rather, this was an analytical choice and focus to achieve certain research aims. Furthermore, the analysis put emphasis on both how meanings emerged and on the effects or meanings that such processes gave rise to. For example, I paid attention to how the interviewees constructed subject positions and to the type of (shifting) subjectivities that emerged through these processes of construction. This was done through a close analysis of contextualized performances of language in which social actors interactively construct meaning and/or attempt to legitimate certain interests or social realities. In sum, Figure 12 illustrates where on the methodological dimensions (see Chapter 3) the study can be positioned during the stage of analysis (Jokinen and Juhila, 1999).

Figure 12 Methodological dimensions during the analysis

4.5.2. How the analysis was conducted

The different interview phases have required to some degree different analyses. The first phases, documented through notes, reports and my memory, called for somewhat different analysis and readings than the analysis of the other phases consisting of only transcribed interviews. Next, I will discuss how the analysis was conducted.

4.5.2.1. Readings, rereadings and writing

The analysis began, as most discourse analyses, by readings and rereadings of the material. In order to handle the large amount of transcripts, I used NVivo (a software programme designed to support the handling of qualitative research materials) to get started with the analysis. With NVivo, I divided the material into smaller parts according to certain themes. However, as Coffey and Atkinson (1996, 108) write:

‘Analysis is not simply a matter of classifying, categorizing, coding, or collating data. It is not simply a question of identifying forms of speech or regularities of action. Most fundamentally, analysis is about the representation and reconstruction of social phenomena.’

Therefore, one could say that NVivo was used to ‘code’ the material to aid the analysis, while the analysis and interpretations occurred through ‘structured’ readings and writing. Potter and Wetherell (1987, 168) explain:

‘there is a basic lesson that is inescapable: analysis involves a lot of careful reading and reading. Often it is only after long hours struggling with the data and many false starts that a systematic patterning emerges. False starts occur as patterns appear, excitement grows, only to find that the pattern postulated leave too much unaccounted, or results in an equally large file of exceptions.’

This suggestion made by Potter and Wetherell describes well how my analysis began. To proceed, I began to work through the interview material by writing various papers on restricted parts of the interview material, which I presented for different audiences, mainly at conferences. This was an effort to elaborate on various issues in the interview material. Through these engagements, I began to develop a more structured approach to analyzing the whole interview material. Moreover, I began to see that the interviewees often talked about three key aspects when addressing their work and organizational restructurings, even when not explicitly asked about them, namely (1) products, (2) ways of organizing the development of products, and (3) subject positions. I had already earlier learnt while conducting the interviews that stability in the daily task of the software product development experts during organizational

restructurings was a crucial element in the interview material. Consequently, I wanted to explore if an analysis of all three aspects in each interview could give insight into how the construction of stability occurred. This contributed to a multiangled interpretation (Alvesson, 2003) of the interview material.

4.5.2.2. Multi-angled analysis within clusters of individuals

Having developed a structure for aspects to focus on in the analysis, I continued the analysis by dividing the interviews into four groups; the core software product development experts formed one group, and their new colleagues three groups, according to the firms they worked for. I then analyzed how the persons within each group gave account of the organizational restructurings experienced and the three aspects, products, organizing and subject positions, in relation to the same projects or events. I found this a useful way of analyzing the interview material because it allowed me to explore nuance, contradictions and differences constructed around the same phenomenon, which would have been difficult to do in an analysis of accounts from interviewees without shared experiences. Moreover, crucial to the analysis was the analysis of diverse perspectives within groups of people working together in the same delimited project settings (see also Lindgren and Packendorff, 2006). This allowed for analyzing nuance both within and between the groups of interviewees in different organizations.

The analysis required a lot of reading since the analyzed interview material consisted of nearly 1000 transcribed pages. Getting to know the interview material and writing conference papers required several readings. I then proceeded by reading each interview to identify the organizational restructurings that had occurred and how they were given account of. Following this, each interview transcript was read at least another three times; once per aspect I was analyzing. I paid particular attention to how these aspects were related to the organizational restructurings that had occurred in the organizations. As I was conducting the readings, certain patterns began to emerge within each group regarding each aspect. This is not to say that there was a consensus between the interviewees within each group; rather there were common 'stories' or accounts, which the interviewees constructed in differing ways. As the patterns emerged, I began writing and constructing stories around these aspects, which are presented in the following chapters.

4.5.2.3. Interrelated layers in the analysis

By now, I hope that the reader has a fairly good idea of the data material, how it emerged and how it was analyzed. The figures presented above in this chapter have summarized the interview material by illustrating the different interviewees, the organizations they have worked in and the different phases during which the different individuals have been interviewed. However, what have been missing in these figures have been organizational restructurings experienced, that is, the organizational restructurings that clusters of individuals working in specific organizations have shared experiences of. For example, the figures have not included the organizational restructurings that the product development experts at Q-software have shared experiences of; rapid growth during phase 1A and then downsizing during phase 1B. As I have explained earlier, such organizational restructurings are approached, not as specific events, but as a movement between points of tension involving various interrelated organizational changes. Describing such ongoing and interrelated process

of organizational restructurings easily becomes messy and difficult to present for the reader in a ‘comprehensible’ way. Therefore, to help the reader follow the analysis, the different organizational restructurings are summarized in a table in which they are divided into different ‘boxes’ to make it easier to discuss the restructurings despite the claim that these organizational restructurings may be strongly interconnected. Various versions of the table will be used repeatedly as a map throughout the chapters on the analysis to help the reader follow the analysis of different organizational restructurings. The site of each organizational restructuring is viewed from the perspective of specific organizations (Q-Software, new.comer, Sissela and EN Systems), although the aim is not to analyze the organizations as such. Rather, these ICT companies are used as different contexts around which the analysis is organized.

In sum, before proceeding to present the analysis and findings, I wish to illustrate with a table the connections between the four interview phases and the organizational restructurings from the perspective of four organizations around which the analysis is organized. With Table 2, I show how the organizational restructurings in various ICT companies (column 1) fit into the picture of the various interview phases (columns 2-6). The shaded areas show during which interview phase accounts concerning certain organizational restructurings in specific organizations were collected.

Table 2 Interview phases and organizational restructurings in specific organizations

Organization and restructuring	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Q-Software: rapid growth	X				
Q-Software: downsizing		X			
new.comer: acquisition of Noburu Zone					X
new.comer: structural reforms at Piranha Solutions					X
new.comer: downsizing at Piranha Solutions					X
new.comer: dissolving the product development unit					X
new.comer: founding new.comer					X
Sissela: rapid growth					X
Sissela: downsizing					X
Sissela: adaptation to subcontracting					X
EN Systems: rapid growth					X
EN Systems: adaptation to the burst of the IT bubble					X
EN Systems: employee turnover					X
Q-Software: startup stage				X	
Q-Software: rapid growth				X	
Q-Software: downsizing				X	
Q-Software: post-bankruptcy				X	

In the following five chapters, I will analyze and illustrate each shaded area one by one. In the next section, I will explain in more detail how I will do this.

4.5.3. *The structure and focus of the analysis*

In the next five chapters, I will analyze the interview material. Therefore, let me say a few words about how these chapters are structured. Each chapter focuses on analyzing a cluster of software product development experts working or having worked in the same organization with experiences of the same projects and organizational restructurings. The clusters are, therefore, named after the organization in which the experts worked; Q-Software, new.comer, Sissela and EN Systems. Table 3 summarizes which cluster is analyzed in each of the following five chapters and during which interview phase the interviews were conducted.

Table 3 Structure of Chapters 5-9

	Cluster	Phase analyzed
Chapter 5	Q-Software	1A and 1B
Chapter 6	new.comer	4
Chapter 7	Sissela	4
Chapter 8	EN Systems	4
Chapter 9	Q-Software and 'post-Q-Software organizations'	3

As Table 3 shows, the first analysis chapter focuses on the phase 1A and 1B interviews with the software product development experts from Q-Software. The three chapters that follow the analysis chapter on Q-Software focus on the analysis of the interviews with the Q-Software experts' new colleagues; first at new.comer, then at Sissela and finally at EN Systems. In the fifth and final analysis chapter, I return to the Q-Software interviewees and analyze the third round of interviews conducted with them during phase 3.

When analyzing these clusters, my aim is to explore the three research questions of this study:

- How do software product development experts construct organizational change?
- How do software product development experts construct their work in relation to organizational change?
- What kind of phenomenon is organizational change when seen through the lens of discourse and practice?

To explore these research questions, I begin by letting the first analysis chapter focusing on Q-Software act as an introduction to the other analysis chapters. In the following four chapters, each analysis chapter begins with an examination of the organizational restructurings that had occurred in the organizations the interviewees worked in. Following this, I proceed to analyze how the interviewees construct their work in relation to these organizational restructurings. I am in particular interested in three aspects of software product development and how they are related to organizational restructurings, that is, how (1) products (2) ways of organizing and (3)

subject positions are constructed in relation to organizational restructurings. Therefore, each of these aspects forms a separate section in every chapter.

I focus on these three aspects in relation to organizational restructurings as the analysis showed that they form perhaps the most important discursive resources when the interviewees talk about their work. Although the emphasis in the analysis of each cluster easily slips towards common and shared constructions of these aspects, I will attempt to also let individual distinctiveness come forth.

The different aspects analyzed in each chapter differ to some extent from each other. Organizational restructurings, products and ways of organizing are concepts and phenomena that were explicitly asked about and discussed during the interviews. Subject positions were not explicitly asked about but emerged as an interesting topic for the analysis after the main analysis was started. These aspects are not seen here as fixed but as ultimately open-ended and dependent on the persons using them, on when they are used and on the context. These are issues that are important to keep in mind while reading the following chapters.

I also wish to point out an important theme that will run through all analysis chapters. With the analysis, I wish to highlight the role of stability during organizational restructurings. Therefore, organizational restructurings in relation to products, ways of organizing and subject positions are explored as potential arenas for constructing stability.

Finally, at the end of each of the four Chapters 6-9, I will reflect on the interview data analyzed and consider its implications for more general theoretical issues. Both data and theory can be understood and approached in a great variety of ways as can their relationship to each other. As the reader by now can probably guess, my attempt will not be to build theory on the basis of categorization, causal explanations, or typifications. Rather, in line with the overall methodology of this study, I will put more emphasis on the relationship between data and theory in terms of *theorizing*.

Theorizing is here viewed as interwoven with data collection and processes of analysis, not as a separate research stage or task (Coffey and Atkinson, 1996). However, this is not to say that there cannot be tensions or gaps between data and theory. Rather the argument is that such tension even can contribute to fruitful theorizing. My aim is therefore to use data, analysis and theory, as well as their tensions, to theorize and generate new insights around product development and organizational restructurings. In other words, in reflecting on data and theory the attempt is not to integrate data and theory but more about 'thinking with the data' (Coffey and Atkinson, 1996) and thus developing, transforming and challenging established theories.

When reflecting on the relationship between data and theory in each of Chapters 6-9, I will highlight different (although interrelated) theoretical issues. In that sense, each chapter contributes to different aspects of theorizing product development and organizational restructurings. However, in all of these chapters there are also other themes that I suggest are more cross-cutting, that is, relevant in all analysis chapters. I discuss these cross-cutting themes in Chapter 10.

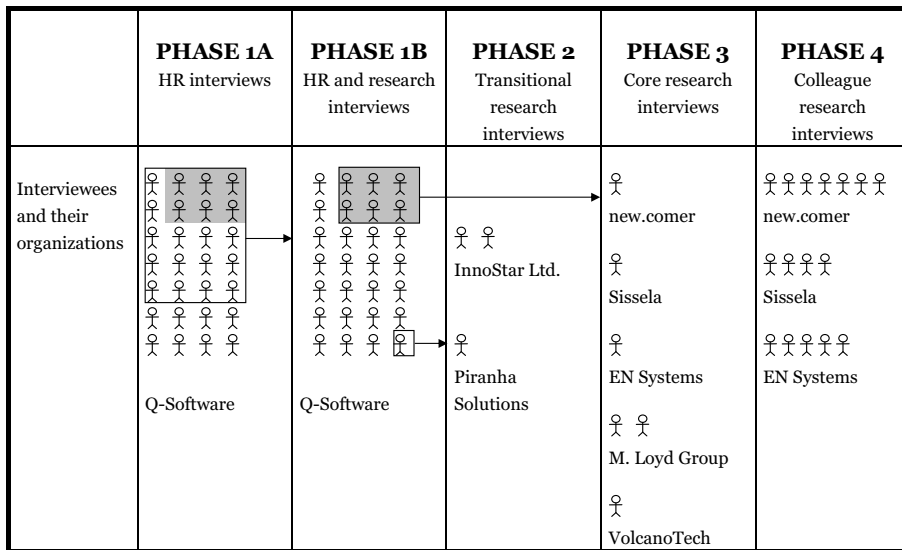
The cross-cutting themes are time, subjectivity work and gender. Time is a cross-cutting issue as change and restructuring is intrinsically about time and thus relevant in all analysis chapters. To illuminate the implications following change over time, I will discuss how organizational change often implies ongoing subjectivity work. Moreover, building on and further developing the analysis of subject positions, I elaborate on

active restructurings of subject positions during organizational change in terms of subjectivity work. Linking to subjectivity work, I then specifically focus on gender positioning and gender issues. Gender is central in the analysis as it is constantly present through the male-dominated environment studied, but yet also, as the reader will see, very absent. In the following chapters, we will see how men, as a category, is 'implicitly talked of, yet rarely talked of explicitly' (Hearn, 1998, 786), and hence mainly take-for-granted, not questioned or problematized. But now let me introduce the reader to the empirical part of this study.

5 Q-SOFTWARE: WORKING AND RESTRUCTURING

It is time to take a closer look at Q-Software, an organization I already have mentioned several times as this is where this study initially began to take shape. More specifically, in 2001 I worked as HR Manager at Q-Software for nine months. When I began working for Q-Software, the company was undergoing rapid growth which soon was followed by a downsizing process. During these organizational restructurings, I conducted 56 HR and research interviews. In this section, I primarily focus on analyzing 12 of these interviews. First, I explore six interviews conducted during rapid growth with the core product development experts of the company; Adam, Frank, James, Kevin, Peter and Scott. Then I continue by analyzing another six interviews conducted with the same experts, but this time during the downsizing process. The grey shadings in Figure 13 illustrate the interviews of focus in this chapter. The arrows and frames indicate the longitudinal dimension of the study, that some interviewees were interviewed several times.

Figure 13 Analysis of Phase 1A and Phase 1B from the perspective of software product development experts



Although I focus in the analysis on the interviews conducted with these six persons, as shown in Figure 13 I also draw on other sources and in that respect this chapter differs from the other chapters on the analysis. I draw on reports I wrote for the management team of Q-Software after having conducted the interviews. I also make use of my own experiences and memories from working at Q-Software during the organizational restructurings, many of which I made notes of. The background information is drawn from official company documents (presentations of the organization and its products produced for marketing and sales purposes) and from the interviews. I will indicate when I draw on a specific source; my own memories of the organizational restructurings will be in italics and marked with a frame.

In the company documents, Q-Software was described as an organization that developed, produced and marketed group communication software for operators and service providers. The company was founded in the late 1990s by some of the core product development experts in focus in the analysis of this section. The company was privately owned by a few employees, including some of the core product development experts. I was told that a couple of years after the founding of the company, Q-Software wanted to begin to expand, and hence a new CEO was employed to take this issue further. It did not take long before the organization was backed by a venture capital company; the IT sector was on the upswing and venture capitalists were moving fast and making large investments even in small startup companies making no profit.

With the now much greater resources, Q-Software entered a period of rapid growth in terms of number of employees. The company went from being a small company employing a few software product development experts to an organization with persons also working on a full-time basis with marketing, sales, project management and administration. During the peak of the rapid growth, I counted that the personnel consisted of over 40 full-time and part-time employees. The organization moved into new much larger, 'better' and more expensive premises in the heart of the city of Helsinki. The company also wanted to operate in international markets and established a small office with two employees in East Asia.

In the interviews, it became apparent that practically all attention, from the perspectives of software development, sales and marketing, was targeted at one product, which was developed and marketed simultaneously. The interviewees expressed a strong belief in the product that was being developed. The product was seen by most of the interviewees as potentially becoming a widely, perhaps globally, used software solution in the relatively near future. As one interviewee said, he hoped the product eventually could be put into mass production. Moreover, the software product development experts seemed to draw on the dominant discourse of fast, large-scale growth characterizing the IT bubble at that time.

Memory: Rapid growth and informal relations

When I began working at Q-Software, the growth was rapid and many of my new colleagues also had fairly recently began working for the company. As the number of employees grew, the company had been divided into four departments; product development, marketing, sales and administration. The supervisors of each department as well as some other persons in key positions formed the management team. All employees seemed to have a clear picture of who their supervisor was. Yet, I remember being asked, as the HR Manager, by some employees if there was an official organizational chart. I found out that the answer was no; the management team specifically did not want to write down a hierarchical organizational chart or formalize relations as this was seen as possibly constructing stronger boundaries between various groups in the organization. I think such boundaries were seen as a potential threat and working against the organizational culture; it seemed to be important to maintain the informal sense of interaction that had emerged while Q-Software only had a few employees. This, the informal and friendly atmosphere, is perhaps my first and strongest memory from Q-Software.

The supervisors gave the employees a high degree of autonomy to define their own work tasks and the practices related to them. This contributed to rather improvised ways of organizing, which were highly valued by the employees and had several implications, for example, for the working climate. This was emphasized in the HR interviews with the core product development experts. The working climate was described as 'relaxed, fun and friendly' and was seen to have taken shape thanks to that the members of the work community were relatively likeminded young people. One person even said that it did not feel like he went to work in the mornings, it felt more like he went to a place where he could hang out with friends. In that regard, the product development experts seemed to have bonded and formed quite close relations.

The tasks provided to the product development experts were seen by the interviewees as being equally as important as the working climate. The product development experts' work tasks mainly involved planning, supervising software programmers, coding, managing projects and supporting the sales department.

Memory: 'I enjoy solving difficult technical problems'

One morning, when coming to work I bumped in to a software programmer. He looked tired, so I asked him if he was all right. He answered 'yes' but continued by explaining that he had stumbled over a difficult problem while programming the previous night. Wanting to solve the problem, he had spent all night struggling with it. I must have looked slightly surprised because he explained that it had been fun, especially when he managed to solve the problem. However, he said he was exhausted so he went home to have a good sleep.

The memory above is a rather extreme example of the product development at Q-Software. Programming was not always nearly as exciting as in this example, often it was just the opposite, but the possibilities to both innovate new software and to learn new skills were seen as very motivating by the product development experts. Solving demanding technical problems in particular was mentioned as rewarding. The satisfaction arising from the tasks and working climate seemed to be connected to and emerging from the relatively improvised ways of organizing. In addition, the product development experts expressed satisfaction with working in a rather small organizational context as achievements were easily observed, recognized, and appreciated by others in contrast to some experts' previous experiences in large ICT companies, where they had experienced feelings of being just another employee.

Some product development experts saw the product and company vision as an either/or vision; either the product would become a large-scale success or not survive at all. Moreover, there was a hope of becoming a global actor producing and selling group communication software. Interestingly, the interviewees thus seemed to express a desire for contributing to the growth of the company and simultaneously a strong identification with being positioned as an employee within a small company. That is, the interviews seemed to show that in the current state of the organization the product development experts had rather good possibilities to 'negotiate voice', an issue they embraced as crucial for their satisfaction, and yet they wished to move away from this. Perhaps one could argue that the positions available for the software product development experts in these discursive practices constructed the individuals as

autonomous actors in charge of their own work yet as team players, as confident experts, sometimes as risk takers and on the other hand also as important actors for taking the organization in trajectories that potential could transform these desired subjectivities.

Only a few months after the 'growth visions' had been expressed in the interviews, they were put to the test. The product under development had not been sold and the IT bubble began to burst. The venture capitalists' investments were running out, and in the changed market situation the company found it difficult to do business and attract new investors.

Memory: Downsizing and dedication

The CEO called for a meeting with the whole personnel. I remember the nervousness in the air before the meeting. Many probably feared the worst but little was said. As the CEO entered the meeting room, where everyone was waiting for him, he had a piece of paper in his hand that he explained an attorney had written. He read it out loud explaining the difficult financial situation of the company and announced that a downsizing process was to be started with some temporary dismissals. The objective was to cancel the dismissal as the situation had been turned around for the better. This never happened. Instead, no salaries were paid and two months later, all employees except two product development experts were dismissed for good. Yet many, including both owners and non-owners, were dedicated to work long hours, even without a salary for months⁸. The dedication really amazed me. At least between 15 and 20 persons continued coming to work every day as usual many being prepared to make personal sacrifices to contribute to solving the situation the company had ran into; they prioritized working for no money above searching for new jobs, someone even claiming to have turned down other job offers.

But how did the software product development experts account for this downsizing process as it unfolded? In the interviews that were conducted from the day after almost the whole personnel had been informed that the dismissal soon were going to come into force, the interviewees expressed a belief in that the economic problems were going to be solved. The way the situation was discussed showed that many implicitly assumed that the company was going to recover, for example, as one software development expert said he hoped that some particular practices that had emerged through the downsizing process would remain also after the difficulties had been overcome. Hence, he was assuming that there were better days to come. In the interviews, many product development experts also said that they did not want to leave the company unless their personal financial situation forced them to do so, hence showing willingness to maintain the daily practices of product development.

⁸ Wages were partially paid retrospectively by the Finnish Employment and Economic Development Centre. In Finland, employees can get benefits up to a certain limit if their employer due to bankruptcy or insolvency is unable to pay wages, salaries or other compensations.

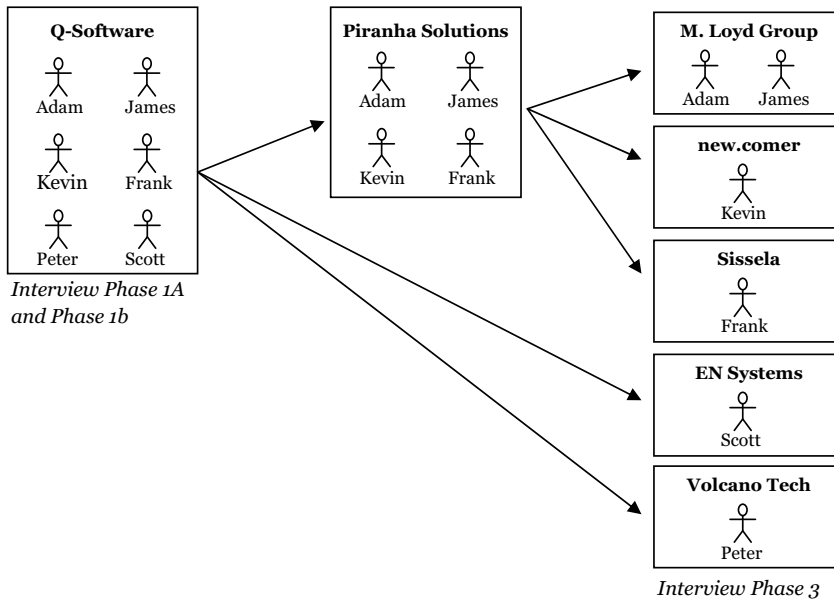
Despite the belief in turning the situation around, some critical voices were simultaneously expressed. With increasing uncertainties concerning potential sales opportunities, some product development experts said in the interviews that the product vision had become blurred and had frequently changed depending on potential future customers, investors and business models. There was also a call for more specific visions and strategies as well as stronger leadership – in other words, ways of organizing that previously during the rapid growth had been seen as undesirable. Some software product development experts said that they suddenly found their work disordered and most experts expressed a need for increased information regarding the economic situation of the company. It seemed like most product development experts felt that they lacked direction.

The atmosphere and interaction between the product development experts did not seem to suffer from the downsizing process, although I remember some tensions between, for example, the sales and product development departments. Nevertheless, the software product development experts said in the interviews that they experienced an increasingly strong feeling of unity. For example, the interviewees emphasized that ‘the spirit was unbelievably good’ and that in this situation ‘nobody should be working alone’. Perhaps this feeling of unity constructed and was constructed by the strong dedication to work despite the dismissals, which in turn increased the efforts that were put into product development.

Numerous attempts to solve the problems did not have the intended results; in due course, a group of employees including all core product development experts with only one exception decided to found a new company. The aim was to buy the rights to the main product and continue developing it, illustrating that the majority of core software product development expert were prepared to make great efforts to save the product. The product could subsequently be interpreted as a crucial source for commitment; examining constructions of the product shows how the efforts to save the product produced joint actions among certain employees. However the attempt to buy the product was also doomed to fail and the rights to the product were therefore sold to another software development company, here given the pseudonym Piranha Solutions, after Q-Software went bankrupt in early 2002.

So what happened to the core product development experts after the bankruptcy? Four of the six core product development experts, Frank, Adam, James, Kevin, as well as another colleague were employed by Piranha Solutions. After a rather short employment with Piranha Solutions, Frank left and began working for Sissela, a medium size ICT company. Piranha Solutions was later on split into two companies (M. Loyd Group and new.comer). Adam and James moved on to M. Loyd Group and Kevin began working for new.comer. Scott, left Q-Software before the bankruptcy and was employed by an ICT company called EN Systems while Peter founded a new company, Volcano Tech. Figure 14 illustrates how the six core product development experts moved from Q-Software to new organizations as well as at what stages I conducted the interviews.

Figure 14 The core interviewees movements from Q-Software to new organizations



By having the opportunity to conduct interviews as well as observe and work alongside the processes of product development during the various organizational restructurings described in this chapter, the aim of this study began to take shape. The strong commitment involving the construction of stability despite the far-reaching organizational restructurings raised many questions. By analyzing the results from the data from Q-Software, my research interest in product development during organizational restructurings emerged, and I decided to take a deeper look at issues found in the Q-Software case by interviewing the core product development experts, Adam, James, Kevin, Frank, Scott and Peter, a third time, as well as some of their new colleagues.

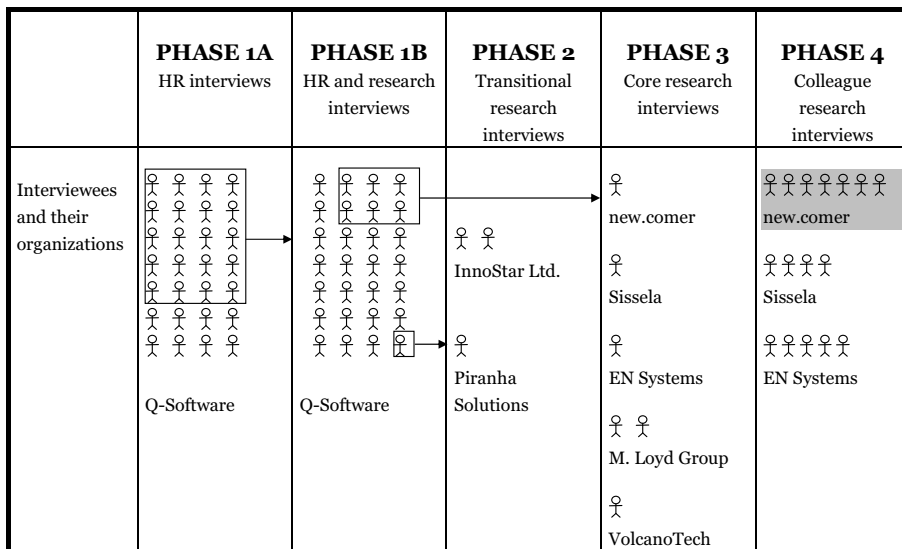
To conclude, with this chapter, I wish in particular to highlight how I became interested in the construction of stability during organizational restructurings. This has been a first introduction to how stability can take shape in the very mundane but at the same time heterogeneous and shifting everyday practices of product development. I hope that after having read the next four chapters the reader will have gained a greater insight into the mutual construction of stability, mundane product development practices and subjectivities during organizational restructurings.

In the next three chapters I discuss the analysis of interviews with Kevin's, Frank's and Scott's new colleagues, all also product development experts, at firms called new.comer, Sissela and EN Systems. James' and Adam's colleagues at M.Loyd Group were excluded as this company did not employ new product development experts, while Volcano Tech was excluded because Peter was the only product development expert in that company. After the analysis of the research interviews with the colleagues from new.comer, Sissela and EN Systems, I return to the core product development experts and analyze their interviews in Phase 3, while this chapter has focused on Phase 1A and Phase 1B.

6 NEW.COMER: TOWARDS PATTERNED PRODUCT DEVELOPMENT

In this chapter, I will analyze seven interviews with software product development experts all working in the same ICT company, here called new.comer. My aim is to explore my three research questions to see how software product development experts construct organizational change, as well as how they construct their work in relation to such changes. First, I will describe all the organizational restructurings that the interviewees had experienced at new.comer. Following this, I analyze how the interviewees relate software product development to these organizational restructurings. I do so by analyzing three central aspects of product development; (1) the products under development and relations to them, (2) ways of organizing the development of these products, and (3) the interviewees' positioning within these processes. As we will see, in and through the experienced organizational restructurings change and stability become intertwined. In Figure 15, I have marked with a shaded area the interviews with seven interviewees from new.comer that are the focus of this chapter.

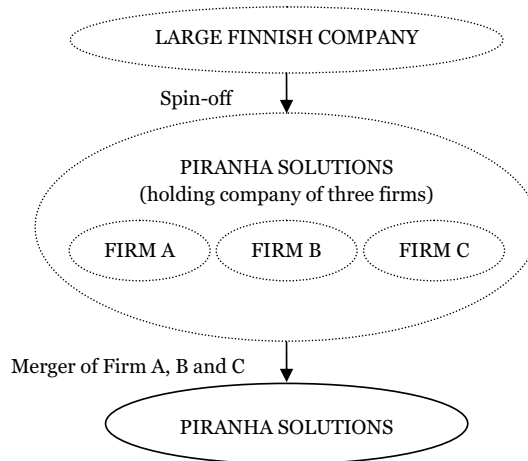
Figure 15 Analysis of Phase 4 interviews within the new.comer cluster



new.comer was founded in 2004 and both develops and supplies software solutions. However, the development of new.comer's products had originally been started or developed in at least three other companies, Piranha Solutions, Noburu Zone and Q-Software. Therefore, this section covers accounts from three organizations: new.comer, Piranha Solutions and Noburu Zone. The story of Q-Software has already been introduced in the previous chapter and will be continued in Chapter 9, so it is therefore not included here. But now, let us take a look at how these organizations had emerged and what type of organizational restructurings they had gone through.

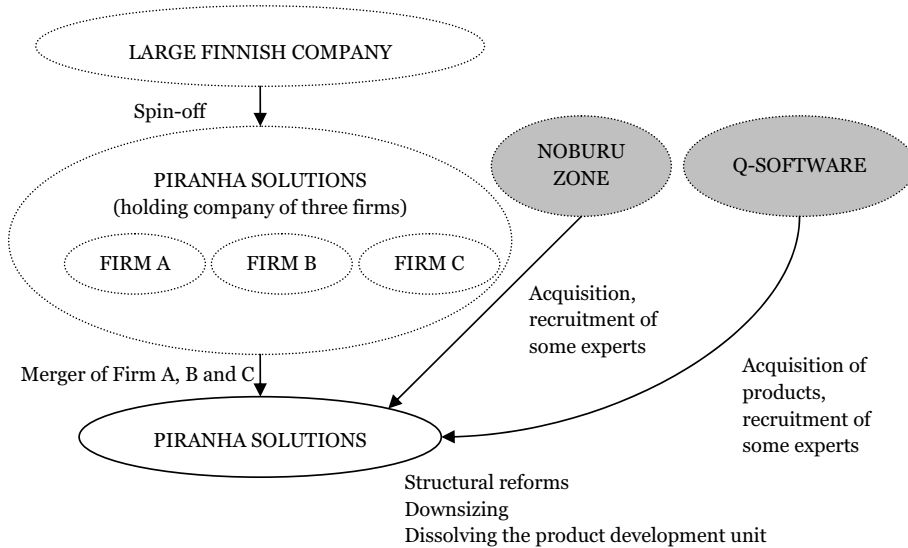
Piranha Solutions began as a spin-off company that was split from a large Finnish company. First Piranha Solutions was a holding company of three firms which later were merged into one company as illustrated in Figure 16. In Figure 16, each arrow illustrates an organizational restructuring as indicated alongside.

Figure 16 The founding of Piranha Solutions



It was around this point in time, when Piranha Solutions was merged into one company, that Kevin, one of the core product development experts that had worked for Q-Software, began working for Piranha Solutions. Seven of Kevin's co-workers, Glen, Hubert, Joe, Lucas, Phil, Ted and Vincent, all product development experts, agreed to participate in the study. All of these interviewees, with only one exception, joined Piranha Solutions approximately around the same time as Kevin. Five of these interviewees were employed by Piranha Solutions due to the acquisition of a company, Noburu Zone, that they worked for. This is shown in the shaded area in Figure 17. The figure also illustrates with another shaded area when a product was bought from Q-Software. Again each arrow with text alongside illustrates an organizational restructuring.

Figure 17 Acquisition of Noburu Zone and acquisition of product from Q-Software



After the merger of the three firms of the holding company, the acquisition of Noburu Zone and the purchase of products, Piranha Solutions was restructured into a matrix organization. Through this restructuring, a number of different departments involved in product development were merged into one large unit.

The establishment of the large product development unit was followed by numerous organizational restructurings. The following years various downsizing processes and structural reforms occurred frequently, often simultaneously. More specifically, soon after Piranha Solutions had recruited many product development experts from, for example, Noburu Zone and Q-Software and while the matrix organization was being established the organization initiated a downsizing process. Many product development experts were dismissed, some temporarily and others for good. Simultaneously many product development experts, who had not been laid off, decided to leave and apply for jobs elsewhere, causing a high turnover of workers in the product development projects. In addition, the matrix organization did not last long. Instead product development teams were split and merged numerous times resulting in that, for example, the persons supervising the teams changed repeatedly. One interviewee explained:

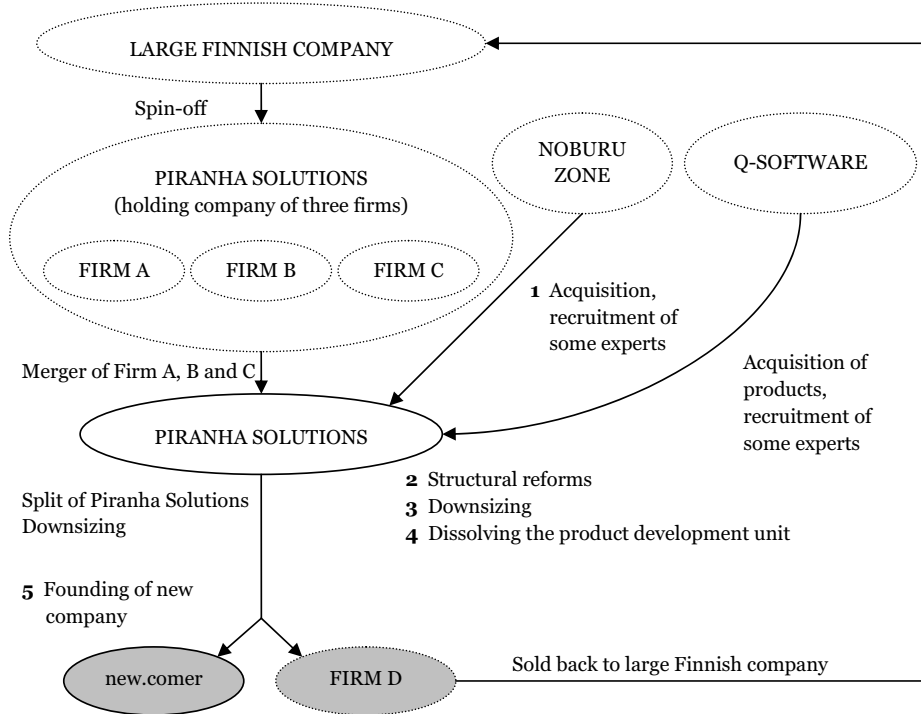
'People began to go, either voluntarily or on the employer's request. Well this shook and mixed [the organization], because key persons disappeared every so often.' (Joe)

Over the next months, more attention was increasingly paid to introducing 'formalized' ways of organizing product development, such as project management. This was an effort to improve the product quality and meet the expectations of various external stakeholders.

Again, it did not take long before the next organizational restructurings were initiated. The large product development unit, which had been created through the establishment

of the matrix organization, was dissolved. The groups doing customer projects and the groups engaged in NPD were separated into different departments with different managers. A few more months down the road, Piranha Solutions was split into two companies, one focusing on customer projects and one on NPD projects. The company that delivered customer projects was sold back to the company it once had been a spin-off company from. The other organization that focused on new software product development became new.comer. The shaded areas in Figure 18 illustrate these various organizational restructurings. In addition, some of the organizational restructurings in the figure have been numbered as these are restructurings that I will pay particular attention to in the analysis.

Figure 18 Split of Piranha Solutions and founding of new.comer



The organizational restructuring through which Piranha Solutions was split into two companies also involved other changes, such as downsizing processes with certain implications. Three of the interviewees commented on these organizational restructurings in the following way:

‘There were a few [interrupts himself], there were also dismissals during the split ... And not just dismissals, some thought that it wasn’t good and decided to leave.’ (Phil)

‘The number of employees decreased significantly, which influenced the workload. And then of course, my tasks changed.’ (Lucas)

‘It radically influenced how fast a product can be taken forward. Anyway, in practice we’re a fraction of what we were a year ago.’ (Joe)

As the extracts show, the split implied downsizing with consequences also for those who could stay on in the organization, for example, regarding the size of their workload.

All the software product development experts interviewed were involved in NPD and became employees of new.comer after the split. new.comer was now a company of less than 20 employees working in two different offices. The company was considerably smaller than Piranha Solutions, which had had 120 employees a couple of years earlier. new.comer employed eight product development experts; five in one office and three in the other.

As we can see, the software product development experts interviewed had experience of several, often simultaneously occurring, organizational changes and restructurings. Moreover, many of the organizational changes were closely interconnected. What I am interested in is what it is like to work in this context. In the following sections, in this chapter I will explore how Glen, Hubert, Joe, Lucas, Phil, Ted and Vincent relate their work to these organizational changes. To help the reader follow this discussion, I have grouped and summarized the most important organizational restructurings in Table 4 and indicated that the interviews were conducted during interview phase 4. I will use the table repeatedly throughout this chapter to show the reader which organizational restructuring I am referring to in different sections.

Table 4 Interview phase and organizational restructurings at new.comer, Piranha Solutions and Noburu Zone

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Acquisition of Noburu Zone					X
Restructuring 2: Structural reforms at Piranha Solutions					X
Restructuring 3: Downsizing at Piranha Solutions					X
Restructuring 4: Dissolving the product development unit					X
Restructuring 5: Founding new.comer					X

6.1. On products and relations to products

In this section, I will explore various constructions of products and relations to products at new.comer. My intention is not to give a comprehensive definition of products. Rather, I wish to point out various conceptualizations of products to illustrate the often nuanced ways in which product development experts talk about the products they develop as such conceptualizations may have further implications for, for example, ways of organizing and subject positions.

The development of new.comer's products had already begun before the company was founded. More specifically, Piranha Solutions, the company new.comer had been split from, had a number of products that originally had been bought from other software

development companies, which then were further developed and sometimes combined into larger products. Hence, the main products of new.comer had taken shape over time in many organizations. As the products had travelled from one organization to another, many of the product development experts who had developed the specific products also moved with the products:

‘Much of the knowledge is in the heads [of the product development experts], so it’s an important part of it, so, of course, those who buy a product from an other company, want to have the people too, because you can’t do anything with it, or you can do something, but the software is worth much less. So you also want to have the person who has worked with it.’ (Glen)

Glen points out that the value of a product, from a software provider’s perspective, is tightly intertwined with the individuals who have developed it. More specifically, the product development experts were constructed as almost a part of the product or as having a close relation to them. The recognition of and emphasis on this tight relation between products and the product development experts implied that many experts were provided with the possibility to continue developing particular products often over many years despite various organizational restructurings such as, acquisitions. This, in turn, probably further strengthened the connection between specific products and individual product development experts, but also the relations between the different experts through the product.

Over time, the products were attributed various and relatively complex meanings. For example, the product that was originally initiated in Noburu Zone, later bought by Piranha Solutions and finally passed onto new.comer was seen as a result of ongoing co-produced development efforts:

‘When you develop a product, you produce one version of this product. And when you have released one version of a product you want to start the next version of the product. But while you develop the next version of the product you will probably or you always find bugs in the product you already have released. And then you sort of have two products that you are developing at the same time, one that you making corrections to and another one that you add features to, all at the same time. And then it’s critical that you know which one you already have released and which one you are developing. And that you are aware of which changes you have made, where and so forth. And these are the type of issues we were very good at, at Noburu Zone. But here [at Piranha Solutions], it was awfully chaotic, there were small changes somebody had made. There was no secure place for the code in the sense that somebody had made a small change somewhere and kept this small part of the code hidden in some corner sort of. And then when you made a product you took a little bit from here and a little bit from there and there and then you didn’t quite know where it was. And then someone perhaps left [the organization] and had his part, a critical code, hidden on his own computer that no one else could access anymore or figure out where it was.’ (Glen)

Glen’s discussion illustrates how a number of products had interactively taken shape over many years. His construction directs attention to how a code was co-produced at Noburu Zone by a number of product development experts drawing on a discourse of product development promoting order. To produce order and legitimize certain logics for the product, the product development experts’ actions were first interrelated through certain shared rules that had emerged through informal interaction. Moreover, there was an agreement between the product development experts concerning when the development process was to be momentarily stopped and the code labelled as ‘a product’. Then the development activities were continued, and the code was used to create a new (version of the) product, while bugs in the previous version of the product were simultaneously corrected. The products were hence seen as separate yet interrelated. Further, the codes that constituted the products were kept so that all product development experts could access them and follow up updates, thus offering shared ‘ownership’ of the code. When the product then was sold to Piranha Solutions,

the established definition of products was disturbed. The rules for how to work and maintain products as well as the definition of when a code is labelled a product became blurred. In short, the codes constituting products were not treated as shared ones, as various parts were often only saved on the computer of the person working on the particular part. This caused feelings of disorder and sometimes even chaos.

In contrast to how products were understood at Noburu Zone, at Piranha Solutions more emphasis was put on the end product than on the process of developing software, as Ted said:

'Few supervisors have cared about them, what the process looks like, as long as the product is produced and it can be sold.' (Ted)

The focus on products implied that how work was carried out was not regulated to a great extent. Therefore, many product development experts who were recruited with a product used the product as an organizing resource, a 'stable' point, which gave structure to everyday routines in the otherwise relatively disordered reality. In that sense, the product played an important role for organizing and stabilizing. Consequently, various small groups within Piranha Solutions developed different daily practices of product development. The production of many different practices within the company made it difficult for different individuals and groups to interrelate their actions. Therefore, the product quality in many cases was poor despite the strong focus on end products. Over time, however, as the organization was restructured, the focal point was radically turned away from the product and directed towards the process of developing software with the intention of providing and restoring order in the products. That is, to restore order in the product, less emphasis was put on the end product. Now, the same products were more carefully divided into specific versions and thus continuously improved, as had been the case at Noburu Zone:

'When you constantly develop new versions, there are old versions in the background, which are tested repeatedly and are up-dated; they're constantly fine-tuned which makes them better and better.' (Joe)

'Our products are now fairly mature. Or lots of work has been done on them. And usually the work we do on them is only extra features which is quite straight forward and familiar stuff to you. You don't have to communicate much other than in the beginning when we do the planning.' (Ted)

The products were described as having become more mature over the years and requiring less interaction and giving the product development experts a stronger sense of control. Interestingly, the one and the same mature product was often seen as both successful and unsuccessful. For example, different product development experts labelled them in different ways or sometimes even the same person could see a product as both successful and unsuccessful at the same time, depending on what they focused on. However, in general unsuccessful or 'imperfect' features in a product often raised certain emotions:

'It is of course sad in every product development situation to let something half-done go.' (Joe)

Here we see how the product development experts occasionally had been asked to develop extra features for existing products. This had meant that 'imperfect' features had been added to technically 'successful' products, an issue raising negative feelings of 'sadness'.

Further, products that previously had been a great source of enthusiasm later also became a source of frustration for some, as the products offered fewer professional challenges over time. On the other hand, the mature products also served as a source of pride as Phil argued:

‘Now that we have a good mature product, I’m also proud of the result.’ (Phil)

Many of the product development experts emphasized the importance of developing commercial products and took great pride in the products they had developed, arguing they were technically good. Yet, interestingly although the products were constructed as technically successful, few had been commercially successful, or as Phil said, they had been ‘difficult to sell’.

To conclude, this section has shown several examples of how software product development experts ascribed products a great variety of different meanings hence highlighting the complexities around software and the shifting nature of such meanings, for example, as organizational restructurings unfold. Software products are not ‘just codes’ to the product development experts, they can be ascribed a number of different meanings, they may mediate bonds between experts and raise various emotions (Case and Pineiro, 2006; Pineiro, 2003). More specifically, the interviewees touched upon issues of order and disorder, successful and unsuccessful product, aesthetic ideals, access to the full code and so on, often in relation to the ‘ideal’ way of developing software. In so doing, they also said a lot about their relations to one another and to the products, raising emotions such as sadness, desire for perfection, enthusiasm, frustration and pride. For instance, sometimes there seemed to be a tension between the desire for order and the frustration or boredom emerging from a high degree of order. An interesting question is then: How are relations to technology intertwined with the construction of the everyday organizing of product development, in particular during ongoing organizational restructurings? Can these understandings and relations to software products tell us anything about how software product development experts construct stability in their work? In the next section, I attempt to shed some light on this.

6.2. On ways of organizing product development

In this section, I analyze ways of organizing software product development during various organizational restructurings. I am interested in exploring how the mundane everyday product development practices take shape and are restructured over time. This section is divided into five subsections; in each subsection, I explore ways of organizing during a particular organizational restructuring.

6.2.1. Acquisition of Noburu Zone: Shaping patterned software development process

Many of Piranha Solution’s products had been bought from other software providers, such as Q-Software and Noburu Zone. As already pointed out earlier, the acquisition of a product often also involved recruiting the experts that had developed the product, which implied that such groups also brought with them certain ways of organizing product development. As five of the seven interviewees at new.comer were recruited from Noburu Zone to Piranha Solutions and later to new.comer, I will begin the analysis of ways of organizing by taking a look at how such organizing had emerged at

Noburu Zone. Table 5 illustrates that the processes around the acquisition of Noburu Zone is the focus of this section.

Table 5 Ways of organizing during the acquisition of Noburu Zone

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Acquisition of Noburu Zone					X
Restructuring 2: Structural reforms at Piranha Solutions					
Restructuring 3: Downsizing at Piranha Solutions					
Restructuring 4: Dissolving the product development unit					
Restructuring 5: Founding new.comer					

The ways of organizing at Noburu Zone had taken shape through interactions between the product development experts on relatively equal grounds:

‘When it all started, we sort of developed the process and ways of communicating at the same time and it, the development, was really informal. ... Together we agreed upon things and tried to reach a compromise, something that was ok for the whole team. And that was perhaps important, that we agreed already from the start [on how to work] and held to it sort of. From then on it just rolled on, because everyone had been a part of it, so everyone was pleased when we had reached a shared understanding [of how to develop the product].’ (Ted)

As we see, the product development processes were constructed alongside the product development activities. All parties involved were invited to contribute to defining specific shared NPD process. Through these enactments, a rather regulated process emerged which the social actors seemed to embrace:

‘Approximately every sixth month, we were to have one version of the product ready and therefore we had clear steps, first we planned the product and then [interrupts himself], or first we reflected on the features of the product and then we documented briefly how they were to be implemented and then they were implemented. Then we had a clear period of testing and then it was released. And this was really straightforward. That is how we did it and, and, it worked well. ... we had really clear rules for what to do while developing this and to keep the code in order, in the sense that there are many working on the same product and therefore clear rules so that it doesn’t [interrupts himself], clear, clear rules specifying where and how to work with the code so that it remains functional.’ (Glen)

The ways of organizing software development process provided the product development experts with clear steps and guidelines for coordination and hence a sense of order, predictability and control; the product development experts were in control of the process and product. The co-construction of a shared and specific product development process thus became a resource for performing work tasks, which proved to be crucial when the product development experts began working for Piranha Solutions:

‘So if we hadn’t been in the middle of a product development phase [when Noburu Zone was sold to Piranha Solution] we wouldn’t have had a clue of what to do, we would have drunk coffee and wondered what to do, that is, “What should we do?”, “Should one apply for a new job?”. But in this case everything was all right; we knew exactly what to do. We had already made plans and schedules at Noburu Zone. So when there was this huge change [acquisition of Noburu Zone] we

were still able to continue as before as soon as we connected up our computers we just continued and that was of course good.’ (Phil)

As Phil points out, the plans and schedules helped the product development experts construct stability in their work despite the acquisition and the change of employer, physical place of work, customers and colleagues. This was possible since the product development experts continued working on the same product and other experts were rarely included in the process.

To conclude, in this section we can see how certain shared ways of organizing product development begun to take shape. Through practices that invited all product development experts to give shape to ways of organizing and carrying out software development a specific product development process emerged. This process and certain plans acted as a useful discursive resource when Noburu Zone was acquired by Piranha Solutions by helping the experts to actively engage in their work despite this organizational restructuring. As we shall see in the following sections, these shared ways of organizing product development became an important discursive resource for this group of product development experts as they engaged in their work and dealt with the tensions between order and disorder.

6.2.2. Structural reforms: Adaptation, fragmentedness and tensions

For the new software product development experts coming from Noburu Zone to Piranha Solutions, working did not only involve drawing on methods developed at previous workplaces. It also involved constant adaptation to the new local conditions, in which the numerous, often simultaneous, organizational restructurings framed the discursive resources that were made available for the product development experts. This turned the product development into an arena for a multitude of discursive practices, which is worth taking a deeper look at. In this section, I explore ways of organizing at Piranha Solutions during various structural reforms as indicated in with an ‘X’ in the last column in Table 6.

Table 6 Ways of organizing during structural reforms at Piranha Solutions

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Acquisition of Noburu Zone					
Restructuring 2: Structural reforms at Piranha Solutions					X
Restructuring 3: Downsizing at Piranha Solutions					
Restructuring 4: Dissolving the product development unit					
Restructuring 5: Founding new.comer					

During the first year after the majority of interviewees had joined Piranha Solutions, all customer projects and NPD departments were merged into one large product development unit. The departments merged seemed to have been sites for very different and typically more improvised than patterned product development processes. The newly-recruited product development experts found the numerous

different organizational practices disordered and even chaotic, in particular those persons who had previous experiences of relatively patterned product development processes at Noburu Zone:

‘In the same group there were people doing different things, and we, in our office, didn’t have a clue what those working on other projects did.’ (Hubert)

‘When we came here to Piranha Solutions we realized how great our processes had been at Noburu Zone. I thought, or all of us from Noburu Zone thought, that everything was chaotic here.’ (Glen)

In contrast to how the situation had been at Noburu Zone, there was no overall product development process, neither before nor after the merge of various product development departments at Piranha Solutions. Vincent commented on the new organizational model that was initiated at Piranha Solutions through the merger of product development departments:

‘There was an extremely sophisticated model, which had been planned, but ideas on how to follow it through were totally missing. It was a model on the intranet and it was used in a very fragmented way somewhere, but still the units worked in their own ways and the people worked in their own ways, a shared culture didn’t emerge. ... No matter how hard you try to merge these together with a power point slide show, there are still n-amount of operations models and in that way the old organizations and communication and everything are sustained there, although there is just one box according to which things should be done.’ (Vincent)

The ‘sophisticated model’ for how to organize the product development, did not seem to provide novel and shared ways for carrying out product development even if there were explicit efforts made to create shared patterned product development processes for the whole product development unit. Instead, different groups and individuals continued to draw on various improvised and locally established ways of acting. Hence, the new model did not become institutionalized in the everyday practices, and product development continued to take shape through relatively improvised processes that generated many different local processes within the company. Moreover, the organizational restructurings did not trigger new ways of organizing daily practices as had been intended:

‘The product development became one department, but people were still doing the same as they had been doing before, so it wasn’t very good in that way.’ (Phil)

But how did the local orchestration of social relations unfold in the organizing of the product development? Interestingly, although an important goal of the merger of various product development departments had been to integrate various groups to larger units, the different groups of product development experts were still working in different locations, some only separated within the same building while others worked in different cities. These local conditions did not seem to provide any opportunity for everyday interactions so that shared experiences and views could be obtained beyond the immediate group of co-workers. Instead, the product development experts mainly engaged in interactions within a rather small network of co-workers. This implied, for example, that this context provided the interviewees who previously had worked for Noburu Zone with possibilities to maintain their strong sense of ‘us’ and translate the processes that had emerged at Noburu Zone into action in their new local conditions, that is, to produce stability in daily work tasks.

Although most product development experts were mainly engaged in the development of various versions of specific products increasingly products were combined, which implied that the product development experts working on different products in

different locations were appointed to the same projects. Now, the product development experts had to communicate with an increasing number other product development experts beyond their immediate work groups. However, as some interviewees highlighted, the product development was still fragmented, making it challenging to develop social relations. The necessity of cooperation in a dispersed social environment seemed to have the opposite effects that which had been intended by those who initiated the structural reform:

'There was never a shared product development culture, so it never had a guiding role. And since it wasn't shared but fragmented, it has been a divisive element during the organizational changes.' (Vincent)

Vincent suggests that the fragmented ways of carrying out product development perhaps made the boundaries between various groups stronger rather than bringing people closer to each other. More specifically, product development appeared to become an arena for a variety of different discursive practices, some emphasizing improvised organizing while others highlighted more patterned product development processes. However, some social actors, in particular certain managers, increasingly engaged in attempts to transform and formalize shared product development processes, which produced some critical voices:

'Important decisions were made at the top and nobody listened to us in the product development. ... I think that authority was allocated to people who didn't know the stuff and they didn't ask those who knew it. They had their own vision. At least I thought it was unrealistic.' (Lucas)

Lucas, as many others, was critical of certain power relations in the context of the matrix organization. Although there seemed to be a strong desire for a patterned product development process, there was dissatisfaction with how this call was answered. They argued that the product development experts' expertise was ignored and the experts were therefore not provided with the possibility of participating in the shaping of the new organization in ways that would have been more beneficial for the product development.

The production of contradictory views on product development processes did not only occur between product development experts and their superiors, but also between different superiors. Likewise, tensions also emerged between product development experts. For example, the experts from Noburu Zone supported the emerging efforts to structure product development practices and attempted to impose rules and guidelines that had been generated at Noburu Zone, which caused tensions:

'I recall that when we, we from Noburu Zone, began to impose processes, they [other product development experts] became slightly offended, perhaps because we entered their territory, they had been there for a long time and then we just walked in and said "we think that this should be done like this and this" and they thought [interrupts himself], you can understand that nobody likes it when an outsider comes with an opinion. I remember so well that there was one person who commented that "soon we'll probably have a process for how to wipe our bums in the toilet".' (Glen)

As we see in the extract, the multitude of discursive practices produced tensions between different individuals and groups. To conclude, the organization was constituted by a great variety of different ways of organizing. Perhaps the dispersed product development practices therefore contributed to that product development became a competitive arena emerging from the contest over meanings ascribed to product development processes. The interviewees drew on a discourse of product development that promoted restructuring towards more broadly shared and patterned

ways of organizing. During the following months, the efforts to formalize broadly shared product development processes seemed to gain some ground as, for example, project management was initiated. Yet, the product development experts claimed that only minimal modifications towards shared processes occurred.

6.2.3. Downsizing: Reallocation, heavy workloads and stress

Numerous downsizing actions occurred at the same time as the previously discussed efforts to restructure Piranha Solutions. Ways of organizing during these downsizing processes are the focus of this section, as indicated in Table 7.

Table 7 Ways of organizing during downsizing at Piranha Solutions

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Acquisition of Noburu Zone					
Restructuring 2: Structural reforms at Piranha Solutions					
Restructuring 3: Downsizing at Piranha Solutions					X
Restructuring 4: Dissolving the product development unit					
Restructuring 5: Founding new.comer					

The downsizing processes at Piranha Solutions provided new discursive resources which seemed to enter and to alter the product development practices within the small groups of experts to a greater extent than any other organizational restructuring. The product development experts' workload increased and became broader. Customer requests became a more powerful organizing source; as the company was undergoing financial problems and therefore under a greater pressure to increase turnover, customers were given promises that many product development experts found unrealistic and difficult to meet. To adapt to the particular conditions in which the company dismissed and reallocated employees, the product development experts began redefining and reallocating work:

"Then you have to think about who will do it and we talk a lot about who will do what. And of course the interaction is much about discussing specifically these processes, that is, "Why do it like this?" and "Why are people dismissed?".' (Ted)

As Ted says here, the downsizing processes and reallocation of persons also had implications for those persons who were not dismissed. That is, to produce software products while some individuals were dismissed the product development experts had to engage in renegotiating responsibilities and ways of interrelating actions. In addition, the downsizing processes was experienced as stressful:

"When it's stressful, it's more difficult to push yourself to work long hours, and it doesn't feel as meaningful if you wonder how [interrupts himself]. For example, many have contracts of employment according to which overtime is included in your compensation, and you don't get any extra overtime payments. So if you know that you're soon going to be dismissed you're not motivated to do, to pressure yourself to work long days.'" (Phil)

As Phil, the majority of the interviewees was stressed by the downsizing processes and was less motivated than before to carry out work in a dedicated manner and, for example, resisted working overtime. Despite experiences of stress and changed workloads, the product development experts still seemed to be able to maintain the same ways of carrying out product development as before:

‘During the Piranha Solutions period a lot has happened. I can’t even recall everything. Well, our team has sort of remained the same, that is, we’re all still developing that same product. But we’ve perhaps worked on other projects, too. But then the supervisors above us have changed; during each development discussion there has always been a new supervisor. Well, the manager director hasn’t changed. On top of that, we have decreased a lot. Departments and business units have disappeared. But it hasn’t influenced my own work.’ (Ted)

To conclude, the product development experts saw their work as relatively stable despite far-reaching downsizing processes and other organizational restructurings. However, it still seemed as the downsizing processes implied some modifications in the everyday practices. More specifically, the downsizing process seemed to slightly restructure the daily practices of product development due to stronger pressures to create turnover. This pressure resulted in the company selling software solutions that product development experts found demanding to develop. The dismissals also implied that work had to be reallocated, which contributed to making the workloads heavier. Here, the product development experts were responsible for organizing these restructurings.

6.2.4. Dissolving the product development unit: Reinforcing patterned processes

The product development unit comprising all product development projects was not functioning in a satisfying way and was soon dissolved. In this section, I analyze ways of organizing during this process as shown in the column in Table 8.

Table 8 Ways of organizing during the dissolving of the product development unit

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Acquisition of Noburu Zone					
Restructuring 2: Structural reforms at Piranha Solutions					
Restructuring 3: Downsizing at Piranha Solutions					
Restructuring 4: Dissolving the product development unit					X
Restructuring 5: Founding new.comer					

As we have seen so far, product development practices remained fragmented on the company level; therefore, no shared processes for all product development experts were created. As a shared sense of community did not seem to emerge either, it appeared as if two opposing social categories emerged over time; one constituted by persons working on customer projects and another one formed by individuals involved in NPD. These social categories were sometimes set against each other, in particular with

reference to resources and spending; NPD was seen as costly and the customer projects were seen as bringing in money. This caused contradictions and tension. Therefore, approximately a year after the efforts to establish a matrix organization and a unified product development department, the NPD and customer projects were separated into different departments with different supervisors.

One of the interviewees with a background from Noburu Zone became the supervisor for the NPD department, including all interviewees. It now became legitimate to create their own visions and their own processes for the NPD department, which the newly appointed supervisor considered to be an important responsibility of his. This implied that the customer projects and NPD activities began to unfold in different directions. More specifically, NPD practices were radically restructured, as Ted commented, the new supervisor 'demands totally different things and emphasizes things in a direction that is 180 degrees different compared to the previous' supervisor. This implied that specific product development processes were now increasingly imposed:

'At that stage the different product processes became fairly similar. The reason for this change, why the products become more similar, was that the product development manager changed.'
(Hubert)

As Hubert explains here, the change of supervisors had large implications as the new supervisor introduced specific NPD practices in all projects. These processes were strongly influenced by the 'formalized' processes that had emerged previously at Noburu Zone. Consequently, we can see how the desire for ordered and patterned ways of organizing began to enable new ways of organizing product development more broadly.

6.2.5. Founding new.comer: Celebrating order

Approximately half a year after the dissolving of the product development unit the next major organizational restructuring took place. Piranha Solutions was split into two separate companies and in connection with this, new.comer was founded. In this section, I discuss ways of organizing during the founding of new.comer as illustrated in Table 9 with an 'X'.

Table 9 Ways of organizing during the founding of new.comer

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Acquisition of Noburu Zone					
Restructuring 2: Structural reforms at Piranha Solutions					
Restructuring 3: Downsizing at Piranha Solutions					
Restructuring 4: Dissolving the product development unit					
Restructuring 5: Founding new.comer					X

new.comer was constituted by the former NPD department of Piranha Solutions. The founding of new.comer involved dismissals, but all the interviewees were employed by

new.comer. The same supervisor continued leading the product development, and the same more patterned processes were maintained in the product development practices.

Although new.comer now had fewer than 20 employees, the company continued to act in two different Finnish cities. This implied that the development of the two main products took place in both offices, which, in addition to spontaneous interactions within the specific locations, also required certain degree of coordination between the offices through tele-meetings, technical tools and phone calls.

Two issues seemed to simultaneously act as important discursive resources as the product development unfolded, the decrease in the number of employees and a formalized product development process. The substantial decrease in employees during the founding of new.comer implied that many product development experts' workload increased and some tasks changed. Yet it was argued that the split of Piranha Solutions helped crystallize the aim of the activities as various responsibilities had to be renegotiated:

'When you decrease or are split up, so that a single unit becomes two, and you experience that, then it's easier to understand the consequences. You know that ok, now those left, five of those who were a part of our development team, left, became another company, then you know that ok, we'll have time to do that, this probably influences our projects.' (Phil)

As we see, the new smaller organization created a site that enhanced better possibilities for interpreting and organizing their own work, in particular in relation to the whole company. A more comprehensive understanding of product development was also enhanced by a shared product development process. Moreover, the ways of organizing product development were still strongly structured by the same relatively formalized processes that had been introduced by the supervisor and embraced by the product development experts just before new.comer was founded. Although the product development processes were increasingly regulated by rules introduced by the supervisor, the product development experts felt they were invited to actively participate in the shaping of the processes:

'you have much better opportunities to influence how things are done and in particular with these processes of course. In that way, one can now [interrupts himself], now one can create the kind of processes one wants to have and you're pleased with and it's much easier to carry out changes of course, as it's a smaller organization.' (Glen)

We can see how the product development expert simultaneously emphasized the production of increasingly fine-tuned patterned processes and non-hierarchical relations. That is, the product development processes were now planned in more detail, but at the same time they were flexible for adaptation to new local conditions. The interviewees drew attention to their active participation in the construction of these processes, hence highlighting informality in ways of organizing. In sum, the interviewees seemed to simultaneously regulate and be regulated by the process. Here, again, there was a production of stability in daily tasks:

'It didn't trigger any organizational [interrupts himself], or sort of changes in the process development or such, because it was only about making the same organization smaller.' (Vincent)

Vincent, as many of his colleagues, claims that there did not seem to be any significant changes in the more formalized product development processes that had emerged towards the end of Piranha Solution's existence.

To conclude, the ways of organizing had emerged in many and complex conditions: at Noburu Zone, in various corners at Piranha Solutions and finally at new.comer. They were intertwined, contested and reinforced in and through perhaps surprisingly many organizational restructurings. More specifically, the ways of organizing seemed to invite a multitude of discursive practices; struggles, competition, subordination and control. These were often linked to differing desires for predictability and order: that is, some experts emphasized improvised local organizings while others preferred a shared patterned and formalized product development process. This in turn implied that certain experts engaged actively in micro-politics while others were more obedient and disengaged from the political sites of organizing. In various ways, this contributed to stability as well as a movement towards more broadly shared patterns in ways of organizing.

6.3. On subject positions

It is time to take a look at various subject positions offered in discourse and taken up by the interviewees in the processes of developing software products. As the previous section, this section is also divided into five subsections following the five main organizational restructurings. First, I briefly examine the subject positions of five interviewees while they worked at Noburu Zone. Then, in the following four subsections I discuss all seven interviewees' positionings within Piranha Solutions and new.comer.

6.3.1. *Acquisition of Noburu Zone: Commitment, co-construction and belongingness*

As we already have seen many times, the experiences that five of the interviewees had gained while working for Noburu Zone, had important implications for various interpretations and practices long after Noburu Zone was acquired by Piranha Solutions. Hence, I find it interesting to explore accounts concerning Noburu Zone. In this section, I analyze positionings around the acquisition of Noburu Zone as indicated with an 'X' in Table 10.

Table 10 Positioning during the acquisition of Noburu Zone

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Acquisition of Noburu Zone					X
Restructuring 2: Structural reforms at Piranha Solutions					
Restructuring 3: Downsizing at Piranha Solutions					
Restructuring 4: Dissolving the product development unit					
Restructuring 5: Founding new.comer					

As a small startup company, Noburu Zone received venture capital. This gave shape to product development activities and hence had implications for how subject positions offered in discourse were taken up by the product development experts:

'It [product development] was done of course under fairly big pressure, because we had a specific amount of money that had been invested, and according to it we estimated for how long it would last and how much [interrupts himself], when it should be ready... It was exciting that there was a pressure on.' (Vincent)

The awareness of the restricted amount of capital and time created a pressure that all the product development experts interviewed found intriguing and motivating. Moreover, by constructing the context of Noburu Zone in a specific way, particular implicit and formalized rules as well as expectations of the product development experts emerged (Alvesson and Willmott, 2002). In this context, the interviewees were encouraged to take on efficient, productive and committed positions. Beyond the development of software products they also engaged in developing specific patterns of NPD processes, which they simultaneously were regulated by. Here, hierarchical relations were downplayed; compromising and co-construction of products and process were highly valued, which produced a sense of equality and commitment among all experts. This in turn created strong solidarity and a feeling of belongingness to the group of people working at Noburu Zone. As we will see, this connection between the interviewees was maintained and reinforced throughout the various organizational restructurings.

6.3.2. Structural reforms: Creative and autonomous experts

Around the time when most of the interviewees joined Piranha Solutions various structural reforms occurred, including a merger of all departments engaged in various product development activities, such as NPD and customer projects. In this section, I explore the implications of these restructurings for subject positions. This focus is indicated with an 'X' in the last column in the Table 11.

Table 11 Positioning during structural reforms at Piranha Solutions

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Acquisition of Noburu Zone					
Restructuring 2: Structural reforms at Piranha Solutions					X
Restructuring 3: Downsizing at Piranha Solutions					
Restructuring 4: Dissolving the product development unit					
Restructuring 5: Founding new.comer					

As the different product development departments were merged into one unit, all product development experts were ascribed to the same social category (the integrated product development unit), which was divided into different teams. The new product development unit was first lead by one superior and later also by a few product managers. In this context, the individual interviewee was foremost addressed as an

expert in particular parts of one or a few products, which she or he was expected to produce in response to specific requests from superiors of different product branches. This also positioned the product development experts in specific superiority and subordination relations, with certain power implications. Moreover, the superiors were in a rather strong privileged position to define, for example, what the product development experts were to develop and to frame guidelines for how to achieve set goals. As Vincent said, the interaction was often 'one-sided', thus suggesting that communication mainly was directed from the superiors to the subordinates. Being located in such power relations, the superiors typically, but not exclusively, emphasized the creation of local conditions that supported the product development experts to specifically be creative:

'The management team didn't think there was a need for [formalized] processes as they thought it was bad for the creativity.' (Glen)

As we see, Glen's statement suggests that the product development experts were addressed as creative experts, which had invoked certain locally improvised product development processes. In general, the interviewees seemed to identify with this subject position, although, as I will show later, they did not approve of the improvised processes. However, we can see a promotion of the self as a creative artist or as a part of an emotional (for example, enthusiastic) labour force:

'For an outsider it might be difficult to understand, but we view it as art, what we create and that's why it is so creative.' (Glen)

'We're not doing any assembly line work, so your own enthusiasm and such really influences a few dozens of percentages, 50 percent, how the product turns out.' (Ted)

Ted's construction of his work illustrates how the way of taking up product development in an enthusiastic manner is seen as having a great influence on the product. In order to enable product development experts to carry out obligations attributed to the offered 'enthusiastic' and 'creative' expert subject position, many superiors avoided introducing certain broadly shared patterns in the product development processes. More specifically, product development experts were positioned as autonomous experts in relation to how daily tasks were carried out, yet without possibilities to create shared ways of organizing. Shared 'formalized' product development processes were seen as a potential threat to being creative. Likewise, there were no formalized networks of interaction to develop social relations between team members:

'For example, when we came here [to Piranha Solutions], well, well, it was bad, that is, we weren't supervised or included at all. It took a year before we got to know people's names since there weren't any formal or informal, sort of, introductions, we were just hanging about.' (Ted)

'In our group there were, were [interrupts himself], I don't even remember now who were there, because we didn't [interrupts himself], we met the other guys perhaps once ... There were people in the same group who did different things and we, in our office, didn't know at all, what they ... who worked on [customer] projects, what they did.' (Hubert)

We see how the interviewees highlight the limited social relations between various actors in product development within the organization. Yet, paradoxically, the new organizational structure identified all product development experts as belonging to the one and same social category from which products were to be ordered. This created a need for product development experts to increasingly interrelate their actions and tasks with each other, for example, when there were requests to combine products that different groups of product development experts were developing. However, as the

extracts above illustrate, a sense of belonging to an integrated social category of product development experts did not emerge. The fragmented daily practices built around the idea of the 'creative and autonomous expert' did not enable the experts to get to know each other, thus making it difficult for various social actors to position themselves in this social category and to interrelate actions:

'If such frames [that enable new actions and a shared culture] are missing, then the individual is dropped back to what is familiar and to previous ways of acting.' (Vincent)

Here, Vincent reflects on how subject positions were only minimally altered despite the forming of the matrix organization, as the interaction beyond the immediate group of co-workers were seen as disordered and difficult to engage in. Perhaps consequently certain tensions emerged in the interaction. Phil explained:

'The processes are some sort of sources of conflict, that is, an issue that can cause conflicts, perhaps not conflicts, but if you think [interrupts himself], you come from different organizations and think that "We have always done things like this and it's good this way"; you thinks like this and the other thinks the same way but has different tools and ideas about the process.' (Phil)

Tensions occurred between product development experts and between social actors at different hierarchical levels. Much of the contestation seemed to concern ways of organizing and creating shared product development processes. In this process, subject positions were contested and renegotiated. More specifically, at this point in time, certain superiors gained better possibilities to voice their opinion regarding ways of organizing, while other superiors were positioned in ways that provided them with fewer possibilities to 'negotiate voice' in this regard. The product development experts' voices were typically silenced or ignored.

As all interviewees showed feelings of discomfort in relation to the established ways of organizing, they welcomed certain superiors' efforts to transform product development processes towards more patterned and shared practices. At the same time, many also showed a desire to take up different subject positions in these processes of restructuring:

'I, although I knew the product really well, didn't get to influence such powerful decisions [concerning the process].' (Lucas)

Here we see how Lucas feels he was excluded from the process of restructuring the product development processes. His, as many other interviewees', own preference was to be addressed as a co-constructor of shared and patterned product development processes. While many interviewees still continued to perform their daily tasks without resisting being excluded from shaping specific NPD processes, others, in particular those interviewees coming from Noburu Zone, engaged in efforts to be included. Moreover, confronting new local conditions made the interviewees coming from Noburu Zone reflect on their past positioning in the light of the subject positions offered in discourse at Piranha Solutions. Drawing on their experiences at Noburu Zone, these interviewees now also sought to be addressed as experts in software development processes and not only as experts in software products, although they previously had not explicitly thought of themselves in such terms:

'When we came here to Piranha Solutions we realized how great our processes had been at Noburu Zone. ... we were more well, well, process-people.' (Glen)

As we can see, arising from the tensions occurring in the disordered interaction, the interviewees coming from Noburu Zone began contesting the 'offered' subject

positions. They began emphasizing their knowledge as ‘process people’. By drawing on their past experiences of successful process development as an important discursive resource in their subjectivity construction, they resisted being addressed as merely software experts. The construction of the self as a ‘process person’ in turn implied constructing many others, both superiors and other experts, as less focused on product development processes. Such attempts contributed to differentiation from others and the production of a strong sense of ‘us’ between the previous Noburu Zone employees. More specifically, instead of contributing to identification with the integrated product development unit, the structural reform seemed to reinforce already-established group affiliations (Alvesson and Willmott, 2002), for example, between the previous Noburu employees or between experts working in the same location on the same product.

Through persistent efforts to become included in the process of creating shared processes, the product development experts from Noburu Zone were able to ‘negotiate more voice’ over time. That is, as time went by, the product development processes were increasingly formalized, and in this process certain interviewees from Noburu Zone, were actively engaged. However, in some cases these engagements seemed to involve imposing distinct guidelines on other groups of product development experts rather than positioning others as co-constructors. This in turn also caused tensions and reinforced differentiations between various subcategories of experts.

In sum, being addressed as a creative and autonomous expert, invoked local conditions of improvised product development process. Such local conditions, however, seemed to limit the product development experts possibilities to develop broader relations to other individuals and groups within the organization. Hence, the product development experts worked and interacted with the same, relatively small group of colleagues despite the numerous organizational restructuring and efforts to create one integrated product development unit. Paradoxically, there was often a need for broader relations and interaction beyond the immediate group of co-workers. Disagreement around how to coordinate work and relations produced tensions, ongoing subjectivity work and some contestation of offered subject positions. The ongoing tensions and contestations often seemed to reinforce established group affiliations, thus also maintaining and stabilizing how work was carried out within the various small product development teams.

6.3.3. Downsizing: Becoming a productive resource and a stressed worker

As discussed earlier, numerous downsizing measures were carried out simultaneously with the structural reforms. Hence, the product development experts not only had to position themselves within discursive practices of the structural reform but also within discursive practices of downsizing. In this section I will explore positioning during downsizing as marked with an ‘X’ in Table 12.

Table 12 Positioning during downsizing at Piranha Solutions

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Acquisition of Noburu Zone					
Restructuring 2: Structural reforms at Piranha Solutions					
Restructuring 3: Downsizing at Piranha Solutions					X
Restructuring 4: Dissolving the product development unit					
Restructuring 5: Founding new.comer					

As various social actors were dismissed temporarily or for good, those not dismissed had to keep product development running. Therefore, they had to renegotiate responsibilities and take up more tasks and with a broader range. The daily practices built around the creative and autonomous subject positions seemed to construct the product development experts as to relatively autonomously reallocate the dismissed persons responsibilities within small groups of immediate co-workers. Perhaps it could be argued that the dominant discourses operated to direct attention to autonomously deal with keeping up the production. Explicating such expectations encouraged experts to understand themselves in terms of 'productive resources' responsible for keeping the local product development activities running. In this context, the interviewees struggled with replacing each other and with taking up new obligations, but also with dealing with unrealistic demands and timeframes arising from the changed local conditions.

We can assume that the product development experts simultaneously were constantly working under the threat of also becoming targets of the downsizing measures. In fact, all product development experts were at different stages temporarily dismissed:

'It was quite stressful then and [interrupts himself], or because it was depressing in a way and I lost my motivation. I remember, in the spring when there was a downsizing processes and I myself was dismissed form work for one and half, so, no actually two and half months, so and, so, so one wasn't perhaps that productive. It influenced my productivity, too, in the sense that I didn't care as much about doing things properly.' (Glen)

Here we see how Glen expresses discomfort with carrying out obligations attributed to the offered (productive) subject position. Feelings of stress caused by uncertainty arising from the awareness of a possible dismissal made it challenging for Glen to carry out work in an efficient, productive way. Likewise, nearly all the other interviewees experienced stress and discomfort in the process of positioning themselves within the partly contradicting discourses of productivity and downsizing. Joe was the only interviewee with a rather different view on the situation:

'I've never thought that we wouldn't make it: it's only a question about how well or bad you will do. But somehow we always make it anyway until of course you might reach a point when it's not realistic to develop anything. But, but, well, that's of course up to the management to decide upon.' (Joe)

Drawing on the established power relations and chain of commands as a discursive resource, Joe remained preoccupied with his work and saw it as the management

team's task to make difficult decisions. By accepting these power relations and their implications in this specific context of downsizing, Joe managed to decrease his feelings of stress in this respect.

Despite various ways of positioning within the discourses of downsizing, working under the threats of the downsizing processes contributed to an increasing solidarity and identification within certain groups of product development experts:

'I think the solidarity between the employees has improved or become much tighter even if people have been dismissed. Instead, a rather supportive atmosphere has emerged there. Well, during the last stage we still tried as a united group to search for solutions so that people wouldn't be kicked out.' (Lucas)

The increasing solidarity seemed to again emerge within small groups of product development experts. This constructed and/or was constructed by differentiation between these groups. For example, by emphasizing certain 'characteristics' of other groups of product development experts, Phil and Glen identified with their own immediate group of co-workers during processes of downsizing:

'People react very differently to, for example, announcements and downsizing processes and so forth. Some become paralyzed and won't do anything. And, well. Well, I've noticed that we, from Noburu Zone, we coped much better and have been able to stay on for much longer. Because with this background beginning from a startup [Noburu Zone] and many have also founded [interrupts himself], and become [interrupts himself again], and founded startups and seen this before. While in the other office, in the strongholds of social democrats, they have dealt with it in totally different ways.' (Phil)

'As I said we became depressed and so forth, but not at all in the same way [as those in the other office] as I've understood it ... we were better at taking it day by day.' (Glen)

Above, we see how, in particular Phil, draws on his past positioning as a 'survivor' throughout certain financial problems and the acquisition of Noburu Zone. He constructs himself as a member of a group that is well equipped to cope with the demands of downsizing, although he went on to state that he also had experienced stress. Nevertheless, by using past experiences as a discursive resource, the product development unit was divided up into 'us' and 'them': into those that are better to deal with uncertainties and those who do it less successfully, into 'patient entrepreneurs' or 'social democrats'. Perhaps these practices of (dis)identification reinforcing group affiliation contributed to possibilities to maintain particular ways of working and a sense of stability.

6.3.4. Dissolving the product development unit: Legitimizing a category of NPD experts

Soon, there seemed to be a relatively clear turning point, after which new ways of addressing various social categories and individual product development experts emerged. This occurred when the integrated product development unit was split into two separate departments, one engaged in NPD and one in customer projects. In this section, I analyze positioning during the dissolving of the product development department as shown in Table 13 with an 'X'.

Table 13 Positioning during the dissolving of the product development unit

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Acquisition of Noburu Zone					
Restructuring 2: Structural reforms at Piranha Solutions					
Restructuring 3: Downsizing at Piranha Solutions					
Restructuring 4: Dissolving the product development unit					X
Restructuring 5: Founding new.comer					

All interviewees were offered positions in the NPD department when the large product development unit was split. A crucial implication of the split was that a new superior was appointed to lead the new NPD department. He was one of the former Noburu Zone employees and supported shared patterned NPD processes. In taking up the new position, he was located in a structure of rights (Davies and Harré, 1990) through which it became legitimate for him to introduce new discursive templates (Tsoukas and Chia, 2002) to reorganize NPD activities.

First, the new superior emphasized the legitimacy and importance of creating a new social category of NPD experts; he claimed that the local conditions of NPD and customer project were different, and thus, after having separated these activities into different departments, there was a need to construct different local 'organizational cultures'. Secondly, he viewed the development of new local cultures as a precondition for reframing ways of organizing. Drawing on his new position, the new superior stressed the need for more broadly shared 'formal' product development processes in contrast to how product development had been organized previously at Piranha Solutions. Moreover, the product development practices and subject positions were radically restructured at this point, inviting the software product development experts to become more active co-constructors of various practices around NPD as I will show in the next section.

6.3.5. Founding new.comer: Agency and (dis-)identification

As discussed previously, Piranha Solutions was soon split after the dissolving of the product development unit, and the NPD department became a new separate company called new.comer. In this section, I analyze positioning during the founding of new.comer as shown in Table 14 with an 'X'.

Table 14 Positioning during the founding of new.comer

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Acquisition of Noburu Zone					
Restructuring 2: Structural reforms at Piranha Solutions					
Restructuring 3: Downsizing at Piranha Solutions					
Restructuring 4: Dissolving the product development unit					
Restructuring 5: Founding new.comer					X

The new ways of organizing that emerged when the large product development unit had been dissolved at Piranha Solutions were maintained when the NPD department a few months down the road was split from the rest of the company and became new.comer. Hence, stability was produced in both daily practices and subject positions despite this restructuring.

A deeper look at the subject positions offered in discourse during this particular period of time illustrates how the new superior was in a privileged position to initiate discursive templates but also that he used this position to invite all product development experts to participate in the construction of product development:

‘I think that this current organization [new.comer] is good. ... in my current job, you can at least influence what you do. It would be different if you did similar stuff, let’s say, at Nokia: there you wouldn’t have an influence [on your own work].’ (Hubert)

‘Before the downsizing, you felt more like an employee ... but now when the company is much smaller it’s more motivating in the sense that you feel that it’s more up to you concerning what the future will look like and in that way more motivating, and perhaps in some way I’ve realized that you have to [interrupts himself], the only option is to act, it doesn’t help to be depressed and not, and not work properly.’ (Glen)

As we see, the offered ‘participative subjectivity’ through which the product development experts had the possibility to ‘negotiate voice’ to influence and organize their work tasks, was embraced. This generated identification with an image of the self as exercising power in daily practices or as not having to be a target of ‘commands’ in a now less hierarchical organization. Furthermore, this subject position also generated identification with new.comer as a small company; a company in which every individual’s contribution was of importance for the success of the company (in contrast to the image of individuals working in different local conditions such as large companies). As Glen suggested, he was now more than just an employee.

In some sense, the increased influence over work tasks and practices contributed to increasing sense of being in control:

‘Now we are starting to have some control over the code.’ (Glen)

While the product development experts seemed to embrace gaining more influence and control over the immediate local conditions within the context of a small company, a

new source of unrest appeared. Working for a new small company was also described as risky and potentially leading to uncertainties:

'Well, well, it [the future] sure does look interesting at the moment, but also full of risks. ... because the company has been split from the parent company, which had in a way [interrupts himself], had a clearly profit-making business unit [the customer projects] and then this business unit [the NPD unit] producing less, which compensated each other. ... Well, I now think that we can make it and last year I went through quite a lot of self-examination concerning if I believe in this and should I run away or something. And then I got this, I got this confidence in this, I processed this risk on my own, so that it wouldn't feel scary anymore or difficult. Well, well, so even if the company went bankrupt and I were to become unemployed, I would survive. Well, it has been quite a good experience.' (Vincent)

Here, Vincent seems very conscious about certain risks of working for a small organization while he also expresses confidence in himself, a confidence that few others had gained. Another source of discomfort arose from the long history of developing the same products:

'As you become older and, and think of your own career, then, then, well, you have ambitions to have different kinds of tasks within product development and be more in the management and so forth in the future. But product development is really interesting. ... well, you do get tired of doing the same things for a long period of time. On the other, hand you know a great deal about it ... In particular, in relation to the product I'm becoming rather bored.' (Phil)

Paradoxically, some product development experts, as Phil above, seemed to have a strong positive emotional relation to product development, and yet they were increasingly bored with their everyday tasks. Therefore, some product development experts expressed a desire to take up more responsibilities and higher positions in the future. Others seemed empowered by the implications following from the subject positions offered in a context that now was less coloured by contestation over meaning and more an arena for the production of consensus around specific practices through 'participative subjectivities'.

To conclude, through processes of positioning, various subject positions were produced. This occurred in sometimes contradicting practices of formalizations of practices, solidarity, tensions, struggles, productivity, creativity, subordination, downsizing and participation. The software product development experts were addressed as efficient and committed actors, as creative and autonomous experts, as subordinates, and later as co-constructors and equal actors. Some were subject positions that the interviewees identified with and others were contested.

6.4. Reflections on data and theory: Discourse

There are a several elements in the new.comer cluster that I wish to draw attention to. First, new.comer seems to have had a history of numerous organizational restructurings. This implied that the software product development experts had worked in a context of repeated organizational restructurings.

In this chapter, we have seen how the majority of the interviewees in and through an acquisition, structural reforms, downsizing and the founding of new.comer formed close relations to the products they developed and to one another, as well as a strong commitment to the shared and increasingly 'formalized' ways of organizing. Working in a context where each project group seemed to relatively autonomously carry out their tasks produced a sense of disorder, but simultaneously the autonomous ways of

organizing seemed to help the interviewees to maintain their 'formalized' ways of organizing as rather 'stable'.

As ways of organizing were fragmented on the company level, product development became a competitive arena involving tensions and contestation over ways of organizing. Nearly all interviewees engaged in micro-politics to maintain and impose the specific shared product development processes that had emerged within their project groups. Moreover, they drew on a discourse of product development that promoted shared and 'formalized' ways of organizing, an articulation of the discourse that over time seemed to gain more ground. So, although the ongoing organizational restructurings at times seemed to invoke certain micro-changes, over time the interviewees were able to maintain a sense of stability in their work. Yet, at the same time, the continuous organizational restructurings and the construction of stability seemed to imply that the software product development experts were often addressed in shifting ways.

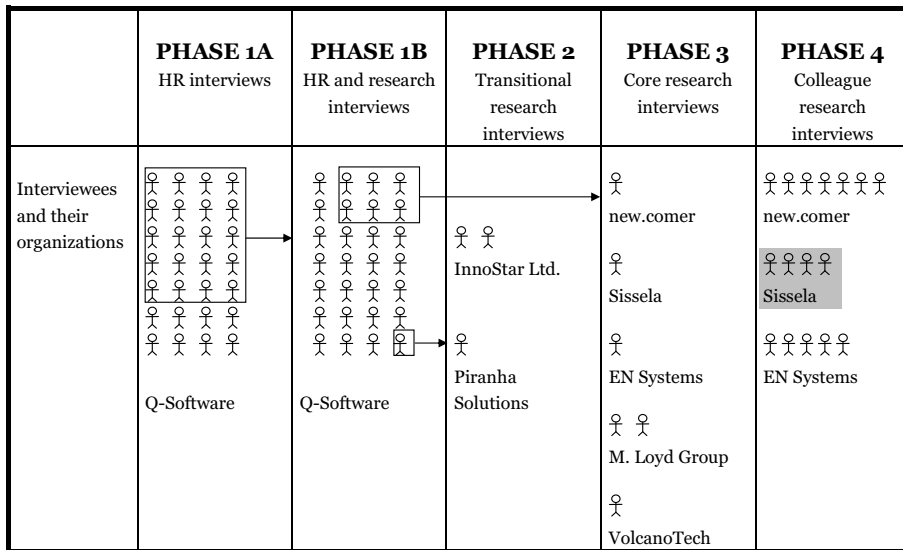
From a theoretical point of view, these complex processes are interesting. The analysis illustrates the dynamics of micro-processes in and through which organizational change takes place (Tsoukas and Chia, 2002). That is, the analysis illuminates in a detailed way how discourse constitutes reality and simultaneously emerges in interaction; how product development experts draw on particular discourses of organizational change and discourses of product development, and how they at the same time reconstruct and deconstruct discourse (Phillips and Hardy, 2002). In exploring the dynamics of discursive practices, this chapter then contributes to the theorizing of organizational change and product development by illuminating the co-existence of processes of change and stability. For example, the analysis of new.comer shows how the product development experts interviewed constructed stability through processes of solidarity, homosociality, bonding and distancing from others, often mediated through products and a desire for 'formalized' ways of organizing and by drawing on discursive resources such as order/disorder. Nonetheless, the interviewees practically had to constantly cope with tensions and pressures related to change. Interestingly, the pressures of organizational restructurings and the apparent construction of stability seemed to invoke active 'reconstructions of subject positions', that is, subjectivity work. In other words, the construction of stability in daily practices over time seemed to involve an ongoing deconstruction of subject positions. In that sense this chapter has given a first glimpse into the importance of approaching organizational change at the level of micro-processes and subjectivities, as studying and theorizing organizational change at this level and as a relationship between change and stability may 'reveal' important and radical implications for the social actors involved. I will return to these issues and the process of standardization, order, micro-politics, subjectivity work, solidarity and homosociality in the two last chapters.

7 SISSELA: FITTING INTO A LARGER PUZZLE

In this chapter I will continue to address my three research questions by exploring how four software product development experts from a company called Sissela construct organizational change as well as how they construct their work in relations to these changes. I focus in particular on how these phenomena look like when seen through the lens of discourse and practice. As in the previous chapter, I begin by discussing the organizational changes that the interviewees had experienced. I then move on to analyzing how the product development experts construct their work in relation to these changes. Again, I do so by focusing on three key aspects of software product development. More specifically, I explore (1) the products under development and relations to them, (2) ways of organizing the development of these products, and (3) the interviewees positioning within these processes, in relation to experienced organizational restructurings.

Sissela was included in the study because Frank, one of the core product development experts working at Q-Software, began working there after the bankruptcy of Q-Software, a short employment with Piranha Solutions and a period of unemployment and studies. Four of Frank’s new colleagues, Ben, Cliff, Neil and Richard, agreed to participate in the study, as indicated in the shaded area under heading ‘Phase 4’ in Figure 19.

Figure 19 Analysis of Phase 4 interviews within the Sissela cluster



Sissela develops mobile and internet software for operators and network equipment manufacturers. Sissela was founded in the early 2000’s but has a background of acquisitions, periods of rapid growth and a downsizing process that stretch some years back from that. Over these years, the ownership and name of the company has changed several times.

The company that Sissela was founded upon was first established in the early 1990's and grew gradually into a company of approximately 40 employees. At this stage, one of the interviewees joined the company. A few years later in 2000, during the IT bubble, the company was sold to a large Scandinavian provider of Internet solutions, which later the same year went through a merger with a large IT consulting company, making the new organization an employer of over 1000 people. Following the merger, the company stepped into a period of rapid growth. The new owners encouraged a rapid increase in the number of employees, which was when the second interviewee joined the company. One of the interviewees described the rapid growth in the following terms:

'The most extensive change, it was probably when the ownership changed to a Scandinavian firm and that was a period of rapid growth when nobody was able to foresee the impossibilities [of the growth]. Well, what had an influence was the growth of the number of people of the company and for no other reason than for the sake of increasing the number of heads; a large, three-storied office in the city centre and all that done with Scandinavian money. Really, it was an order from owners over there to a certain extent. Well, that was probably our most significant rise.'⁹

As pointed out here, the growth was rapid. However, soon the IT bubble began to burst, and already the year after the acquisition it became apparent that the new large company had made severe losses. Many product development experts had been twiddling their thumbs for months due to lack of tasks while, interestingly, others were nearly buried in work. The company announced that the Finnish office was a losing concern, to be returned to the co-founders of the Finnish office. A heavy downsizing process was initiated to decrease the number of employees. The interviewees explained:

'It didn't take more than a year [after the rapid growth] and then we got to see the other side too, and they were tough, tough times, even if I knew all the time, that I could, could continue or I believed in those guys [the original founders who still worked for the company after it had been sold to the Scandinavian Internet solution company] ... that, although this company wouldn't survive, that they would for sure do something in this same sector and I'd be in it. I had such a strong belief all the time, but it was tough to look at the downsizing process.'

'There was 100 of us and perhaps then after the downsizing process, 20 or 30.'

After the burst of the IT bubble and the heavy downsizing processes, the company slowly began to recover. During the following years, the other two interviewees as well as Frank began working for Sissela:

'I heard there was a vacancy at Sissela, so by chance I applied for it and got the job. ... As a matter of fact, there haven't been many restructurings but an organization has emerged. When I started at Sissela, at that time it had a different name, I recall that there were about 20 employees. We worked in an office that was smaller than my flat. ... It was just so great, when you came from a firm where people were constantly kicked out and everyone was in a bad mood due to that and nothing really worked out. And then I came to a firm, that still was new and had an energetic atmosphere, it was very rewarding. But then we have slowly developed towards a real organization. There haven't been any major changes, but people have slowly been placed into "boxes", that is, "this is your task" and "this is your task". And then we have employed new people. Now we have implemented this team leader culture just a while ago ... different departments are divided into teams that are controlled by team leaders, at least in theory ... The organizational changes haven't really influenced work in any way' (Richard)

⁹ In this chapter, I will leave out the name of the interviewees in the end of some of the extracts in order to protect anonymity. There were only two interviewees who had experienced some of the organizational restructurings (growth and downsizing) analyzed in this chapter, and therefore using their pseudonyms at the end of some extracts would make it possible for some readers to recognize who the interviewees are.

After a drop from approximately 100 employees to 20, Sissela began to recover. A new enthusiasm emerged in the small and much more modest company premises. As Richard said, the working atmosphere was as energetic and rewarding.

From then onwards, the company moved into another period of growth. Three to four years later, when the interviews were conducted, the company had again grown into a company of nearly 100 employees. Now the company was restructured, and new more 'formal' ways of organizing were introduced. To manage various projects, the employees were placed into specific units with certain responsibilities as explained by Richard in the extract above. A team leader layer was added to the hierarchy, and hence a team leader was appointed as supervisor for each project.

Frank, originally from Q-Software, was selected as team leader for a team consisting of about eight product development experts, including the other interviewees from Sissela. The task of the team was to develop a certain part of a large and complex product developed by Sissela's customer while working as subcontractors in the customer's office.

To conclude, the most significant organizational restructurings at Sissela and in the companies that Sissela was founded upon were during the growth period from the early 1990's up until the burst of the IT bubble. This period included mergers and acquisitions. After that, there followed a downsizing period, resulting in another change in the ownership of the company. However, Sissela successfully managed to recover from this downsizing process and received increasing numbers of customer orders including a long-term subcontract project. In Table 15, I have summarized these organizational restructurings in the first column. The data describing these restructurings was gathered during interview phase 4 as marked with the 'X' in the last column. I will draw on this table repeatedly in this chapter on Sissela to help the reader see the specific organizational restructuring that I am referring to in different sections.

Table 15 Interview phase and organizational restructurings at Sissela

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					X
Restructuring 2: Downsizing					X
Restructuring 3: Adaptation to subcontracting					X

7.1. On products and relations to products

The product development experts interviewed at Sissela had worked on various products before they began working as a team on the same product. None of the interviewees had participated in NPD projects at Sissela, although two of the interviewees had developed new software products at their previous workplaces. However, many interviewees had a great deal of experience of short projects, for example, of developing Internet services. Such projects were typically seen as IT work rather than as (new) product development. Therefore, in this section, I only discuss the new software product the interviewees were jointly working on as a team.

While working as subcontractors in a customer's office, the team of the interviewees had to adapt to established plans when engaging with the local conditions of product development. Product development was strongly influenced by a detailed overall project plan. An important purpose of the plan seemed to be the production of a product on the basis of a rather strictly defined logic. This implied a conceptualization of the product as potentially chaotic if not carefully planned and controlled.

The development of the product stretched over many years, which seemed to contribute to particular local orchestration of material and social relations (Chia, 1995). More specifically, the product was constituted of a great number of parts that were developed at different points in time and often also by different actors. In bringing all the parts together into a coherent whole, the product required strict coordination. In sum, the product could be seen as a stabilized effect constructed through complex webs of relations.

To the interviewees, the product almost appeared to be a large puzzle consisting of a great number of pieces. However, the size of the puzzle was so great that understanding the whole picture was seen as impossible and unnecessary. Rather, the focus was on a small part of the product and its position in relation to the whole:

'Certain parts have been bought from some company, but of course there are also many companies doing similar things. ... Sissela is responsible for some specific, specific parts, or we have many parts.' (Ben)

'You just have to try to produce a satisfying solution on the basis of all the requirements from various directions.' (Neil)

Developing and positioning specific parts of the product was demanding and thus the product became a source of discipline and consistency:

'This is a large project and certain small things can potentially have awful domino-effects. An individual manager can come up with an idea that "I think we should support this and that [technology]". Then I realize all of a sudden that it means that "this part of the product is in war with a new plan". And then I have to go and ask, that "Are you sure? Do you realize what this change means to us and most of all to our work?". And after the plans have been changed [I have to go to] the implementation that has to do it [the change in the product]. And if they still say that let's just do it I have to go and tell the planning department that this has to be redone. Then they have to listen to the people in the implementation crying "I won't get to sleep again for a week and my family is missing me". But this just has to be programmed again.' (Richard)

As Richard explains, his tasks involved making sure that the product development followed a certain logic. A deviation from the logic was perceived as nearly unacceptable and hence the product could also be seen to legitimize certain behaviours, for example, Richard's persistent demands in the extract above which implied that the programmers had to work overtime and 'not sleep again for a week'. In that respect, the product took form through constant actions of adaptation, persuasions, negotiations and struggles.

The representations of the product offered in this context also raised various emotions. The development of the product was seen as a unique possibility to participate in a large NPD project, but simultaneously there was a lack of enthusiasm in relation to the product. It evoked a desire for developing products allowing more creativity, improvisation and 'handicraft'. Neil was also concerned with the use of the product:

'I can perceive the product that I've planned as some sort of useful product so that it's not necessarily mentally a burden to develop it. But I suspect that I'm gonna do, on the request of the customer and perhaps on my employer's demand, if I remain in that same firm, also totally

useless or unnecessary consumption products, which only accelerates some unsubstantial money-making stuff that only some already rich benefits from. So I don't see it as very [interrupts himself], based on my current skills, I don't think I could do that.' (Neil)

As we see above, the product rarely raised enthusiasm or positive emotions. To conclude, typically the interviewees expressed what might be called indifference towards the product, seeing it merely as a source for a useful experience. This involved a focus on only a small part of the product, even though the product was large. To avoid potential disorder as the many different parts of the product were connected, the product became a source for discipline and for legitimizing certain power relations.

7.2. On ways of organizing product development and services

I now turn to exploring ways of organizing the development of the product described above. I will also discuss ways of organizing at Sissela prior to the development of this product, that is, during growth and downsizing. At the point when the interviews were carried out, the interviewees were still engaged in the subcontract project discussed. In that respect, the subcontract accounts differs from the ones on product and service development during growth and downsizing.

7.2.1. Growth: Autonomy and flexibility

As we have seen, Sissela and the companies that Sissela was founded upon have gone through several organizational restructurings. More specifically, the company grew in terms of the number of employees up until the burst of the IT bubble in the early 2000's, in particular after the company had gone through an acquisition. The shaded 'X' in Table 16 illustrates that I will analyze ways of organizing at Sissela during the period of growth in this section.

Table 16 Ways of organizing during growth at Sissela

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					X
Restructuring 2: Downsizing					
Restructuring 3: Adaptation to subcontracting					

Two of the interviewees began working for Sissela during the period of growth. Within their first projects, they participated in developing various services for the particular purposes of individual customers mainly in Internet service projects. Such projects are typically not seen as new product development but can be referred to as IT work. However, these projects were carried out within a short period of time, sometimes under time pressure, in small teams of approximately five persons. The interaction was spontaneous and relaxed; specific ways of organizing projects had not been institutionalized. In other words, the projects gave those involved possibilities to direct and control the course of the project to a great extent:

'What comes to my mind is ... fast pace work where there has been perhaps a slight pressure, that is, work within a bit too tight timeframes. But what increased my enthusiasm to some extent in that stuff was really that it wasn't compulsory work. Rather, I wanted that the end result would

be really good. And then one has worked overtime, too, and it may have gone late, but I've had the feeling that I want to work. But mainly the key has been that it has been a short project, that's the key term. ... I've controlled it. If I haven't carried it out alone, which rarely is the case that you would do it alone, but you can explain in detail what is going on to others [involved]. ... It is more about a creative chaos model.'¹⁰

'What is mainly emphasized is the use of heuristics and the designer's own visions. ... This is not like the car industry, which already has well-established practices according to which products are produced in specific ways.'

As we see, the ways of organizing the development of Internet services emerged mainly through the project workers' own understandings and views of their work, products and projects and not according to established or strictly formalized models or processes.

The ways of organizing had implications for agency and power relations which, however, were typically only given account of implicitly. For example, one interviewee discussed non-hierarchical relations in the organization by emphasizing that the individual employees skills were often appreciated more than 'titles' and hierarchical positions:

'In nearly all projects there have been informal and relaxed relations in general between people. That is the nice thing about this sector that one doesn't care about titles and other irrelevant things. Instead your skills are what matters.'

As in the extract, power relations in terms of hierarchical control were typically only referred to implicitly, in particular in relation to the various processes of developing software during rapid growth. In sum, various projects were put forward as a site for autonomous, relaxed and flexible work.

7.2.2. Downsizing: Unrealistic demands and wider work descriptions

As in many ICT companies, the burst of the IT bubble had dramatic consequences for Sissela. In this section, I discuss ways of organizing during these times as indicated in Table 17 with an 'X' in the last column.

Table 17 Ways of organizing during downsizing at Sissela

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					
Restructuring 2: Downsizing					X
Restructuring 3: Adaptation to subcontracting					

As the IT bubble burst, Sissela experienced a dramatic decrease in customer orders. From the product development experts' point of view, there were at least two crucial responses to the situation that modified the ways of organizing. First, a far-reaching downsizing process was initiated and nearly 80 percent of the 100 employees were laid off. Second, to increase the turnover, the sales department gained a privileged position

¹⁰ The names of the interviewees are again left out at the end of the extracts in this section in order to protect the anonymity of the two interviewees who had experienced the organizational restructuring analyzed in this section.

in relation to those implementing the solutions and services sold. Certain implications on the ways of organizing product development and services followed from these events. To address these implications, the two interviewees who had experienced these events used the workload as a discursive resource in various ways in their accounts.

As the sales department was under pressure to increase customer orders, they gained a key position in creating the product development experts' workload. There was some dissatisfaction with how this was done:

'The sales department sells something, something to the customer with an unrealistic timeframe and the customer is on top of that difficult and doesn't know what to buy and then it starts off in a dreadful hurry or from something strange that nobody will benefit from. ... It is probably the hurry and lack of money and perhaps some sort of lack of resources ... When the times were tough in the IT sector for a couple of years, there was perhaps a pressure on the company to sell, just sell and to create turnover.'¹¹

Expectations that the product development experts found difficult to meet emerged in the local conditions where the workload was produced. The product development experts were now typically only invited to participate in the shaping of the products and services after the sales, hence restricting their possibilities to give shape to the solutions sold. In addition, the workload was limited, so it acted as a source of inclusion and exclusion of product development experts in the development process. More specifically, before the process of dismissals certain actors had a heavy workload while others had hardly any tasks to carry out, thus also contributing to a division between the different actors. After the dismissals came into force, those who were allowed to stay on experienced changing local conditions of the development activities. While there was a significantly smaller number of people developing products and services the product development experts' workload become even heavier, thereby increasing the time pressure. Simultaneously, the work descriptions become broader:

'In this process it [the tasks] could be a combination of those of a project manager, an architect, a programmer, a graphic designer or perhaps of a secretary, that of a secretary, too, and answer the phone.'

The everyday practices were described in the following terms:

'It [the product development process] became faster and more flexible. Probably because the organization was smaller, the communication is in a way easier. When you sit next to each other, then you lose, to some extent a, a, what should I call it, a larger process. Or it develops more easily into just working, you just do things and not according to a process, the documentation is not necessarily done that well. It's about having to get lots of things done and you don't have time to think about the process in itself.'

As we can see, the processes of product development were constructed as faster and more flexible as well as less structured. The interaction with other product development experts became more immediate while the product development experts seemed more occupied with 'just working' detached from established processes. This is interesting as these processes had previously been described as being developed without established models. Nevertheless, during the downsizing process ways of organizing various projects were not modified to a great extent; the two interviewees who had experienced this downsizing process claimed that although they were faced with unrealistic

¹¹ The names of the interviewees are again left out at the end of the extracts in this section in order to protect the anonymity of the two interviewees who had experienced the organizational restructuring analyzed in this section.

demands their work tasks had not significantly been influenced by the downsizing process:

‘If one only looks at it only from the perspective of one’s own work, I didn’t really experience in that sense any changes in it, I continued, continued all the time like, if one could have like shut the surrounding world totally out, then in a sense it would not have influenced me in any way, I did the same stuff all the time as before and at a high pace.’

To conclude, as the extract illustrates the product development experts were able to produce stability in their work by being occupied and preoccupied with their tasks during the decline despite heavier and broader workloads and decreasing possibilities to ‘negotiate voice’.

7.2.3. Adaptation to subcontracting: Compliance to pre-specified plans

Sissela was founded and rebuilt on the ruins of what was left after IT bubble. The owners of the company that had acquired Sissela during the IT bubble now returned the company to the initial company founders. After the company had hit the bottom of the downsizing process, a successful recovery began. The company gradually recruited more employees as customer orders started to increase, including a subcontract project that would stretch over a number of years and employ all the Sissela interviewees. In this section, I analyze the adaptation to the subcontract project as shown in the last column in Table 18.

Table 18 Ways of organizing during adaptation to subcontracting at Sissela

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					
Restructuring 2: Downsizing					
Restructuring 3: Adaptation to subcontracting					X

As Sissela began the subcontract project, the appointed team undertook the task of developing a specific piece of a large product that Sissela’s new customer was developing. As the Sissela team joined the project, it had already been going on for several years and consisted of a great number of teams working on various parts of the product. Different teams were brought into the project at different points in time, some working at the customers’ offices, while others worked in their own organizations. The interviewees’ team worked as subcontractors in the customer’s premises, while Sissela also had programmers working on the product at Sissela’s own office. Participating in such a product development project required an adaptation to the customer’s ways of organizing in order to make it possible to coordinate all the teams; internal and subcontractors, those developing the product in the customer’s office and those working in own organizations. Frank, originally from Q-Software, was appointed team leader within this project and supervised about eight team members, including the other four interviewees from Sissela.

The NPD process taken up when working in Sissela’s customer’s premises was described as very predictable, planned and structured:

'We have these plans, according to which we live. And schedules have been made early on in the project, which of course change and are drawn out and also become shorter. But in that way quite a lot has been done in advance. That is, certain stages have been given, which define what has to be ready by a specific point in time.' (Ben)

'Now when we are only working on this specific part of the project, you can easily see what you should focus on, you know in detail what you are working on. ... It went according to the overall project plan. That is, internally our customer has created an overall project plan, according to which parts then are just handed out "to you", "to you" and "to you".' (Richard)

As Ben and Richard explain, the overall project plan acted as an important discursive template (Tsoukas and Chia, 2002) for the various actors participating in the project. However, how was the overall plan translated into action? How did the product development experts take up the plan in their daily work? What kinds of meaning were attributed to it? Translating the overall plan into action did not only involve following a simple shared logic but also an engagement in certain relational processes:

'Of course there is control in between [the different stages of the process], and you have to go through things with the other participants well in advance before the deadlines. ... On the project level it's the customer who defines [the schedules and stages]. But then these internal, smaller projects are divided into internal, smaller parts. And it feels like every matter has some sort of a manager there, who is responsible for smaller and smaller parts. On the other hand, it sometimes feels like there are more managers than people doing productive tasks.' (Ben)

'There is quite a chain of checks. You always have to ask so many in higher quarters "Can I do this?" ... I write presentations of how I would like to have things done. And then these different people look at the presentations and say if they are acceptable or if it is possible.' (Neil)

'I have about 8-9 [smaller] organizations within our customer's organization that I'm constantly in touch with. I tell them about our problems and ask them about their experiences in their projects so that everything will go according to the customer's overall plan.' (Richard)

As we can see, the daily product development processes emerged through a complex web of relations to ensure that all different parts of the product contributed a coherent solution and thus an 'adaptive' product. The customer defined in detail a process according to their overall plan and followed up the progress of the project and quality of the product by exercising control in terms of an institutionalized '*chain of check ups*'. However, control did not only emerge out of relationships between the product development experts and persons in higher hierarchical positions but was also constantly reinforced in the daily practices in which project managers, programmers, designers, software architects, testers and so forth engaged. More specifically, control over progress and product quality was built in and exercised through the everyday micro-process of developing software on all levels of relations. While the interviewees brought up the various forms of control, the relations of power constituting them were hardly addressed or reflected upon.

The interviewees ascribed the overall plan and ways of organizing certain meanings as they engaged in the complex networks of relations:

'I believe that all this anyway may provide a positive end result, that is, the final product won't be a hara-kiri solution.' (Neil)

As in the extract, the interviewees typically thought of the NPD process as potentially providing successful results but also as allowing them to focus merely on their own product development tasks. Often this meant that the individual actors' strengths in terms of technical skills were emphasized.

How the project unfolded and was (expected to be) organized formed a fairly stark contrast to the interviewees' previous experiences of improvised organizing and often broad work descriptions. Now the ways of organizing were viewed as inflexible and bureaucratic:

'Inevitably, the bureaucracy and so forth is much more comprehensive and inflexible, things occur more slowly, so to speak.' (Cliff)

'In a large company such as this one, even the smallest changes are made according to a process defined in advance. You never make decisions like "now this is how it should be done instead". Of course it's good that things are controlled but on the other hand the flexibility, to make rapid changes in the final stage, that you are used to do in a smaller company, is missing'. (Ben)

As the extract shows, the dominant discourses drawn upon in organizing the project seemed to have a suppressive effect on certain actions, such as improvisation, that were in conflict with established project specific rules. In this context of more bureaucratic and ordered forms of organizing, developing an understanding of the overall project plan and translating it into action was not always unproblematic:

'It took a long time before I learned to do it [the product development] the right way and, and, well for a long time our customer set unrealistic goals concerning how fast things can be done. I achieved my first task, it took me, well, it took me five months. The schedule allowed one month. If I had known everything it would have taken me four months to be realistic. It caused some anxiety and stress because the customer was so hopeful concerning how efficient that process is.' (Neil)

As the extract above indicates, the overall project plan was not always unambiguous nor was it always taken up in ongoing practices as intended. Despite a strong commitment to the overall project plan and efforts to act coherently with it, actors could be seen to have been constantly engaged in processes that potentially modified and challenged it. For example, Richard explained:

'At some stage we didn't know what to do anymore, who should do what. And then we got to a point where we began planning your own process and after that everything has gone quite nicely when we have made our own input to what we are doing.' (Richard)

'What we actually have done inversely- for example, I have already done and run half of the tasks before having finished the plan. But it is really a consequence of me having to work according to, too tight timeframes. That task was given to me too late. There wouldn't have been any point in writing it [the documentation for the task] then. Now I have to do it reversely and work in a tremendous hurry, at the same time as I'm implementing, I'm writing the plan.' (Richard)

Here, Richard is well aware of what is expected of him through the overall plan, but to achieve the goals set for him he engaged in the product development process by taking a different path; he undertook his assignments without first writing a document and asking for approval to implement it.

To conclude, the daily practices of product development and ways of organizing formed a stark contrast to the interviewees' earlier experiences of more improvised organizing and broader work descriptions. Now the interviewees daily work tasks took shape in a context of more bureaucratic and 'formal' ways of organizing, which seemed to provide a sense of stability. The daily work and organizing were controlled by complex formalized structures, chains of checks and networks of relations. Such networks, however, did not seem to provide the interviewees with strong solidarity or friendships as, for example, during the times of downsizing.

7.3. On subject positions

I now turn to analyzing how the interviewees position themselves within the meanings ascribed to product development and organizational restructurings. This chapter is also structured on the basis of experienced organizational restructurings as the previous section on ways of organizing product development. Hence, I will offer an analysis of how subject positions are constructed, offered, changed and taken up in action during growth, downsizing and adaptation to the subcontracting project.

7.3.1. *Growth: Autonomous craftsmen*

As the 'X' in the last column in Table 19 shows, I will focus on the production of subject positions during a period of growth at Sissela in this section.

Table 19 Positioning during growth at Sissela

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					X
Restructuring 2: Downsizing					
Restructuring 3: Adaptation to subcontracting					

Two of the interviewees joined Sissela during the IT bubble as the company was recruiting a great number of IT experts. During this period of time, Sissela had a great number of customer projects. Both interviewees participated in carrying out numerous projects. The ways of organizing these projects in this particular context had certain implications for how subject positions were offered in discourse and taken up by the interviewees. More specifically, in the act of carrying out their work in relation to these ways of organizing, the interviewees constructed themselves as autonomous project workers. This was accomplished through discursive practices where the interviewees were provided with the possibility of controlling how projects unfolded and developing a holistic understanding of it. Here, the interviewees emphasized their enthusiasm to work and highlighted their skills above hierarchical positions by addressing themselves in terms of autonomous 'craftsmen' and identifying with this subject position. As we will see later, the construction of this subject position was soon restricted and over time became a subject position the interviewees wished to revive. Let us take a look how this happened in the next two sections.

7.3.2. *Downsizing: Divisions and subordination*

The downsizing process that followed the burst of the IT bubble had new implications for how subject positions were altered, as I already suggested above. In this section I will analyze these issues as indicated with an 'X' in Table 20.

Table 20 Positioning during downsizing at Sissela

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					
Restructuring 2: Downsizing					X
Restructuring 3: Adaptation to subcontracting					

As 80 percent of the employees were laid off at Sissela, established subject positions were all of a sudden under threat. The downsizing process created divisions and tensions between and within various social groups; the representatives of the management team, the product development experts, the sales department and the customers. Taking up subject positions within this web of social relations seemed to require ongoing processes of positioning. The two interviewees who were working for the company at this stage explained that the product development experts were in the initial phase of the downsizing process split into two groups of 'doers' and 'non-doers':

'I, myself, had work to do all the time, which helped me pull through, so that I could focus on it and in a way push away other people a little but it was some sort of hiding.'¹²

Here, the interviewee is reproduced as a doer. By taking up this subject position, he managed to construct stability in his work by being occupied and preoccupied with his tasks. In doing so, he distanced himself from his colleagues. Yet, now the interviewees were provided with fewer possibilities to exercise control over the project they were involved in, thus altering their previous 'autonomous subject position'. The product development experts were increasingly experiencing subordination in relation to the salespersons; from the product development experts' perspective, the sales department aimed at increasing the turnover to the extent that solutions were repeatedly sold that later proved to be difficult to develop. This contributed to unrealistic project demands, which generated frustration and the doubting of one's own actions:

'They're frustrating, frustrating projects; you begin to think, "Why am I doing something that nobody will benefit from?" ... The customer is to some extent an enemy, and then you develop these kinds of relationships, but not with your colleagues.'

Some of the frustration was directed towards the customers by constructing them as 'an enemy', which simultaneously produced solidarity between the colleagues. In these projects, the product development experts became relatively passive recipients of the customer orders:

¹² The names of the interviewees are again left out at the end of the extracts in this section in order to protect the anonymity of the two interviewees who had experienced the organizational restructuring analyzed in this section.

'It is somewhat a difficult, difficult issue in a small company like this anyway. There's not in a way enough resources to do things necessarily always properly, and then you have to accept it as a part of your job description.'

By making sense of the local conditions that the company operated within in a very specific way ('a small company' without 'enough resources'), the interviewee shaped at the same time his subject position (Alvesson and Willmott, 2002). Moreover, despite frustration he accepted the unrealistic project demands and was prepared to carry out obligations attributed to the subject position offered in discourse. In addition, the product development experts' relations to the management team and to each other were highlighted during the downsizing processes:

'Well, sure, sure there was a bad, bad atmosphere, which had an influence, but in that way many of the people, who were there then, are still my pals, perhaps not friends, but people who I still catch up with every now and then. There was something, some kind of team spirit, against the big bad, against the employer. Some kind of bonding, which has remained to a certain extent. But I was, as a matter of fact, a difficult person, or in a difficult position. I wanted to be at the same time loyal to my co-workers and to the employer. In that way a difficult situation, but I hid in my work. Or I wanted to bury myself in it and not until later have I realized that I tried to hide there.'

We can see in the extract how the interviewee describes some difficulties in showing loyalty to both the employer and his co-workers. These groups of people seemed to form two different social categories: one that the interviewees identified with, and another one that was seen as 'the big bad' employer. At the same time, 'the big bad' employer was crucial for the interviewees' chances of staying on in the organization, thus generating some ambiguous feelings. To cope with such feelings, the interviewee in the text above took up a 'doer' position, through which he was able to stay preoccupied with his work and construct stability. He believed he was not laid off because, as he said, there was 'a certain trust from the employer's side', while the other interviewee emphasized that he thought he was kept on because he possessed a broad range of skills. Such skills were important as the dismissals came into force and those left in the organizations had to take up broader work descriptions.

'And then after it, when a fast reconstructive movement is done due to the market situation, those who are left in the organization get too much work and the work descriptions become broader in that sense, that I had to do the kind of stuff that I would never have done before. More hats or roles.'

In sum, becoming survivors of the far-reaching downsizing process brought the product development experts closer to each other, creating fairly strong solidarity and identification with this social group, a group that was offered the subject positions of 'doers' and 'multitasking-actors' but also 'subordinates' and 'obedient' in contrast to being addressed as autonomous experts.

7.3.3. *Adaptation to subcontracting: Compliers and dis-identification*

Let us now take a look at what occurred as the interviewees began working as subcontractors on a large NPD project in their customer's premises. The 'X' in the last column of Table 21 illustrates that the focus of this section is on adaptation to subcontracting and positioning

Table 21 Positioning during adaptations to subcontracting at Sissela

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					
Restructuring 2: Downsizing					
Restructuring 3: Adaptation to subcontracting					X

As illustrated previously, the subcontracting project was described as predictable, planned and structured. This understanding of the project had very specific implications for how work was carried out and for how the social actors took up subject positions. More specifically, an overall plan, developed by the customer, specified rules and guidelines for the NPD project. Hence, the overall plan acted as a discursive resource that invoked how to act in various settings and consequently had implications for various social actors' self-understandings.

The interviewees were addressed as experts on specific parts of the product; hence, the interviewees were foremost defined based on their skills. Here some interviewees developed a rather instrumental view of themselves. For example, Ben referred to product development experts, implicitly including himself, as 'resources'. He saw himself as a relatively passive receiver of specific tasks that were considered to fall under his expertise.

Here, it could be argued that being addressed as an expert involved being distinguished from other actors in terms of being attributed with specific characteristics implying particular expectations (Alvesson and Willmott, 2002). For example, Ben felt that he worked in isolation from others, as he said he had 'no idea' what the majority of the other project workers did, which Richard, on the other hand, thought was a great relief.

Not being able to meet the expectations created when being delegated with tasks sometimes caused feelings of discomfort; for example, Neil was ashamed and experienced stress and anxiety when he was not able to meet the obligations carried with his subject positions.

For those who had worked at Sissela prior to this NPD project, taking up the expertise position, involved a narrower work description as the product development experts now were allowed to draw more on their special skills while autonomous work was again restricted. Moreover, although the daily product development practices were only modified moderately, the possibilities to exercise power within the organization or product development process decreased.

Richard used his very precise work descriptions to legitimize his actions and exercise power. For example, to achieve the goals set for him he used plans as powerful devices to make programmers reprogramme the product when he thought the goals had not been reached in line with the overall plan. This sometimes implied that the programmers had to work overtime, causing dissatisfaction and, from Richard's point of view, persuasion and referencing to the plans.

While the product development experts' subject positions were constructed on the basis of skills that 'distinguished' social actors from each other, subject positions were simultaneously also constructed through a complex network of interrelated relations. From the interviewees' point of view, being defined as an expert required an engagement in constant interactions with a great number of different social actors. Moreover, to carry out the obligations attributed to the expert subject position, the interviewees were expected to continuously seek approval of their plans and of their work from other actors. This became an important arena for negotiating subject positions and power relations:

'Nobody knew each other, so nobody could trust each other in any way ... Then it took three months and things began, began, people began to know each other and then an understanding of how things work began to arise... The more I've got to know people, I've learned to talk to the right people about right things at the right point in time, the better the cooperation has began to work. The communication has changed from sort of being cautious to being more immediate' (Neil)

As we see here, over time the product development experts from Sissela were able to position themselves and others by drawing on various discursive resources which produced possibilities for action, power relations, cooperation and so forth. One could argue that the continuous processes of checking and controlling the quality and progress of work were embedded in the distinct ways of carrying out product development at all hierarchical levels of relationships. Here, some persons had a more explicit responsibility as managers to follow up quality and progress, while Ben said he viewed himself as 'a representative of productive work'. More specifically, the interaction implied a constant reinforcement of the established 'productive expert' subject positions offered through the overall plan as the product development experts sought approval for their work to make sure they fitted into the whole; 'What is my position in this project?', 'Do I fit in, in the chain of relations?', 'Have I done what I'm expected to do?', 'Does my work meet the standards?'

To conclude, the strict project guidelines that addressed the interviewees as experts and invoked certain obligations were controlled through a complex network of social relations. However, despite some struggles, these practices were typically embraced by the interviewees:

'Having these tools makes it easier in the sense that there is a certain practice that everyone is committed to.' (Neil)

'Of course it's a good thing that things are [short break], kept together in a controlled way.' (Ben)

Although the interviewees embraced the highly formalized ways of organizing, as seen above, many of the interviewees expressed discomfort with the subject positions offered within this context, as Ben said:

'When you look at it from a far distance, it's been a good, good experience, but not my thing in the end.' (Ben)

When expressing discomfort concerning identification with various subject positions, autonomy was highlighted. More specifically, while control was exercised in the context of the NPD project through strict regulation of subject positions, the interviewees constructed autonomy often by drawing on alternative subjectivities:

'If I continue working in this sector, it looks quite good currently and that I sort of can focus on exactly the part of the product development that I'm supposed to do and not on irrelevant stuff. But on the other hand, you never know for how long you feel like doing this stuff.' (Cliff)

'I do hope that I will get to continue doing this ... But if it looks like I don't have a future in our firm with these kind of tasks, I may later apply for that type of work elsewhere. I have never been loyal to companies; of course I do what I'm paid for to do and what I have agreed to do. I don't change employer for the fun of it, but it isn't important to me that "hey, I work at Sissela this is the purpose of my life, oh, how nice", no I work to earn my living, I work so I could pay my rent and buy food. And if it looks like somebody can offer me better opportunities I'm off to there. It's not such a big deal.' (Richard)

'My wife doesn't want to live in city X [where the project is carried out], and I don't want a divorce so I prefer a resignation from the firm rather from my family.' (Neil)

The extracts illustrate issues around autonomy, identification and dis-identification in various ways. First, Cliff emphasized the benefits offered in the NPD project, but seemed to dis-identify with the restricting implications of the project bureaucracy on his subject position. Yet he continued to perform his tasks while simultaneously contesting it by suggesting he may walk away one day if he wants to.

In contrast, Richard identified strongly with his subject position, emphasizing his professional self while challenging his identification with Sissela and the customer, thus showing he is an autonomous agent pushing his career forward in the direction he wants to go. On the other hand, as he constructed himself he also drew on his non-professional self, prioritizing it above his professional self; he primarily works to earn his living.

Neil clearly dis-identified with the subject positions offered in this context, feeling controlled as 'the artistic freedom is fairly restricted' hence seeing himself more as an 'artist' who resists unnecessary commercial products. As shown in the extract above, he also highlighted his dual position as a professional and non-professional; as a product development expert and as a husband and father; as a breadwinner and a potential victim of changing market situations and organizational restructurings. When emphasizing these subjectivities, he expressed various contradictions when trying to fit these positions together. He concluded that the family comes first and as Cliff, says he may walk away one day.

Ben also dis-identified with his subject position stating:

'My wish is that I could return to some kind of handicraft one day'. (Ben)

As with Neil, Ben's sense of self as an artist is constructed through a desire for less structured processes and more creative, autonomous work. For Ben, the strict regulation of subject positions in the NPD project hence works to reinforce identification with more desirable subjectivities achieved in previous projects rather than constructing identification.

As this section has shown, the adaptation to subcontracting followed highly formalized practices drawing on a pre-specified plan that could be said to have acted as a discursive resource. The product development experts were expected to comply with an

overall plan, which they also did. The processes triggered by this discursive resource (Tsoukas and Chia, 2002) implied that the interviewees were addressed as productive resources, as relatively passive receivers of tasks and as experts with specific skills. This in turn implied that the interviewees in various ways dis-identified with their subject positions and constructed a desire for more autonomy or agency to develop as professionals or 'artists'. For some, this involved a wish for reviving lost subject positions, and for others this meant looking into new opportunities in the future.

7.4. Reflections on data and theory: Subject positions

Sissela had a history of numerous organizational restructurings. In their accounts, the interviewees focused in particular on a period of rapid growth, downsizing and adaptation to subcontracting. Two of the four Sissela interviewees had experienced the periods of rapid growth and downsizing, which seemed to differ significantly from the period of subcontracting when the other two interviewees were recruited to Sissela. Before the subcontracting project, ways of organizing had typically been autonomous and improvised, which provided the interviewees with the possibility to remain occupied and preoccupied with their work and thus construct stability even when far-reaching restructurings, foremost rapid growth and downsizing, occurred.

As Sissela had survived the heavy downsizing process, the company managed to sell a long term project to another Finnish ICT company. This subcontracting project implied that ways of organizing changed significantly. Most activities seemed to be dictated by specific ways of organizing, that is, a formalized structure and plans, chains of checks and networks of relations, which kept the daily work practices rather stable. For the product development experts, this meant a strong focus on narrowly defined works tasks and compliance to pre-specified plans. In this context, the product development experts did not seem to develop strong relations with the products. Instead, they expressed perhaps foremost indifference towards them.

The analysis of subject positions showed how the interviewees' subject positions shifted from 'autonomous craftsmen' during rapid growth and multitasking, subordinate and allied actors during downsizing towards being addressed as productive resources, passive receivers of tasks and skilful experts in the subcontracting project. This shift also seemed to imply a shift from identification with the subject positions towards dis-identification.

The analysis of the Sissela cluster contributes to the theorizing of organizational change as co-existent processes of stability and change in interesting ways. While the analysis of new.comer in Chapter 6 provided a first glimpse into the importance of approaching organizational change at the level of micro-processes and subjectivities, the analysis of Sissela has taken us one step further here.

By exploring mundane everyday practices and subject positions in an organization moving from improvised ways of organizing towards subcontracting in a very patterned project setting, this chapter contributes to our understanding of how processes of stability (and change) occur. Moreover, the chapter shows how increasing fixing of patterns in NPD and transforming subject positions (giving product development experts fewer opportunities to 'negotiate voice') contribute to the 'stabilizing' of daily product development practices. And yet the chapter also illustrates how such processes may produce simultaneous dis-identification from and compliance with prevailing ways of organizing amongst product development experts. For example, we saw how the

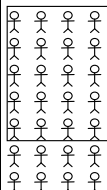
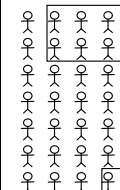

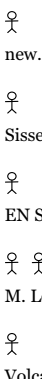
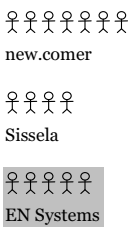
Sissela interviewees were increasingly addressed as instrumental resources and passive receivers of task as they engage in more 'formalized' product development practices, while they also silently dis-identified with these subjection positions. We saw how they, despite their dis-identification, continued to perform their task and thus produce stability. In that sense, this chapter has illustrated how organizational changes may imply ongoing restructuring of subject positions, that is, active subjectivity work.

Drawing on these findings this chapter seems to open up important discussions about and theorizing of stability during unfolding organizational changes in terms of interconnections between increasing 'formalization', subject positions, agency, (silent) dis-identification and compliance. This highlights how stability may work through the reproduction of power relations that social actors, such as product development experts, perhaps paradoxically, seek to distance themselves from (Fleming and Spicer, 2003). In that sense, this chapter also theorizes implications following 'formalization' and the stabilizing of product development practices. In the two final chapters, I will discuss further these issues of increasing 'formalization' of ways of organizing, compliance, instrumental views on relations, and dis-identification.

8 EN SYSTEMS: THE GURU AND THE COMMUNICATORS

The focus of this chapter is on the analysis of five interviews with software product development experts from a company given here the pseudonym 'EN Systems'. The structure of this chapter is the same as in the two previous ones. I begin by discussing the main organizational restructurings that the interviewees had experienced at EN Systems. After this, I explore how the interviewees relate their work to these restructurings. This is done by an analysis of (1) products and relations to products, (2) ways of organizing the development of these products, and (3) the interviewees positioning within these processes. These three aspects are related to the organizational restructurings experienced. With this analysis, I attempt to explore how software product development experts construct organizational change and their daily work in relation to these changes. I am in particular interested in looking at these phenomena through the lens of discourse and practice. In Figure 20, the shaded area illustrates the interviews that I focus on in this chapter.

Figure 20 Analysis of Phase 4 interviews within the EN Systems cluster

	PHASE 1A HR interviews	PHASE 1B HR and research interviews	PHASE 2 Transitional research interviews	PHASE 3 Core research interviews	PHASE 4 Colleague research interviews
Interviewees and their organizations	 Q-Software	 Q-Software	 InnoStar Ltd. Piranha Solutions	 new.comer Sissela EN Systems M. Loyd Group VolcanoTech	 new.comer Sissela EN Systems

EN Systems had, since it was founded in the early 1990s, gone through several organizational restructurings. For the first few years the company was small in terms of the number of employees, then during the heyday of the ICT sector in the late 1990's EN Systems experienced a period of rapid growth, and the number of employees grew to nearly 50. In addition, EN Systems went through an acquisition through which the company acquired a subsidiary in another European country. First, EN Systems only owned one part of this subsidiary, but later EN Systems became the sole owner of it. As a consequence, the total number of employees grew to approximately 100.

As the number of employees grew, so did also a pressure to structure company practices more strictly and impose hierarchies. Therefore, various organizational models were implemented and tried out during the following years.

Although several attempts were made to create more formal ways of organizing during rapid growth, some more extensive structural reforms were still to come. As the IT bubble began to burst in the early 2000's, many ICT companies faced economic problems and bankruptcy. The burst of the IT bubble influenced EN Systems as it became more difficult to sell software products, and the optimism of the boom decreased and created some uncertainties. At this stage, the management team made some crucial decisions concerning how to reorganize the company. Although the profits fell substantially, no one was dismissed in the Finnish office, while the office EN Systems had abroad was affected by downsizing processes. In addition, the departments were reorganized and resources were reallocated, which had certain implications for the product development department.

Before the burst of the IT bubble, both new product development and customer implementation projects had been carried out within the same department at EN Systems. Now, the product development was divided into two separate departments; one that worked with customer projects and one with new software product development. Although customer projects were important in generating cash flow during the recession, NPD was given increased attention. The purpose was to develop new skills and software products to increase the competitive advantage of the company once the markets had recovered from the burst of the IT bubble. Ryan and Timothy reflected on these changes:

'At that stage, when we saw that it began to go down we made a relatively conscious decision to invest in the product development, and at that stage we organized more clearly our product development unit ... Fortunately, it really did influence us in practice, it changed our activities. It did have a true influence on us in my opinion. We explicitly got our own space, and that way the freedom to organize product development according to how we believed the unit would bring in profit.' (Ryan)

'As a company, we invested in product development during quiet times; we intentionally took a risk and invested, and now we have seen that it was worthwhile, because now we have products with which we can beat even big competitors in competitive biddings.' (Timothy)

The creation of a separate NPD department had several implications. The NPD department was given more resources and became highly prioritized within the company once it had gained the status of an independent department. Ryan claimed:

'The product development has more clearly been differentiated from the other production. What has happened is that we have created a more genuine product development, which according to my opinion is a requirement if products are to be created. Before, our problem was that we weren't able to produce products, the products became specific customer systems. I believe that it [the structural reform] has been completely necessary and wise and a requirement that has lead up to the relatively good situation; now, we have more pure products, we have turned IT systems into products while they were before de facto specific customer systems. I think that has been the most significant thing; it can be seen in the organization as a unit called product development, which didn't exist before. It has become more structured.' (Ryan)

As we can see, the work carried out within this department became more independent from other groups and more strongly focused on specifically developing new products. Further, the structural reform could be seen to have generated practices through which the product development experts positioned themselves as belonging to a specific department, a department attributed with certain meanings.

However, when giving account of the most significant organizational restructurings at EN Systems, many software product development experts referred to situations when certain persons had left the company. The persons mentioned had often had a central

position within the product development department as ‘innovators’ and supervisors. Their departures were described as stressful and potentially chaotic.

To conclude, the main organizational restructurings that had occurred at EN Systems were rapid growth that included an acquisition, adaptation to the IT bubble and employee turnover. I have summarized these organizational restructurings in Table 22, which I will use repeatedly to help the reader follow how the analysis proceeds from one organizational restructurings to the next.

Table 22 Interview phase and organizational restructurings at EN Systems

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					X
Restructuring 2: Adaptation to the burst of the IT bubble					X
Restructuring 3: Employee turnover					X

8.1. On products and relations to products

In this section, I explore constructions of products and relations to products at EN Systems. EN Systems had a few software products, but was constantly engaged in NPD projects. The typical starting point for the development of a specific product was customer needs. Such needs were first carefully mapped out with experts in the customers’ business. New products were to meet the customers’ future needs, some dependent on, for example, new laws, and to be built on the latest technology. Hence, the planning of products was important and required giving great attention to foresight. The inclusion of ‘future features’ was seen as the perhaps most important key to competitive products.

When a product was sold, it usually had to be adjusted to the customer’s needs. Thus, there was usually both NPD and customers’ implementation projects running as parallel cases. Sometimes, a product was first fully developed and then sold. However, often an idea was first turned into a ‘demo’, for example, a power point show with pictures of the final software, showing the different functions of the product. Not until the idea had been sold with the help of the demo, did the actual NPD project begin. Since the aim was to develop a product that could be sold to many customers, the NPD and customer projects were organized as separate projects that required certain processes and procedures, which Oscar described in the following way:

‘We are doing traditional product development in its early stages; we have developed the first version, and it has been implemented to a customer. Alongside this, we are building a process for the product development department for handling new customer implementations in order to keep the product technically in order regarding different version ... The first version is in a way married to this first customer, and now we are dividing it into a base product, which can be sold to others.’ (Oscar)

As we see, it was important to the company to explicitly separate customer projects and new products. Products that had been developed and perhaps implemented for specific customers were often not constructed as ‘real’ products. New products were seen as genuine products, as something different from customer implementations through

their lacking customer logos, special functions and so forth, which were tailor made and added to specific new products when they reached a customer project. All this implied various structural reforms over the years and attempts to regulate actions in particular directions in an effort to find efficient ways of working.

In the creation of new ‘genuine’ and competitive products, a common desire among programmers to produce beautiful code was seen as unnecessary or even negatively by some managers. To them beautiful code was not a guarantee of competitive products (often the contrary); they felt the focus was to be targeted at the customer need and thus the code only needed to be functional and not technically optimal. Conceptualizing products in such terms turned the products into a source for legitimizing certain power relations. More specifically, this meant that certain supervisors were seen as best equipped to pre-define the products. The fewer persons involved in the specifications, the more coherent products were to be expected, it was argued. In other words, the products developed were seen as a source for ‘negotiating voice’, control and attempted predictability.

This seemed to contribute to a rather instrumental view of the products. For example, in contrast to relations to products in the other ICT companies analyzed, at EN Systems the product seemed to raise few emotions such as pride, sadness, excitement and so on. Instead, the products were talked about in terms of competitiveness, turnover, sales and profits.

In sum, constructions and meanings ascribed around products at EN Systems were typically strongly related to customer needs. Predicting future customer needs, focusing on functionality rather the aesthetics of the code (Pineiro, 2003) and legitimizing certain voices seemed to contribute over time to a rather instrumental view of products. Although this does not provide a comprehensive definition of products, I hope it points out some important notions of products, which are of relevance when we proceed to exploring in more detail various processes of developing these products.

8.2. On ways of organizing product development

By constructing specific understandings of products, certain processes of developing new software products were generated. These product development processes are the focus of this section. I will begin by analyzing ways of organizing product development processes during rapid growth. I then proceed by analyzing ways of organizing during adaptation to the burst of the IT bubble, and finally during employee turnover.

8.2.1. Growth: Becoming ‘a real company’

As with any restructuring, times of rapid growth can potentially provide new challenges for ways of organizing product development activities. In this section, I explore what occurred at EN Systems when the company entered into a period of rapid growth in terms of the number of employees. This period of time also involved an acquisition. Table 23 shows the focus of this section with an ‘X’ in the last column.

Table 23 Ways of organizing during growth at EN Systems

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					X
Restructuring 2: Adaptation to the burst of the IT bubble					
Restructuring 3: Employee turnover					

As a startup company in the early 1990's, EN Systems naturally only employed a few persons and ways of organizing were highly improvised.

'Everyone did everything, with the exception of the administration of the company, which the CEO focused on. He made sure that we had a financial statement and so on. We had no budget et cetera, that type of stuff; the budget was sketched on a packet of cigarettes to keep the company afloat.' (Ryan)

However, soon the company began growing, and the typically improvised ways of organizing were seen as insufficient. The increasing number of projects and employees as well as the sales targets became difficult to combine with the improvised ways of organizing. At least temporarily, work seemed disordered and 'messy' to many, consequently producing a desire for more order. From then on, various attempts were made to create shared and more specific ways of organizing organizational practices, including the product development activities. Oscar and Ryan explained:

'You could say that, that's when it became a real company, along with it [growth] came the structures. That's when one really started to think, that when everyone had been doing whatever they felt like doing in whatever ways they felt like doing them, one began to impose project management and processes and instructions for how to do things. It all came along with the increasing number of people.' (Oscar)

'Within a short period of time we recruited many people ... we ended up with crisis processes. And the cure to that was that we clearly for the first time hired the kind of people whose work descriptions involved developing processes, and who were not directly in specific customer projects, but focused on our internal matters to develop a real company, a real business model. At that stage, we had some problematic processes with our customers, there were specific problems, we lost one customer de facto, because we weren't able to take care of it properly. And still this business community is extremely small, you can't blow it many times or you will lose your reputation.' (Ryan)

In Oscar's and Ryan's accounts, we see how company practices were organized in new ways to give the organization a specific shape, the shape of 'a real company'. This was an effort to improve the disordered ways of organizing, which even seemed to have caused a failed customer project. Now various methods were implemented, for example, project management was imposed in product development to reach certain outcomes. The ideal project was seen as one that it is easy to grasp, predict and control, that is, one that does not provide unexpected effects.

Despite these structural reforms, the product development experts claimed that they remained fairly unaffected by the restructurings as they were rarely transferred to positions requiring new or different skills:

'I fell into a certain box. In my opinion, the contents of the boxes have not changed much from my perspective. They have just been moved in different directions. It could have had

implications, if I had done everything by the book, but I hate bureaucracy and I've been able to avoid it.' (Craig)

'It doesn't matter who we are on the organizational chart, it doesn't influence anything in practice.' (Oscar)

As we see, Craig and Oscar felt that the structural reforms had not significantly altered the content of their work. However, one of the few changes the period of growth brought about was more explicitly formulated work task descriptions. This implied that the experts' work became more focused and their responsibilities were now more narrowly defined. Timothy and Oscar argued:

'I was able to focus on my particular tasks because we recruited experts to other tasks that did not fit into my core expertise ... We were able to break up the implementation and of course when we had these experts, the quality improved and we received new opinions. Naturally we were able to organize the implementation in better ways and invest more into it.' (Timothy)

'Our project leader's workload have been further delegated and made our responsibilities clearer and shown who is in charge of what ... undeniably it has made things clearer.' (Oscar)

As we hear here, the increased number of employees implied that the experts could focus specifically on tasks around their core expertise. The division of tasks and delegation helped the experts to find a focus.

To conclude, perhaps not surprisingly, the rapid growth brought with it a desire for more coordination and specific shared ways of organizing work. This mainly seemed to involve clarifying the experts' work descriptions. This in turn did not seem to modify the daily practices significantly, although the end result from the customers' perspective probably improved.

8.2.2. Adaptation to the burst of the IT bubble: Imposing hierarchies

As discussed in the introduction of this chapter, the burst of the IT bubble brought up new issues in the local conditions of product development. EN Systems was never forced to take downsizing measures, although the customer orders decreased significantly. However, EN Systems did engage in certain structural reforms to deal with the recession. In this section, I explore ways of organizing during the adaptation to the burst of the IT bubble, as shown with an 'X' in Table 24.

Table 24 Ways of organizing during adaptation to the burst of the IT bubble at EN Systems

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					
Restructuring 2: Adaptation to the burst of the IT bubble					X
Restructuring 3: Employee turnover					

Up until the burst of the IT bubble, customer projects and NPD projects had been carried out within the same department. However, customer projects were typically prioritized above NPD projects, making it challenging to engage in activities leading up to new products. Therefore, some actors engaged in creating a more prioritized and

independent position for NPD in relation to customer projects. The main argument was that the company ought to develop new products during the recession to have competitive new products once the market recovered from the IT bubble. Therefore, a separate NPD department was established, which became highly prioritized within the company. This meant that many product development experts were appointed to new positions in one of the two departments, although some software product development experts later worked in projects within both departments.

Many interviewees highlighted that working with NPD is very different from being involved in customer projects. The differences seemed to involve more how the projects were organized rather than the concrete work tasks, as Timothy and Craig explained:

'I don't know if my tasks changed that much ... We got to work in peace and quiet, to focus on the [NPD] tasks.' (Craig)

'We are the customers, in practice, in product development, while there is an external customer in the customer projects who naturally is interested and is controlling and gives feedback because the work is being done with their money. In that way, it is harder to work with a customer and it is inevitably different, while our own development work is in a way more relaxed than customer projects ... The work in itself is exactly the same; the results are in a sense the same. I think the way of working, how formal and informal it is, is significant.' (Timothy)

In other words, many product developers felt that the restructuring gave them an opportunity to work in ways that they found more satisfying. Moreover, the restructuring decreased the pressures of strict reporting and time schedules.

The establishment of the NPD department also made it more legitimate to create new and specific ways of organizing NPD. Organizing product development in such ways implied taking some distance from other organizational practices. For example, it became more legitimate to resist participating in customer projects. Hence, the establishment of the new NPD department could be seen as an act that drew new boundaries between various practices in the organization. However, customer and NPD projects continued to be highly interrelated, and thus software product development experts moved frequently between projects within both departments. Often, such movements did not cause tensions, although some struggles for resources continued to take place.

While the structural reform could be seen as rather significant for the establishment of the NPD department and the construction of identities in relation to it, the daily product development tasks did not seem to be significantly effected. Matt explained:

'I think that not very much [has been affected by the structural reform] because the product development has been quite stable when compared to client projects. And the product development has so far, has been kind of quite high priority inside the company because this is the only way how, how we can get new clients and, and that is good I think that this had, this has such a high priority, at least management has understood that this is where they should invest. So, I wouldn't say that this structure change had a very big impact on product development.' (Matt)

Some interviewees felt insecure, although the structural reforms within the organization during the burst of the IT bubble did not influence the product development practices noticeably. Timothy and Craig explained:

'Of course it [the recession] has an influence on people, there's some insecurity, insecurity is perhaps the most central factor, that is if, if your position is perhaps under threat, but I don't think it has any other effects. Perhaps you talk about it occasionally, about the situation, but I'm sure it hasn't had any influence on the actual work.' (Timothy)

'It [the recession] did worry me in a way, the possibility of being unemployed, because there were no vacant positions elsewhere so that's the reason why, but here we didn't do that [dismiss employees] ... I think there was an ideology behind it. It was a question of value decisions, not rational decisions.' (Craig)

As Timothy and Craig explain, the recession evoked a sense of insecurity, but the structural reforms that occurred within the company during the burst of the IT bubble did not generate any extensive changes in the product development practices.

To conclude, over time EN Systems went through a movement from improvised practices towards more patterned and hierarchical ways of organizing practices. The ways in which product development activities were given shape ensured stability in the daily product development tasks. As the amount of projects and product development activities grew, stability was created by trying to make practices regular and predictable. Later, creating the legitimacy of NPD became important.

I now turn to discussing how the product development process unfolded once EN Systems had began imposing more shared and formalized ways of organizing. The movement did not involve adopting established and standardized NPD models. Still, avoiding disorder and enhancing predictability were seen as important features for securing the success of product development projects:

'It [the project] was successful because it was so well defined, it was of the right size; it was small and easy to grasp and the whole was easy to control, and didn't cause any large scale surprises.' (Timothy)

Instead of working according to an established or recognized NPD model, it was crucial for the interviewees to have a vision according to which the work was done. Business potential seemed to be an important factor that influenced the vision according to which the project work was organized. Business potential was seen in the latest technology and in knowing the customers' business processes and future challenges. Ryan explained:

'I tried to plan it very carefully; I know our business. Then there is the technology, you need to master it. And then you need to know the finance sector well enough. Our business is here in between. We are a software house that delivers technology to the [finance] sector. I've had to deal with everyone.' (Ryan)

The product development projects were organized in line with visions with business potential. In defining the business potential, the project leaders, the supervisors of the software product development experts interviewed, seemed to have gained central positions:

'[The vision comes] from our development chief; he identifies it with our finance experts, we have the old generation products, we know what we have and we take what has been experienced as good, so we have a vision, we don't start from scratch.' (Oscar)

Ryan, the project leader, who often had been in the position of planning NPD and negotiating with clients, said:

'The specification [of the product] was made by one person. Of course, if one person makes it, the product is likely to become consistent compared to if a team makes it in cooperation; there is a danger that many people won't see the whole picture in the same way.' (Ryan)

Usually, when the project leader had formed a vision for a NPD project, he made specifications for the product. Following this, a team was appointed and various experts were given specific tasks. The beginning of a project was often characterized by some

struggles regarding setting rules and motivating people to accept the specifications that had been made. Once the development process began, the work and the goals had to be followed up. This made the project leaders' workload heavy, and thus this workload was delegated to a few project managers. The project managers' tasks came to be further delegating tasks to others, for example, software product developers, as well as following up their work and making sure that the goals were reached. Matt described his work tasks in the following way:

'So basically, my role was just to be a communicator or in some sense I was an internal Project Manager, so I allocated tasks to developers, and then I made sure that they were implemented. And then I took care of project plans, estimations and testing, or organizing testing actually. Of course, I was testing by myself, too, but this was a kind of unofficial testing. I just [laughs] this was for myself to be sure that we are doing exactly what is needed.' (Matt)

In sum, the burst of the IT bubble had some clear implications for the ways of organizing product development, although the company did not have to initiate downsizing processes as did many other ICT companies at that point. Instead, the company decided to invest in NPD in order to have new competitive products when the market recovered. The emphasis on NPD implied new, more hierarchical, ways of organizing making the product development supervisor a 'visionary' and the product development experts communicators. The tasks of the communicators were to receive tasks and further delegate them as well as follow up progress. And yet, despite these restructurings, the product development experts claimed that their daily practices had not significantly changed.

8.2.3. Employee turnover: The importance of supervisors

When asked about the most significant experienced organizational changes and organizational restructurings, many of the interviewees mentioned employee turnover. In this section, I explore how ways of organizing and employee turnover were connected to one another in the interviews. In Table 25, I have marked the focus of this subsection with an 'X' in the last column.

Table 25 Ways of organizing during employee turnover at EN Systems

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					
Restructuring 2: Adaptation to the burst of the IT bubble					
Restructuring 3: Employee turnover					X

A few times during the interviewees' employment with EN Systems, supervisors had left the organization. These events were mentioned as significant organizational restructurings, that is, as events that often created various fears of disorder and lack of direction. Craig felt that these types of situations involved psychological setbacks:

'One person left us; he was the best in Finland, perhaps on a global scale, too, a highflier. He knew everything in practice. There was not one thing he didn't know. And if you asked him something, he was such a pleasant person, he knew how to talk to everyone and there was no

such thing as a stupid question, ever. It was a psychological setback when a person like that left.' (Craig)

As Craig explains, employee turnover was experienced as a potential source for organizational restructurings. Losing a person from the product development department seemed to potentially involve restructurings of work.

Despite the stressful and confusing aspects attributed to the situations of various persons leaving the company, product development tasks were again constructed as rather unaffected by these specific situations.

'This was a kind of situation where, where we felt inside the product development that I don't know that whether it is a good thing or bad thing. Definitely it was a bad thing, when, when, you lose your CTO [Chief Technology Officer] and all technology know-how will, will move to the client side for free basically. But the good, good thing was that we basically had a back-up person for this CTO inside the company, and, and he was basically ready to take that responsibility and, and we haven't had any big problems. We thought it would be a bigger mess, but basically the timing when the CTO left was good, we could easily replace him.' (Matt)

As we have seen in this, but also in the previous subsection, ways of organizing at EN Systems often seemed put certain supervisors in central positions. This contributed to a feeling among many product development experts that the supervisors were almost irreplaceable, and as the supervisors left the organizations this was experienced as a more significant change than the restructurings of whole departments. In that sense, seemingly 'small' restructurings were sometime experienced as having larger effects than changes that at first glance may appear as larger ones. These 'small' restructurings could be argued to be more closely connected to the mundane everyday practices than any other experienced organizational restructurings. Nevertheless, not even the turnover seemed to alter the daily product development practices over time, as Matt and Timothy argue in the extracts above.

8.3. On subject positions

Through the product development experts' accounts of their work, the experts also position themselves in relation to what they gave account of. Therefore, this section draws attention to how various subject positions emerged in processes of product development; I will focus on how subject positions are produced and reproduced through discursive practices in which social actors participate (Davies and Harré, 1990). I will do so by analyzing process of positioning in three subsections, each focusing on subject positions during a specific organizational restructuring.

8.3.1. Growth: Technology oriented and business minded experts

I will begin the analysis of subject position by exploring processes of positioning during the period of growth at EN Systems. In Table 26, I have marked this focus with an 'X' in the last column.

Table 26 Positioning during growth at EN Systems

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					X
Restructuring 2: Adaptation to the burst of the IT bubble					
Restructuring 3: Employee turnover					

The period of growth involved a step from being a startup company to becoming a company of nearly 100 employees. This shift seemed to imply rather radical transformations in how the software product development experts were addressed. More specifically, in the early days of the company, the product development experts were addressed as autonomous multi-tasking actors: ‘everyone had been doing whatever they felt like doing’, as Oscar said earlier. When the business grew the company also recruited more employees. The individuals recruited to the product development were often young and quite inexperienced, both in regards to software development and the finance sector where the customer target group was. Since ways of organizing were still rather improvised, the company ran into problems with some customer projects and implementations. Therefore, a few persons were employed to specifically structure the ways of organizing. Simultaneously, the supervisors engaged in transforming the focus of the product development. The software product development experts were seen as ‘software hobbyists’, who needed to become more business- and customer-oriented. Ryan claimed that his task as a supervisor had been to help the product development experts to change:

‘... from a strict technology focus to seeing our business.’ (Ryan)

As he continued, his task had been to help the product development experts to see that it is not important that the code is optimal and beautiful, but rather what is of importance is that the overall picture and results are good.

One interpretation of this shift is that subject positions were constructed or offered by management by promoting a specific understanding or perspective on work (Alvesson and Willmott, 2002). For example, by imposing the idea that product development is not about making a beautiful code, but rather it is about satisfying customer needs, the management attempted to redefine the product development experts’ work orientation. Implicitly, this suggests a re-definition of the product development experts on the basis of what was expected of them (Alvesson and Willmott, 2002). This in turn is partly connected to the product development experts’ skills; they were addressed as young skilled professionals but in need of encouragement to become business minded.

To conclude, we can see how the period of growth became, from the management’s perspective, a site for restructuring subject positions. As the company grew, various more formalized ways of organizing were imposed which seemed to discipline the product development experts in new and more business-oriented ways.

8.3.2. *Adaptation to the burst of the IT bubble: The guru and the communicators*

As the burst of the IT bubble occurred, the product development activities EN Systems were restructured as discussed in the previous section. This meant that the product development experts were addressed in new ways. In this section, I explore the implications of these restructurings on subject positions. In Table 27, I have marked this focus with an 'X' in the last column.

Table 27 Positioning during the adaptation to the burst of the IT bubble at EN Systems

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					
Restructuring 2: Adaptation to the burst of the IT bubble					X
Restructuring 3: Employee turnover					

The interviewees' accounts of themselves as product development experts were strongly related to the hierarchical relationships at EN Systems. These hierarchical relationships took shape in relation to the structural reforms that occurred during the adaptation to the bursting of the IT bubble. Ryan, the project leader and supervisor of the other interviewees, took a central position, and was often given this by the interviewees. He had developed his visions for NPD in cooperation with finance experts, presented it for approval to the management team and made the specifications for the products. He was described as an intelligent, experienced person, with the capacity to judge what the best solutions for the product development were, as Craig said:

‘The process, according to my view, began as the person who is pulling the strings, the major guru, who sort of leads the product development; he has a long history, he has seen many products, he has even seen many versions of this product [under development], that is of financial portfolio systems. He has seen many financial portfolio system products and systems related to them. On the basis of this experience, he has probably during the years developed a vision and he also happens to be, let’s say quite an intelligent person. Somehow, he can keep all these things in his head, it helps. And then he probably got a green light from someone to begin developing his idea. In my view, it has been led from one head.’ (Craig)

As Craig says here, the product development supervisor was positioned as a ‘guru’ and a very central person in shaping the product development. As described earlier, as the supervisor had specified a vision and product, he appointed a team and delegated tasks to it. These activities involved persuading and motivating people to accept the specifications. The product development experts interviewed had a crucial role in their teams to further delegating tasks to programmers and follow up progress and goals. Carrying out these tasks was not always uncomplicated, and therefore struggles to perform obligations attached to specific subject positions sometimes took place. Oscar reported some difficulties in the early stages of an NPD project:

‘We have an office abroad and here. First, I had to make the cooperation work, as we work on things in both ends, that is, who are assigned to do what and their responsibilities. The beginning is of course characterized by questioning, that is, “Why are we doing this like this?” especially in the product development department because you have said “things have been decided upon, we will do it like this; this is the technology choice that has been made although there may be other ways of doing this, but this is how we will do it”. Of course everyone will question this, that is, “Why do we have to do it like this?”, “Why not do like this instead?”, “This would be a better way

of going about it!", "Shall we do it like this?". Then you just have to say that "This is how it will be done!" [laughs]. This is to get everyone in the same direction, these are the first struggles.' (Oscar)

As we can see, the interviewees' tasks involved following instructions given by supervisors and making others follow them. In that regard, the interviewees seemed to be addressed as compliers and 'communicators' who were to carefully follow guidelines. The interviewees did not seem to contest these ways of organizing product development and subject positions. However, at the same time many interviewees found their work stressful:

'I enjoyed it [the project] but undeniably it has been stressful and time consuming in the sense that a normal work day doesn't seem to be enough as we have had tight schedules because we have been under pressure to get the first [product] in production, so the schedule has been tight.' (Oscar)

Although the interviewees disliked the time pressure, no one reported to having refused to spend long hours at work. While disliking having to work overtime, Matt also saw some positive consequences with working overtime:

'From time to time it is good to have that kind of stress, because it is a little bit motivating, because then you really feel that you are the kind of person, who is needed by the company [laughs]. And also developers have agreed with me that from time to time it is fun to take the kind of challenges that involve whether we can make it or get ready in time.' (Matt)

Matt seems to argue that the subject positions taken up provided him with a sense of being needed. Craig, on the other hand, seemed dissatisfied with the subject positions provided through the ways of organizing although he considered the outcomes to be successful:

'Each [team member] has had a very narrow scope in it. One hasn't let them intervene in everything. Instead they have been, well, let's say that their scope has been kept narrow with dictatorial means. It is maybe doubtful in a social sense, but on the other hand it has given good results. That is a product has been created. And if you started messing a lot outside your own scope, then you would suffocate very soon. It has worked in this case. Perhaps everyone has respected it. There has been a leadership style that is efficient in my opinion.' (Craig)

We see in the extract how Craig approves of the ways of organizing, while simultaneously clearly dis-identifying with them, and in that sense constructing himself as obedient. A shared construction of the product visions and specifications were thus not a part of the routines at EN Systems. Breaking this norm could have negative consequences for an individual. In one case, a person was transferred to other tasks as he was questioning tasks delegated to him:

'I decided that he had to be removed elsewhere, because with the schedules we had, his way of working would have taken too much of my energy, of supervision, that's why it was better that this other mate, who was sitting over there, who was very easy to cooperate with, who quickly understood the core things ... it was easier to argue for my decisions with him ... I had to make some radical changes, and make a decision about who could contribute to a top team, that can achieve things. I had to get people to believe in this thing, that is, if we do it like this, it [the product] will become successful; we will make it in time, with the resources allocated to us.' (Ryan)

As illustrated, specific ways of organizing had implications for subject positions offered and taken up by software product development experts. The interviewees' accounts of themselves as product development experts were strongly dependent on the hierarchical relationships at EN Systems. In sum, Ryan, the project leader, had gained a crucial position in developing visions and ideas, defining products and projects as well

as negotiating with the management group and customers and assigning authority to others, hence influencing which subject positions that were made available for the other interviewees. Consequently, his accounts on subject positions were quite different from the others'. The other interviewees were constantly moving between the subject positions of complying with authority (supervisors) and the subject positions as practising authority towards others in lower hierarchical positions (for example, towards programmers). When taking up such subject positions, software product development experts were implicitly produced as 'less experienced' and 'less knowing' than the supervisors, and thus the legitimacy of the leaders were maintained.

Craig was the only person who during the interview explicitly questioned how these ways of organizing produced limited subject positions, while the other interviewees seemed to accept their subject positions. Having specific responsibilities also produced the interviewees as dedicated employees, who were committed to delivering products according to the customers' schedules, leading the interviewees to accept working overtime when needed. More specifically, various discourses provide possibilities and limitations for social actors' subject positions, but at EN Systems the context of product development provided the interviewees with rather limited space for negotiating subject positions.

The analysis also illustrates how the interviewees (dis-)identified themselves with the subject positions taken up, that is, how the interviewees 'responded' to the subject positions offered within this specific context (Fleming and Spicer, 2003). Craig was the only person who during the interview explicitly questioned how these ways of organizing produced limited subject positions. He argued that clear responsibilities pushed interviewees into narrow and less interesting tasks and prevented them from gaining comprehensive pictures of the projects. Nevertheless, although he dis-identified with the subject position he had taken up, he continued to carry out the NPD practices and in so doing reproduced the relations of power (Fleming and Spicer, 2003). In the cases of Timothy and Oscar, it is more difficult to conclude how they related to their positioning. However, they participated in the various practices in similar ways to Craig, thus showing commitment to projects and a willingness to work overtime to meet deadlines. Matt, on the other hand, explicitly seemed to embrace his subject positions, at least in certain settings. For example, working under time pressure functioned as important means through which Matt constructed himself as 'a person who is needed by the company'.

8.3.3. Employee turnover: Superiority and subordination relations

Finally, let us take a look at how the employee turnover, in particular when it concerned superiors, influenced the product development experts' subject positions. The 'X' in the last column in Table 28 indicates that this is the focus of this section.

Table 28 Positioning during employee turnover at EN Systems

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Growth					
Restructuring 2: Adaptation to the burst of the IT bubble					
Restructuring 3: Employee turnover					X

As the previous sections both implicitly and explicitly have shown, EN Systems went through a restructuring over time, from being a non-hierarchical company to being a more hierarchical organization. This contributed to ways of organizing where certain supervisors gained a central position. Having gained this insight, it is easier to understand why many product development experts saw employee turnover and departures of supervisors as the most significant organizational restructurings. Many saw it as a loss of critical know-how and control in the daily practices.

‘When my supervisor left, who had started all this, that was perhaps the most significant [organizational restructuring]. First, I probably thought how will we go forward?’ (Timothy)

Perhaps this suggests that the loss of a superior was experienced as threat to their own subordination; the subordination was in constant need of regeneration through interaction with the superior (Alvesson and Willmott, 2002). When this relationship ceased to exist so did in a way also the subject position of subordination. However, at EN Systems there always seemed to have been ways of reconstructing this relation as the superiors who left were quickly replaced by a new supervisor who reinforced the superiority and subordination relations. In that sense, this type of turnover foremost seemed to contribute to a certain fear rather than to significant restructurings of work and subject positions. As Timothy says above, when he heard that his supervisor was leaving, he wondered how the department would manage to go forward without the supervisor. However, he continued by arguing:

‘The work continued fairly soon as before. In the end, it wasn’t such a big deal. All the pieces just fell into places and we continued as before ... on a practical level there weren’t any consequences.’ (Timothy)

As we see, although the loss of a central supervisor contributed to certain fears, this did not have any significant effects on the daily product development practices. In sum, the concern about supervisors leaving the organization seems to highlight the centrality of hierarchical relation for subject positions at EN Systems. These relations seemed to be generated by practices that continuously emphasized the supervisors, ‘guru’ skills to the exclusion of constructing the product development experts as skilled beyond their ‘communicator’ position.

8.4. Reflections on data and theory: Micro-processes

Since the founding of the company in the early 1990s, EN Systems had gone through various organizational restructurings, such as rapid growth, adaptation to the bursting of the IT bubble and employee turnover. The shift from being a company of a few employees to a company of nearly 100 employees naturally had had certain implications. Ways of organizing had gradually become more patterned, involving the establishment of a relatively prioritized and autonomous NPD department. This restructuring was seen as an important response to the bursting of the IT bubble, in an effort to improve the competitiveness of the company. Through this restructuring, hierarchies became more central in the organization. More specifically, the project leader gained a key position to identify business potentials, plan projects, specify products, appoint project members and delegate tasks. What was left for the product development members then was to receive tasks and further delegate tasks to others. These ways of organizing seemed to provide the software product development experts with relatively stable work tasks and thus a sense of stability. However, employee

turnover, in particular supervisors leaving the company, seemed to cause insecurity as supervisors were often seen as irreplaceable by the software product development experts.

The hierarchical relations also seemed to imply shifting subject positions. Over time, supervisors were increasingly constructed as 'gurus' with the most 'rational' voices and best insights into business potentials, while the product development experts were seen as the communicators between the 'gurus' and, for example, programmers. In that sense, hierarchies, dominance, rationality and instrumental views seemed to structure relations to products, ways of organizing and subject positions.

How does this analysis of the EN Systems cluster contribute to the theorizing of organizational change as co-existent processes of change and stability? An important contribution from this analysis of EN Systems is the insight it offers regarding the becoming of everyday practices of product development during organizational restructurings. The findings from the analysis of the EN Systems cluster help us to see and theorize the ongoing change in the organization and the simultaneous efforts to stabilize and organize social reality (Tsoukas and Chia, 2002), efforts that unfold in the very mundane micro-processes of daily product development.

For example, the cluster of EN Systems shows how organizational changes can be used as discursive resources to trigger both change and stability. At EN Systems, product development was restructured (a new NPD department was established) in order to ensure relatively stable NPD practices and possibilities. This in turn had, perhaps less intentional, consequences as the organizational restructuring seemed to be the beginning of changing power relations and dynamics. Over time this involved imposing and institutionalizing hierarchies that celebrated the rationality of the supervisors, while restricting the software product development experts' possibilities to 'negotiate voice'. This had implications for how employee turnover was felt amongst the experts and so on. In that sense, the EN Systems cluster illuminates the various and simultaneous processes that both aim to change and stabilize product development in differing ways. These processes were simultaneous, conterminous, interdependent, shifting and yet often almost invisible. In other words, they reflect the heterogeneous becoming of product development over time in terms of the often small, but yet powerful, mundane daily practices in which social reality takes shape.

To conclude, this chapter, like the two previous ones, highlights the importance and benefits of a focus on the micro-processes of organizational change in the development of our understandings of the dynamics and mutual construction of change and stability in organizations. Tsoukas and Chia (2002, 580) conclude:

'Looking at change in organizations from within, that is noticing how organizational members reweave their webs of beliefs and habits of action in response to local circumstances and new experiences and how managers influence and intervene into the stream of organizational action, is the perspective organizational scientists must take if they are determined to convey a sense of the organizational flow.'

Taking this perspective, as suggested by Tsoukas and Chia (2002), may involve studying and theorizing the micro-processes and micro-politics of organizational change (Thomas and Davies, 2005). This chapter has, for instance, showed how micro-politics are enacted in an organization, and in so doing it has developed our understandings of how hierarchies may emerge, how they are maintained and made relevant, how they are intertwined with context, how they discipline individuals and

have implications for human agency, and finally how they most importantly may work as to maintain power relations and construct stability over time.

9 AFTER Q-SOFTWARE: MOVEMENT OVER TIME

It is time to return to the core product development experts whom I interviewed twice during their employment at Q-Software, during interview Phase 1A and Phase 1B. When discussing the findings from these two interview phases in Chapter 5, I described how Q-Software grew from being a small startup company to a company of over 40 employees. Soon, however, the company was hit by financial problems, and later Q-Software went bankrupt. In this chapter, I come back to these restructurings by discussing the analysis of a third interview round with the same core product development experts as interviewed in Phase 1A and 1B: Adam, Frank, James, Kevin, Peter and Scott.

When the third interview round was conducted, Q-Software had gone bankrupt and the product development experts had been working for two to three years in different organizations. During this interview phase, I asked the same questions as posed to the interviewees working for new.comer, Sissela and EN Systems. Consequently, I have structured this chapter in a similar way to the three previous chapters. However, since I already have described the organizational restructurings that had occurred at Q-Software in Chapter 5, I will only mention them rather briefly before analyzing (1) products and relations to products, (2) ways of organizing the development of these products and (3) the interviewees' positioning within these processes. Throughout the analysis of these three aspects, I will again relate the aspects to the organizational restructurings experienced by the interviewees. This is an attempt to explore my research questions: How do software product development experts construct organizational change? How do software product development experts construct their work in relation to organizational change? What kind of phenomenon is organizational change when seen through the lens of discourse and practice?

In Figure 21, the shaded part under the heading Phase 3 shows which interviews I focus on this chapter.

Figure 21 Analysis of Phase 3 interviews within the Q-Software cluster

	PHASE 1A HR interviews	PHASE 1B HR and research interviews	PHASE 2 Transitional research interviews	PHASE 3 Core research interviews	PHASE 4 Colleague research interviews
Interviewees and their organizations	 Q-Software	 Q-Software	 InnoStar Ltd. Piranha Solutions	 new.comer Sissela EN Systems M. Loyd Group	 new.comer Sissela EN Systems

As I showed in Chapter 5 when analyzing the Phases 1A and 1B interviews, the main periods during which certain restructurings occurred were: the startup stage (founding Q-Software), rapid growth, downsizing, and the post-bankruptcy stage. These stages and organizational restructurings are summarized in Table 29, and as in the previous chapters I will use this table throughout the chapter to help the reader follow to which restructurings I am referring. The 'X' indicates when the interviews analyzed in this chapter were conducted, while the "*" shows during which phase the specific organizational restructurings unfolded.

Table 29 Interview phases and organizational restructurings at Q-Software and after

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Startup stage	*			X	
Restructuring 2: Rapid growth	*			X	
Restructuring 3: Downsizing		*		X	
Restructuring 4: Post-bankruptcy				X	

As Table 29 shows, in this chapter I analyze experiences of organizational restructuring both at Q-Software and in the organizations where the interviews began working after the bankruptcy of Q-Software. By engaging in product development during the post-bankruptcy stage, often during organizational restructurings, new experiences were generated that the product development experts needed to accommodate in relation to previous ones. Hence, constructions of products and their development processes as well as subject positions were reconstructed or deconstructed. This is seen here as ongoing processes of constructing meanings. Previous experiences of developing software can be seen to serve as discursive resources, but perhaps also as limitations, as product development experts are confronted with new experiences in their work. In other words, the past is related to action in present moments, and thus the past continues to exist through time and is not a fixed moment lost in time (O'Shea, 2002).

In this chapter, I also include the interviewees' constructions which, in retrospect are critical of what occurred in product development during organizational restructurings at Q-Software. The aim is not to point out in hindsight what could have been done better, but to show how the past may act as a discursive resource or limitation when the present and possibilities for the future are constructed.

9.1. On products and relations to products

At Q-Software, the core product development experts all worked mainly on the same software products. As shown in the analysis of the Phase 1A and 1B interviews, various interactive processes that the core product development experts were involved in created a strong belief in the main product and its potential large-scale future success. The product was seen as technically advanced and thus demanding to develop, which the core interviewees saw as a great source of satisfaction. The strong belief in the product was sustained even through the downsizing process to the extent that great efforts were made to save the product. The core interviewees worked for months without salaries, making various efforts to develop the product and strategies for saving

the product in case of a bankruptcy. One could say that the product became a source of commitment and joint actions.

Following this brief summary above of constructions of products during the Phase 1A and Phase 1B interviews, let us now turn to the Phase 3 interviews, which were conducted two to three years after the Phase 1A and Phase 1B interviews. In the Phase 3 interviews, the product was still attributed similar meanings to those during the previous interviews, such as being technically advanced although the product had been commercially unsuccessful. Considering the bankruptcy of Q-Software, perhaps unsurprisingly, several critical voices were raised regarding frequently-changing product visions and their business potential. However, some other aspects concerning the product were now emphasized more. For example, the product was constructed in various ways as the core product development experts' shared 'property':

'The whole code was shared and anyone was allowed to go and poke his nose in anyone's stuff, to some extent anyway.' (Peter)

Although Peter says in the quote above that the code was shared, he simultaneously talks about poking one's nose into codes designed and/or implemented by others, thus indicating the product was not shared. Nevertheless, this way of constructing the product as belonging to the core product development experts was challenged during rapid growth. The increasing number of, for instance, programmers meant that the product was to be shared with a larger group of people. In this sense, the product could be understood as a source of inclusion and exclusion and thus as more than merely successful or unsuccessful software. But what were the implications of inclusion and exclusion of more people? The core interviewees claimed that the growing number of employees and an increasing time pressure made it difficult to keep the product, or more precisely, the code, simple, logical and ordered:

'We tried to develop it according to a process, but there was always a tremendous hurry ... Nothing good followed from that, the only thing that happened was that the coding process was destroyed.' (Adam)

Adam expresses in the quote a wish for more structured product development practices to produce a product but draws attention to difficulties in achieving this during rapid growth. The lack of structured and shared practices and/or rules were sometimes seen as an obstacle to producing a logical and easily readable code, which seemed to be the desired product attributes.

As the core interviewees one by one at different stages had to give up developing the product, various emotions were raised, such as feelings of being deprived of the product, feelings of regret regarding what could have been done differently, and feelings of letting the product go. In other words, various emotional relations to the product were expressed. One interviewee explained that after the product had been sold due to the bankruptcy, it was unsuccessfully implemented at new.comer and, as he said, was now given 'hospice treatment'. This interviewee hence described the product as almost a living being facing death as the development of the product was coming to an end.

After the bankruptcy of Q-Software, the core product development experts began working with NPD projects in various organizations. When confronted with these new experiences, the product developed at Q-Software was frequently related to the new products; the previous commercial failure and the technical strengths of the product were compared to products under development in the new organizations. For example,

the previous discomfort with the messy or untidy aspect of the product created a desire to avoid or to eliminate such disorder in new products:

‘One should keep it simple in every way and not begin to do things in many different ways. And then force everyone to work in accordance with a certain model, that is, when you develop the product then different stuff should be named logically, reasonably simply. And then the same rules should apply everywhere, so that the structure stays simple ... if there are 10000 names in a software and if they are logically named, then you won’t need to remember them, it works out automatically according to certain rules.’ (Peter)

As the quote indicates, for some product development expert, it became important to eliminate disorder in products during the post-bankruptcy stage. Others claimed that to be impossible, for instance, under time pressure, as products become increasingly complex or need sudden readjusting. Elsewhere, disorder in products was seen as unavoidable, for example, due to new information or the size of the development team, but at the same time as a phenomenon that could be controlled and managed to a certain extent.

In sum, as we can see, an examination of accounts of products helps us to recognize that products and relations to products are attributed a variety of meanings in complex and sometimes contradicting ways. As I concluded at the beginning of the section, the product was seen by most of the interviewees as technically advanced although it was commercially unsuccessful; as something evoking extensive actions of saving, thus becoming a source of commitment and joint action. Further, the product was conceived, perhaps in contradicting ways, as shared property, a property that can be viewed as a source of inclusion and exclusion of various actors in product development practices. Interestingly, the examination of constructions of the product also illustrated various emotional relations to products and technology. In addition, there seemed to be a growing desire for order and eliminating disorder in products.

9.2. On ways of organizing product development

The previous section on products implicitly touched upon issues of organizing product development. In this section, I will discuss these in more detail, that is, how ways of organizing product development change over time as various organizational restructurings unfold. Therefore, I now turn to how the core product development experts retrospectively gave account of ways of organizing product development at Q-Software and in the companies where they began working after the bankruptcy of Q-Software.

9.2.1. The startup stage: Informality, interdependence and autonomy

I will begin by discussing ways of organizing product development during the first few years after Q-Software was founded, a stage that I refer to as the startup stage. This stage is marked with an ‘X’ in Table 30, which also shows that the interview material analyzed here was gathered during interview phase 3.

Table 30 Ways of organizing during the start up stage at Q-Software

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Startup stage				X	
Restructuring 2: Rapid growth					
Restructuring 3: Downsizing					
Restructuring 4: Post-bankruptcy					

Product development at Q-Software was described by the software product development experts James, Peter and Scott in the following terms:

'It [product development] was done in rather chaotic ways ... It was fun, it was extremely dynamic, it was rather extreme programming from the start.' (James)

'It is some kind of handicraft tradition or something like that in a way. It is handicraft really.' (Peter)

'We didn't really have a system for the specifications, where we could gather specifications and discuss, follow-up the development, ask questions and data base for the documentation when the product had been finished. Instead it was sent around, and if you wanted to do something with something then you never knew where it was.' (Scott)

These accounts construct product development in different ways, but at the same time all three accounts draw attention to how product development at Q-Software was constituted by few formally-enforced structures or NPD practices. These accounts of product development at Q-Software could be seen as a stabilized effect at that specific point that emerged through relational processes and local orchestrations of relationships (Chia, 1995). In the local conditions of Q-Software, where such effects were constructed, various processes of developing software were grounded in certain practices of informal interactions, autonomy and relatively close friendships between the experts. However, one core product development expert had more authority and extensive responsibilities for planning and defining the product. On the other hand, the other core product development experts were given a relatively large say in influencing the product and ways of organizing:

'I told them [the other core product development experts] what I wanted and then a suggestion was produced, more or less, that this is probably how it could be done. In my opinion, there was a core that worked it out. It took shape there quite well. I then didn't communicate very much with others after that. There was in a way, in my opinion, a perfect software development style in some sense.' (Peter)

The extract above suggests that Peter had a certain authority, but there was little control exercised over the core product development experts at Q-Software. Peter developed product visions or ideas, which he then shared with the other core experts, who in turn gave their feedback and began to develop the ideas further. Product development processes were hence seen to emerge as a result of the work carried out by the core product development experts as a group in which each individual had a certain position:

'We [core product development experts] have divided the work between us based on different items and then based on ... the stage of the product development process. That is, Frank has planned the user interface. That's where it all started. Then Peter has made demos and come up with ideas. Then I have made corrections to Peter's work and made a new version, and then

James has made corrections to my version and then in a way made the final version ... the work has been divided according to our personal skills.' (Adam)

Product development, as described in the quote above, was shaped by how specific parts in a series of activities were taken up by certain core product development experts within the development team. Interestingly, although the core software development expert group was seen as a group constituted by interdependent individuals, the core product development experts sometimes simultaneously gave account of their work as less interdependent pair work, or as a rather autonomous performance:

'The majority of the work is done alone or in some sort of pairs and the work of the pairs or individuals are brought together in some kind of weekly meetings.' (Kevin)

'The most typical thing is that the communication isn't comprehensive enough, that is, everyone is working on their own piece and the organization doesn't even have a structure that would make it [communication] possible.' (Frank)

As we see here, product development was also constructed as a relatively dispersed condition. Perhaps one can conclude that although the ways of organizing the product development processes were described as a condition that invited actors to engage in product development autonomously, practices of positioning the self and others as a part (or not as a part) of the core product development group was crucial. This could be seen as bonding and strong identification with the core product development group and an emphasis on good social relations within this team:

'In general, in my opinion, from a product developer's perspective, the most important thing is that the project runs, runs well and that the dynamics and personal chemistry of the project team work.' (Kevin)

In sum, the first years after Q-Software was founded the everyday product development practices were typically improvised and relatively non-hierarchical, thus inviting all core product development experts to participate cooperatively in shaping, for example, NPD processes. This provided them with relatively good possibilities to 'negotiate voice' and influence their own work. From the start, it seemed like friendships and bonding between the product development experts were important for the positive working atmosphere and employee satisfaction.

9.2.2. Rapid growth: Inclusion/exclusion and supervision

After the startup stage Q-Software received venture capital and stepped into a period of rapid growth in terms of the number of employees. The shaded 'X' in Table 31 indicates that this organizational restructuring is the focus of this section.

Table 31 Ways of organizing during rapid growth at Q-Software

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Startup stage					
Restructuring 2: Rapid growth				X	
Restructuring 3: Downsizing					
Restructuring 4: Post-bankruptcy					

What happened when Q-Software entered into this period of rapid growth? Adam explained that the friendly and good working atmosphere was maintained when Q-Software began to grow rapidly:

'Everyone was happy and the atmosphere was good. That's what I think. Then you sure get this drive. That's what I mostly remember. Sure, we worked hard, but that doesn't matter when the atmosphere is good.' (Adam)

Yet, the specific ways of organizing did not include any particular or formalized ways of helping new employees to adapt to the new work place, nor was there any guidelines for how to hand over tasks. James explained:

'We had no diffusive processes; we didn't really have any processes. New employees just arrived and we wondered what to do with them.' (James)

As we see, the ways of organizing various practices, which had emerged mostly through the interaction between a small cohesive group of core product development experts, were challenged when new employees were to be included in product development processes. However, the ways of organizing product development were not modified significantly and consequently the supervision of new programmers took a rather disordered shape:

'It [the supervision] was messy, everyone spoke to everyone and we did not necessarily know what the others [core product development experts] had supervised. ... There were no supervisors in that way, not in the way that it had an influence. There were probably quite a few supervising, and other times not everyone got enough, enough supervision.' (James)

'There is a problem in a situation where many persons are recruited quickly as there are no methods for introducing them immediately to the development work. Therefore, the productivity of the work is weak if the person [the new employee] isn't exceptionally qualified. Typically, those who have worked there before are left with the burden of too much work.' (Frank)

As we see here, the inclusion of new employees was seen as improvised, insufficient and a source of disorder and uneven workloads. However, through the new experiences, the core product development experts gradually become more involved in supervision. The supervision was organized through spontaneous and improvised practices, which the core experts seemed rather satisfied with. Frank, though, was retrospectively critical of his own actions:

'I have made the mistake myself, that when I have been in a position of decision-making, I haven't been able to give up power and assign power in a manner that I clearly should have done.' (Frank)

As in the extract above, many core product development experts seemed occupied and preoccupied with their work tasks at the exclusion of delegating and restructuring the everyday work in the new local conditions. This implied that although the communication within the product development department was relatively active, the product development practices unfolded at a distance or to some degree in isolation from other organizational practices:

'I didn't have much to do with the marketing and sales departments, not even then [during rapid growth]. That, too, was perhaps one of the challenges or in that way we failed or I failed. That is, the communication was surprisingly limited in a way.' (Peter)

Peter points out that he was working at a distance from actors in other departments. In other words, the ways in which the rapid growth was translated into action modified to a minimal extent the networks of communication. Organizing and hierarchies were

also maintained relatively unchanged. In these local conditions, the ongoing construction of stability in the product development seemed to be sustained:

‘The organization grew, but the processes were stable there.’ (Scott)

‘Of course you’re distracted when new employees are recruited who should be introduced to the work ... but I don’t think that there was any big problems.’ (Scott)

In sum, during rapid growth, the established ways of organizing were challenged but yet not significantly modified. Instead, the product development experts maintained their improvised ways of organizing through processes of distancing from other groups and through a reconstruction of friendships.

9.2.3. *Downsizing: Commitment and solidarity*

Only a few months after the peak of the rapid growth, a downsizing process began at Q-Software. Table 32 illustrates that this section focuses on ways of organizing during the downsizing process.

Table 32 Ways of organizing during downsizing at Q-Software

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Startup stage					
Restructuring 2: Rapid growth					
Restructuring 3: Downsizing				X	
Restructuring 4: Post-bankruptcy					

From the core product development experts’ point of view, the ways of organizing various product development practices had not been rearranged to a great extent during the rapid growth, but during the downsizing process most employees were laid off work. Still, the core product development experts showed an even stronger commitment to performing their tasks and to the product development group:

‘I think the communication improved when things started to go wrong. Somehow, it was, I think it was maybe mainly because the group cohesiveness became stronger especially at that point of time. At least I felt that way. I felt more solidarity with the others who worked for the company.’ (Scott)

‘I kept it in mind all the time, that if we don’t succeed, then we will just do this again, we have a great team and we will just start all over.’ (Adam)

Here, the downsizing process seemed to provide a site for stronger bonding and social relations between the product development experts to the extent that it contributed to a sense of security.

In addition, the core product development experts became more preoccupied with their tasks despite the fact that the core product development experts’ relation to the company legally changed when they were laid off work. They continued to work, showing even stronger dedication to work:

'It was really that this core group was committed to work, so that even if the walls fell down the blokes¹³ just coded. Their commitment was exceptional, a personal thing in a way. I think a lot of technology blokes have a bit of that attitude.' (Peter)

'My work was more fun when it began to go down because there were fewer people left ... in a way I got to take more responsibility.' (Scott)

'The activities become much more efficient, that's when you're in a must-situation. It's a pity that the efficiency only improves in must-situations.' (Kevin)

As we see, the product development experts showed a strong commitment to their work; many of them enjoyed the pressure, increased responsibilities and efficiency. But how were the increasing product development efforts organized? The ways of organizing product development practices were again minimally modified and various practices still provided a context where few formalized ways of organizing were imposed on individuals. Frank commented on the process of product development:

'There was no product manager or person in charge of the product as a commercial product. Nor did the management team provide a clear vision about what to aim for. Consequently, the result is that the product development team work according to their own vision, and still necessarily, at least in small companies, such teams don't include people who are interested in the business side. The product may be good or I mean functional but doesn't have in a way enough business potential.' (Frank)

As we hear here, Frank was critical of the ways of organizing. He felt that the non-hierarchical ways of organizing gave little in the way of suggestions to the product development experts on how to deal with the downsizing process. Instead, the product development experts continued working as before, thus maintaining stability in the daily practices. Kevin on the other hand was less critical:

'It [the vision] was never blurred in my opinion but if, for example, there are less people working on the same things, because rarely the stuff or tasks decrease, so in a way the focus is forced to become more specific'. (Kevin)

Regardless of how the product development process was given account of, during the last months before the bankruptcy, the most central organizing aspect was perhaps the product. When the different actors at Q-Software had realized that bankruptcy was unavoidable, not only did the core product development experts still commit to developing the main product, but they also engaged in various activities for saving the product from the bankruptcy. In other words, the product seemed to have provided an important source for how the product development and downsizing process unfolded.

To conclude, the strong focus on the product and the desire to save it seemed to contribute to that the ways of organizing were maintained and kept relatively 'stable' despite the organizational restructurings that occurred at Q-Software; over time, the experts just became increasingly absorbed in their product development tasks and social relations in an attempt to save the product. Hence, stability and friendships were generated and constantly 'in the making' through the ways in which the core product development experts interactively and locally organized reality.

¹³ This extract has been translated from Finnish to English. I have translated the Finnish word 'äijät' to 'blokes'. Äijä (singular for äijät) refers to an old man often emphasizing 'traditional' masculinities.

9.2.4. The post-bankruptcy stage: Desire for order

After Q-Software had gone bankrupt, the core product development experts began working in different organizations: Piranha Solutions, M.Lyod Group, new.comer, Sissela, EN Systems and Volcano Tech. In this section, I analyze the period after the bankruptcy as indicated with an 'X' in Table 33.

Table 33 Ways of organizing during the post-bankruptcy period

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Startup stage					
Restructuring 2: Rapid growth					
Restructuring 3: Downsizing					
Restructuring 4: Post-bankruptcy				X	

The core product development experts were confronted with new local conditions of product development in the organizations that they began working for. Here, product development often took shape during various organizational restructurings, as illustrated in the previous chapters on new.comer, Sissela, and EN Systems. When describing the experiences gained after the bankruptcy of Q-Software, issues of disorder, order and control were emphasized more than before in particular by Peter, Scott and Frank.

Peter who founded a new company, Volcano Tech, wanted to avoid organizing product development as it had been done at Q-Software. Although he was the only full time product developer at Volcano Tech, he strived to enforce specific product development models or logics so that possible future employees could act in line with shared rules. As he said 'one should keep it simple in every way' and 'force everyone to work in accordance with a certain model'.

Both Scott and Frank expressed strong satisfaction with the rather highly structured product development processes in the ICT companies they had begun working in. At Sissela, where Frank now was working, the development process was strictly specified, including timetables, responsibilities and decision-making; all to ensure the development of products with business potential.

Scott, who now worked at EN Systems, embraced various technical specifications and documentation systems, which were used by the software development experts and thus structured the development processes there:

'We didn't really have a system for the specifications ... you never knew where it was, but here at EN Systems, where I work now, we have Lotus Notes and despite some exceptions, in most projects, always the same database.' (Scott)

These systems contained information about specific products under development and showed product development experts how to carry out their tasks. Hence, such tools offered Scott a sense of security concerning what to expect around the corner at EN Systems. In addition, these tools enable the product development experts to focus only on their own particular part of the product without necessarily having to know all details about the entire process. Therefore, the specification and documentation

systems acted as an organizing device that instructed and interconnected actors by offering strict frames and simultaneously the possibility for actors to work independently with minimal interaction. To conclude, in many of the interviews it seemed as if one could discern a movement towards an increasing desire for order in the everyday practices, a desire that often seemed to be related to past experiences of disorder at Q-Software.

9.3. On subject positions

In the two previous sections, while discussing constructions of products and ways of organizing the development of them, I implicitly touched upon issues of subject positions several times. In this section, I specifically explore how the core interviewees position themselves within the meanings ascribed to products and ways of organizing; I am interested in how the core product development experts took up certain subject positions as they developed software during various organizational restructurings. As I will show, subject positions were altered over time as various organizational restructurings occurred in local contexts of product development. By referring to these constructions, product development and organizational restructurings, particular subject positions were attributed with specific meanings, which also created specific ways of being.

9.3.1. *The startup stage: Distancing and identification as group members*

In this section, I will discuss subject positions and processes of positioning during the startup stage of Q-Software as marked with an ‘X’ in Table 34.

Table 34 Positioning during the startup stage at Q-Software

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Startup stage				X	
Restructuring 2: Rapid growth					
Restructuring 3: Downsizing					
Restructuring 4: Post-bankruptcy					

During the first few years after Q-Software was founded, the product development experts’ team grew into a very cohesive group:

‘There was enough room for all of us blokes¹⁴ to work in the same room and we went to lunch together and did everything together, so we ended up spending a lot of time together.’ (James)

These interactive practices seemed to play a crucial role in establishing the core interviewees’ content of subjectivity in this particular context. The practices addressed the interviewees foremost as certain software product development experts with implications such as a strong commitment to the group and its tasks. Taking up this

¹⁴ The extract has been translated from Finnish to English. The word ‘ukot’ has been translated into ‘blokes’ just as the Finnish word ‘äijät’ in an extract in section 9.2.3. Both ‘ukko’ (singular for ‘ukot’) and ‘äijä’ (singular for ‘äijät’) usually refers to an old man, while the use of ‘äijä’ in the interviews perhaps emphasizes more ‘macho masculinity’.

subject position simultaneously involved a production of the self as not belonging to other groups. Therefore, the practices that constructed cohesiveness and identification with the product development group implied that the core interviewees at the same time distanced themselves from other persons through limited interaction with them. This located the core product development experts within a structure of rights that enabled them to isolate themselves to a certain extent from other organizational activities and strongly focus on product development practices. Consequently stability was created in the daily work tasks. This could be seen as an achievement accomplished through joint actions within the product development department as the members made sense of themselves and each other in relation to other persons and groups.

9.3.2. Rapid growth: From being a worker towards being a manager

Let us now take a look at potential transformations in the software product development experts' subject positions as Q-Software stepped into a period of rapid growth, as shown in Table 35.

Table 35 Positioning during rapid growth at Q-Software

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Startup stage					
Restructuring 2: Rapid growth				X	
Restructuring 3: Downsizing					
Restructuring 4: Post-bankruptcy					

As the number of employees rapidly began to increase new product development practices emerged. The software product development experts' work shifted from implementing and coding software to planning products and supervising new programmers. These new experiences generated by the rapid growth challenged the subject positions the core experts had taken up, as James said:

'Supervision stuff came as a new thing along with the growth ... I saw it as a natural development in a way and it was nice, but I'm more of a doer type of person rather than a manager. I prefer expert work to supervising.' (James)

As James points out, the six core product development experts were increasingly located as belonging to a category of managers. This position was sometimes experienced as conflicting with the already established subject positions. Peter also reflected on the shift away from concrete product development tasks in relation to how he positioned himself:

'The specific feeling of hands-on tasks disappeared, and that was perhaps the most concrete thing then, and I felt myself to be "a ditch digger" or a worker. But you should try to hang on to the actual doing ... and just looking at it [product development] from above just gives you itchy feet or it is difficult somehow. [Silence] So then, becoming detached from the actual thing wasn't necessarily a good thing.' (Peter)

In sum, the 'worker' and 'doer' subject positions were threatened by the 'managerial' positions as the core product development experts dealt with rapid growth. The interviewees often seemed to identify themselves with the established subject positions

and found it undesirable or difficult to take up the ‘managerial’ positions. In the interviews, carried out two to three years after the rapid growth, some of the interviewees were to some extent critical of their own positionings and ways of being in this situation while at the same time making sense of their actions by constructing themselves as having been inexperienced.

9.3.3. Downsizing: Increasing solidarity and back to being a worker

As the rapid growth was followed by a downsizing process, subject positions were again altered in the light of the new experiences. As Table 36 shows, this is the focus of this section.

Table 36 Positioning during downsizing at Q-Software

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Startup stage					
Restructuring 2: Rapid growth					
Restructuring 3: Downsizing				X	
Restructuring 4: Post-bankruptcy					

As the downsizing process unfolded, it seemed as if it became more legitimate and desirable to take up ‘doer’ and ‘worker’ subject positions again. The company was under threat, and there was a shared strong desire to save the company or products. To do so, the product development experts, as many others within the company, actively engaged in their work as ‘doers’. As Peter said the ‘core group was committed to work so that even if the walls fell down the blokes just coded’. In other words, although the Q-software dismissed all employees for months, the core product development experts continued coming to work:

‘We had a certain attitude at that stage, that nothing can hurt us, a certain confidence in our own professional skills.’ (Peter)

‘Difficult experiences are likely to create a committed project team.’ (Kevin)

As we see in the extracts, solidarity and commitment to developing the products were emphasized more strongly than ever before. This produced the core product development experts as committed, responsible and efficient members of the organization, implying that the survival of the main product and stability in daily practices often seemed to be prioritized above efforts to find new jobs and/or securing the personal financial situation. By accepting and drawing on the subject positions offered, the core product development experts were prepared to work long hours with delayed or even no payments.

The accounts on ways of organizing during downsizing illustrate processes of exceptional commitment and solidarity in and through which the interviewees were addressed as dedicated doers ‘saving’ the company or product, a position that the interviewees seemed to identify with. It appeared as if the downsizing process reinforced and ‘intensified’ previously celebrated subject positions, which had been threatened during rapid growth.

9.3.4. *Post-bankruptcy stage: Instrumental resources and software experts*

As illustrated above, the processes of constructing subject positions is continuous, and as subject positions are reconstructed people draw on past experiences. We can assume that the experiences at Q-Software and subject positions related to them may have shaped and constrained how the product development experts made sense of themselves as they moved on after the bankruptcy to various organizations. In this section, I explore various subject positions taken up by the core interviewees after the Q-Software bankruptcy and how these subject positions were related to the past. Table 37 illustrates that this section focuses on positioning during the post-bankruptcy stage.

Table 37 Positioning during the post-bankruptcy period

	Phase 1A	Phase 1B	Phase 2	Phase 3	Phase 4
Restructuring 1: Startup stage					
Restructuring 2: Rapid growth					
Restructuring 3: Downsizing					
Restructuring 4: Post-bankruptcy				X	

As the core product development experts began working in new organizations after the bankruptcy of Q-Software, they were to varying degrees confronted with new expectations with certain implications. The extensive organizational restructurings at Q-Software had provided the core product development experts with particular self-understandings. Many of the interviewees now viewed themselves as experienced. Kevin was able to use his own experiences as a resource during another downsizing process at Piranha Solutions:

‘At Q-Software I observed the situation [downsizing process] as a bystander. But here I have been forced to participate ... mainly I’ve had to think about, about the targets of the adaption actions [people to be dismissed] and then face to face, for example, inform about this unfortunate news.’ (Kevin)

Kevin disliked his obligations in the downsizing process in the new organization, but he was able to accept his subject position by drawing on previous experiences. More specifically, by sharing his previous experiences of coping with the downsizing process at Q-Software he was able to be supportive by convincing those who found the situation stressful that ‘it doesn’t mean that it is that serious if you are dismissed or if there is a bankruptcy, it is not that serious in the end’. Thus, he was able to negotiate a desirable account of himself. Elsewhere, the experiences at Q-Software invoked questioning the self and the ability to carry out obligations attributed to specific subject positions. For example, Adam questioned his skills in specifying products:

‘I have lost it [the ability to know in what direction to develop products], once I used to have an understanding of it, now I have realized that I don’t have the capacity anymore, I can’t do it. Perhaps I used to envision too much then.’ (Adam)

As Adam suggested, over time various experiences of organizational restructurings made him reject being allocated as a person with expertise in specifying the user needs

and directions for product development. He positioned himself as ‘merely’ an expert in certain technologies. Peter and Frank also claimed:

‘In a way I do throw off the responsibility for defining what this product really should be used for.’ (Peter)

‘Somebody should have the business responsibility ... if the user segment or market has been defined and then one finds out that there is no such segment, somebody should be in charge of that specification otherwise nobody will take responsibility for it.’ (Frank)

As we see, Peter and Frank also resisted being addressed as more than software experts by handing over business responsibilities to other actors and by suggesting that they had failed in such tasks at Q-Software.

Many of the core product development experts were now also addressed in new ways in relation to the firms they began working for. At Q-Software, most of the experts had been owners and thus relatively well informed about the financial situation of the company. With the exception of one interviewee, the core product development experts began working for larger companies than Q-Software. Now, many were frequently excluded in various ways:

‘I have confronted situations where, let’s say, the company has not been able to use my special skills, or one has not had a willingness to do that.’ (Frank)

‘At least I was confused, it felt like I found every week some kind of new group that had assembled for a meeting or something like that. It never became clear to me where the decisions were made as people assembled in different groups. ... Then another [hierarchical] layer was imposed, and it became even more confusing what we were doing in the product development and consequently anybody [within the company] could ask us to develop something.’ (Adam)

Here, Frank and Adam share in different ways their difficulties in engaging in certain activities. Frank had been excluded from a project and left with too little to do, while Adam felt distant from the decision-making.

In the new firms, the positionings offered many of the interviewees more instrumental understandings of themselves. When taking up these subject positions within these particular discursive practices, some interviewees came to experience themselves as more or less directly responsible for ‘bringing in money’ to the firms:

‘At the moment I’m only so to speak an employee here. Then [at Q-Software] it was a combination of work, leisure and hobbies sort of.’ (James)

‘Here I can most clearly influence the company by bringing in money.’ (Adam)

‘No job is secure. There is no place where you can lean back and take it easy. So if you work somewhere you should understand that everyone has to contribute to the results in some way.’ (Frank)

As we see, the interviewees seemed to be addressed as instrumental resources. This is not to say that these interviewees identified themselves with the instrumental subject positions offered. For example, while Adam drew attention to the positive benefits of receiving a regular wage from such a job, James was nostalgic about a lost ‘doer’ position. Frank did not seem to think that the instrumental self-understanding excluded the ‘doer’ position. In many respects then the desire for the ‘doer’ and ‘worker’ positions were still present.

Kevin, Scott and Peter constructed the organizations they began working for as sites where they potentially could develop as experts often by highlighting 'doer' and 'worker' subject positions. Rather than taking up an instrumental self-understanding, these three interviewees identify themselves primarily as software experts. They drew attention to their specific expertise and desire to use it and develop it, while also emphasizing past, present and possible future threats to this position. Maintaining these subject positions hence seemed to require constant processes of construction and reconstruction of the self in relation to ongoing and potential threats and desires.

9.4. Reflection on data and theory: Time

All software product development experts in the Q-Software cluster had experiences of far-reaching organizational restructurings, that is, rapid growth, downsizing, bankruptcy, and various organizational restructurings in the post-bankruptcy period. The analysis of the two first interview rounds with the Q-Software interviewees (phases 1A and 1B described in Chapter 5), highlighted the interviewees' strong relations to the products under development. The ways of organizing the development of the products were improvised and non-hierarchical. Together, the improvised ways of organizing and the relations to the main product seemed to have been important sources for solidarity and identification between the software product development experts. In particular, during downsizing the strong focus on saving the product created a sense of unity.

As this chapter has shown, a retrospective reflection on these organizational restructurings by the interviewees illustrates in more detail the important role played by emotional relations to products, improvisation, bonding, and friendships, while also touching upon problematic issues around improvised or 'chaotic' organizings, inclusion/exclusion of new colleagues, and distancing from others. Such reflections showed how stability was achieved by the interviewees; how they were occupied and preoccupied with their tasks; how they distanced themselves from others and 'excluded' new employees, and through these processes constructed stability in their daily work. In so doing, the retrospective accounts illustrated how stability was achieved in different ways during different organizational restructurings.

The analysis of these interviews also showed how the experiences of organizational restructurings had contributed to an emerging desire for order in the post-bankruptcy period as an attempt to avoid previous mistakes, a shift that had both desired and undesired implications for subject positions. I will return to these issues around autonomy, relations to products, desire for order, and homosociality in the final two chapters.

This chapter provides interesting insights and opportunities to theorize organizational change as experienced by software product development experts. First, it must be said that the perhaps most fascinating aspect of the Q-Software cluster from the perspective of this study is the exceptional commitment shown by the product development experts towards work and/or products, in particular during the downsizing process. Here, the reproduction of stability was strong, although probably not thought of at the time in these terms by the actors involved. Nevertheless, the analysis around this phenomenon provides interesting possibilities to theorize co-existent process of change and stability during organizational restructurings. This I will do by addressing 'movement over time', that is, drawing attention to the importance of connecting processes of change and stability to time (Roberts, 2004).

It may seem to be an obvious remark, to claim that time is important in theorizing organizational change since change, it could be argued, is intrinsically about time (a deeper analysis of this in Chapter 10), but time is often in various ways a relatively marginalized issue in studies and theorizing of organizational change. This neglect is in some senses understandable, as addressing time can be difficult and even ambiguous or problematic. However, as I will show, the analysis of the Q-Software cluster indicates that time is important to address. This is not because time needs to be 'captured' or described, but because it may shed some new light on ongoing processes of change and stability, including various implications and offer further development of theorizing despite the vagueness of this concept. Let me explain in more detail what I mean.

The Q-Software analysis illustrates how the core product development experts typically not only constructed their past experiences of organizational restructurings in terms of emotional relations to products or as informality, improvisation, but also as 'chaotic' ways of organizing. Restructurings were connected to solidarity, homosociality and also to inclusion/exclusion of new colleagues, and distancing from others. Together, these various aspects and processes seemed to contribute to the production of stability over time as various organizational restructurings occurred at Q-Software. Although many of these aspects of product development and organizational restructurings were embraced, most interviewees used these past experiences as critical discursive resources in the present moments of the interviews to construct a desire for increasing order both in present and future product development. This illustrates how the past, present and future are connected in and through discourse and gives a sense of movement over time. Therefore, rather than attempting to fix specific discourses of organizational change or discourses of product development, this chapter has shown the shifting and/or fluxing character of discourse.

The usefulness of highlighting issues around time in the analysis and theorizing of organizational change is thus to be seen in the possibilities that this offers to develop deeper understandings of shifts (including ongoing processes of stability and change) rather than primarily attempting to fix or describe discourse. Moreover, it shows how discourse, stability, change and time are intertwined and constantly in a state of becoming.

10 CROSS-CUTTING THEMES

At the end of Chapter 5 where I analyzed the first two rounds of interviews with the Q-Software product development experts, I wrote that I hoped that after having read all the analyses of the different clusters the reader would have gained greater insight into the mutual construction of stability, mundane product development practices and subjectivities during organizational restructurings. The analysis has shown the frequency, ‘character’ and course of the organizational restructurings experienced by the interviewees. It has also illustrated how the construction of stability seemed to be intertwined with everyday, mundane product development tasks to the extent that the ongoing production of stability could almost be said to have become an invisible routine outside ‘the formal organizational structures’.

Overall, the analysis also suggests that the particular ways of organizing product development in the different organizations had very specific implications for ways of being at work. Moreover, although, when I began the analysis, the interview material at first glance almost seemed to illustrate that little happens and is altered despite large-scale organizational restructurings, the analysis has shown that product development during organizational restructurings often imply ongoing ‘work’ to construct stability, relations to products, ways of organizing, and subject positions. In the following three sections, I want to discuss how these ongoing processes of construction may contribute to potential implications of software product development during organizational restructurings for the social actors involved.

First, I will discuss how the discourse of change and discourse of product development were transformed or reproduced over time in the clusters studied. More specifically, I will show how an analysis of the interviewees’ time conceptualizations of the past, present and future (Roberts, 2004) and their moves between different time tenses highlights transformations and trajectories as well as how the interviewees position themselves in this context. This effort sheds light on how the prevailing ways of organizing and views of products discipline various social actors and how the interviewees position themselves in relation to these established organizations and understandings. Moreover, the focus on shifting time conceptualizations interlinks stability, subject positions and various trajectories.

Secondly, building further on the issues arising from the analysis of time conceptualizations, I elaborate in more detail on how ‘the disciplining’ of software product development experts over time in and through certain ways of organizing is related to the interviewees’ subjectivity work, agency, (dis-)identification and production of power relations.

Thirdly, linking to subject positions and subjectivity work, I wish to emphasize that the analyzed interviews were produced from the perspective of men, with only one exception, and that this draws attention to gender issues. More specifically, having analyzed a male-dominated environment, we need to consider how the interviewees as individuals and groups of individuals in a gender category construct issues around product development, organizational restructurings and in so doing simultaneously talk (or do not talk) about gender. Here, a focus on gender positioning is used to illustrate how gender is talked about and what the implications of this may be.

While time, subjectivity work and gender issues all illustrate and analyze implications following product development during organizational restructurings, they also differ

from one another in various ways. Time could be referred to as a ‘processual perspective’, which was difficult to bring out fully in Chapters 5-9 but which is nevertheless a central theme and needs emphasis. This is so because restructuring is always about time and an inclusion of time in the analysis can show the process and construction of the research itself. Subjectivity work, on the other hand, comes perhaps closest to the theoretical and methodological orientation of this study in examining detailed data. The focus on gender tells us more about content-related issues or perhaps a lack of it by addressing the participants of the study, including “who they are”. Despite the differences between these themes, they may benefit from being interlinked and discussed together as I will demonstrate next.

As we will see, all the three following sections are interconnected in various ways with the analyzed key aspects: relations to products, ways of organizing, and subject positions. In so doing, the sections highlight potential implications for social actors that emerge in and through the interconnections of these aspects. Finally, I also wish to highlight that the issues discussed in the following sections should be understood as intertwined and as mutually produced, not as following one another in a linear way.

10.1.1. Time and transformation in the research material

The analysis of the four clusters shows that software product development in relation to organizational change indeed can form sites of very different, nuanced and shifting practices. The software product development experts discursively constructed in various ways product development as autonomous work, as controlled, as work requiring compliance or dominance, as rational activities, as practices to be ‘formalized’ and specified for maximum productivity, and yet sometimes or potentially as disordered, chaotic, uncontrollable or improvised. As we saw, even the same type of organizational change, for example downsizing, invited very different ways of organizing in different contexts.

While analyzing these heterogeneous processes and meanings around product development and organizational change I gradually came to pay more and more attention to issues concerning time and how time is related to and intertwined with the studied phenomena. One could say that time is interesting from the perspective of this study for at least three reasons:

- the study draws on an ontology of becoming which ultimately is about movement (Chia, 1999) and thus intrinsically about time;
- the research topic is about change and restructuring over time;
- the interviews and analysis have focused on how groups of individuals talk about their past.

What I want to emphasize here is that the interviews draw attention to how certain social actors in differing ways temporarily and discursively label and fix the flux of experiences (Chia, 2000), for example, how product development is labelled as controllable or/and as ‘out of control’, as disordered or/and ordered. From a discursive and social constructionist perspective, such processes and meanings emerging from them are constantly in a state of becoming (Chia, 1995). That is, if product development and organizational change are socially defined and labelled, these categories are constantly subject to potential transformation over time (Chia and

Tsoukas, 2002), and stability can be understood as a ‘symbolic construction generated by actors themselves through the way they talk about past practices, habits and routines’ (Tsoukas, 2005, 102). More specifically, product development and organizational change, and also stability, are intertwined with time and transformation. By transformation, I refer to becoming and micro-change (Chia and Tsoukas, 2002) of certain social realities.

As the interviews mainly focus on how the interviewees construct their past, the analysis has implicitly touched upon how time is connected to various, sometimes contradictory, experiences of product development and organizational change as well as to interlinked discourses. As we are moving towards the conclusions of the study, a more explicit focus on how social actors conceptualize time could help us to understand the complex interlinkings of time and the interviewees’ differing and shifting accounts of past experiences of product development during organizational restructurings (Roberts, 2004). Such a focus could potentially enhance our interpretation of restructurings over time as well as distinctiveness and commonalities, as Roberts (2004, 95), using a biographical approach to history-making and accounts of time, explains:

‘Within a particular biographical account (an interview or document) an individual may move between different time tenses, for instance, at one point speaking in the past-past – as if personal events, beliefs and patterns of life were gone forever. At another point, responses may be completely within the Present-present – the here and now. Later in the interview (or document) there may be references to the past as the future (Past-future), or even the future as in the present – the future as already here (Future-present). Thus, a movement can be discerned with perhaps some events seen as gone, some traditions still upheld or some lost beliefs to be revived. Even so, there is usually some general summary of life that is clear in an interview. Individuals often seem more attached to a particular time perspective – a combination of time tense (say Future-past) and an orientation or mood, perhaps an anxiety or nostalgia. Similarly, when examining interviews within a group (according to age, gender ethnicity or other background) commonalities in time perspectives may be found which relate to a shared experience, such as poverty in early life. The analysis of commonalities of tense and mood in groups can still retain the individual distinctiveness of a narrative where non-shared elements are voiced or shared themes are give a particular degree of emphasis.’

Roberts’ (2004, 95-97) argument can help us to sense how the interviewees conceptualize time, move between different time tenses and in so doing participate in discursively constructing and restructuring certain social realities of product development and organizational change. In other words, this would illustrate how the participants of this study speak about their past and use the past as discursive resources with certain implications for themselves. For example, do the interviewees see their past experiences of product development and organizational restructurings as gone forever (‘that was in my past’) or perhaps the future as the past (‘those days will return)? Or do they speak about the present as the past (‘my experiences now were also like that’)? The possibilities are of course many. Roberts provides a useful model (see Table 38) for analyzing a variety of different possibilities, although he emphasizes that a specific model cannot illustrate all complex processes around time.

Table 38 Time conceptualizations (adapted from Roberts, 2004, 96-97)

	Past	Present	Future
PAST	PAST-past: The Past as/in the past Example: 'That was in my past'	PAST-present: The Present as/in the past Example: 'My experiences now were also like that'	PAST-future: The future as/in the past Example: 'Those times for me will come back'
PRESENT	PRESENT-past: The Past as/ in the present Example: 'My life is still the same'	PRESENT-present: The Present as/in the present Example: 'I take life as it is'	PRESENT-future: The Future as/in the present Example: 'My prospects will be the same'
FUTURE	FUTURE-past: The Past as/in the future Example: 'I need to learn from my mistakes'	FUTURE-present: The Present as/in the future Example: 'My life is changing a lot'	FUTURE-future: The Future as/in the future Example: 'I do not know what is in store for me'

Roberts' (2004) model illustrates nine different time conceptualizations of how the past, present and future can be understood and interlinked. Drawing on this model, I will attempt to develop an understanding of the interviewees' interpretations of their past, present and future in the context of product development and organizational restructurings. This is to explore if such time conceptualizations can tell us anything about the shifts and transformations in various articulations of the discourse of product development and the discourse of change as well as any potential implications following from such transformations. With this, I attempt to show how the clusters of interviewees have arrived where they are, how they currently relate to their work – in particular in relation to organizational restructurings – and how they draw on their past. As Roberts (2004, 98) claims, such an analysis of movement between time tenses can inform us about how groups 'explain their formation and continuance, while pondering on or setting guides for the future'.

As the analysis illustrated, the discourse of change typically constructed by the interviewees did not seem to change considerably during the periods discussed in the interviews, nor did there seem to be many competing constructions of change. More specifically, the dominant discourse of change in Chapters 5-9 seemed to primarily construct change as ever present, unpredictable and inevitable but typically not desirable. Although this discourse of change drawn upon remained rather uncontested over time, the findings suggest that the discourse of product development underwent more transformation. Interestingly, such transformations often contributed to reconstructing stability. That is, while dealing with organizational change and to maintain stability, discourse and product development was constantly reconstructed and deconstructed. Here, tensions between disorder and order seemed to form a powerful discursive resource in the everyday practices in all clusters studied. Increasing discomfort, or perhaps a fear of disorder, sometimes emerging from organizational

restructurings, such as rapid growth or dispersed organizing, triggered new ways of relating to product development, which in turn invoked 'formalization' of organizing, fixing patterns, struggles, compliance and dominance in the name of productivity and efficiency. Through these patterns, I will in the following refer to efforts to move away from improvised ways of organizing towards shared, stricter, formalized and/or less flexible ways of organizing.

In the next subsections, I illustrate how an analysis of time conceptualizations in each of the clusters studied can give us better insights into phenomena such as fixing patterns, struggles, compliance and dominance. I will in particular focus on common time perspectives within the different clusters.

10.1.1.1. Time at new.comer: Upholding the past

At new.comer, the discourse of product development promoting an emerging desire for order and patterns transformed over time into something increasingly 'celebrated'. As, for example, Lucas said:

I like being involved because it [product development] was really clearly managed and conducted.' (Lucas)

The interviewees at new.comer with a previous background at Noburu Zone embraced the 'formalization' of product development processes to the degree that they even engaged in 'fighting' for them so as to uphold ('Present-past': the past in the present) or perhaps revive ('Past-future': the future as the past) formalized processes from Noburu Zone:

[We] thought there was a need for such processes ... the management team didn't think there was a need for [formalized] processes as they thought it was bad for the creativity ... they then realized when they, at some stage, developed far-reaching visions about becoming listed on the stock exchange et cetera that one has to have proper processes ... we from Noburu Zone began to impose processes, they [other product development experts] became slightly offended, perhaps because we entered their territory.' (Glen)

It [our process at Noburu Zone] was much more developed than the one, the processes, here at Piranha Solutions ... really, nothing came out of it [Piranha Solutions' processes], the processes we now have here at new.comer are the processes we brought with us from Noburu Zone.' (Phil)

Here we see how, for example, Glen and Phil construct their past experiences of specific patterns in product development processes as something to impose in the present despite resistance from others, and as something to uphold. In that sense, they, as many other interviewees, constructed the past in the present (Present-past). Occasionally, it seemed like upholding the formalized product development processes was challenging, and thus the experts rather had to engage in reviving the past, as Vincent concluded:

Many ideas have been or will be imposed at new.comer.' (Vincent)

It could perhaps also be argued that the formalization of certain patterns was something holding product development together and unaffected by organizational change:

We had already made plans and schedules at Noburu Zone. So, when there was this huge change [acquisition of Noburu Zone] we were still able to continue as before as soon as we connected up our computers we just continued and that was of course good.' (Phil)

As we see, by making specific plans and schedules and by holding on to them, the Noburu Zone experts were able to uphold past formalized product development processes during an acquisition (the past in the present) and hence produce stability. Moreover, by drawing on particular time conceptualizations (foremost 'Present-past': the past in the present), the discourse of product development promoted an increasing desire for order and 'formalization' and thus stability. In this context, many new.comer interviewees actively engaged in processes of legitimizing their preferred interest of more 'formalization' by attempting to gain a more privileged voice.

10.1.1.2. Time at Sissela: Trapped in the present

At Sissela, the discourse of product development also promoted order, here in terms of compliance to an overall plan, which in contrast to the situation at new.comer provided the software product development experts with little possibilities 'negotiate voice' and exercise power. Product development was typically given account of in the following terms:

'We have these plans, according to which we live ... certain stages have been given, which define what has to be ready by a specific point in time.' (Ben)

As we see here, the software product development experts at Sissela 'lived' or worked according to plans given to them. When looking into this in more detail, the analysis seems to suggest that the dominant time tense in this context was 'Present-present' (the present as the present): the product development experts took product development as it was in the present. Cliff explained:

'Well, that's really the thing, here, that the future perspective is not very, let's say, long ... I haven't really thought that far, sort of, thought about it, well,well, well, about what the future looks like.' (Cliff)

Moreover, it seemed as if the product development experts had to take the tasks and local conditions as they were given to them and make their very best of them, take work as it is, thus producing the present in the present. As Neil said:

'You just have to try to produce a satisfying solution on the basis of all the requirements from various directions.' (Neil)

The discourse of product development promoting strict rules and compliance with them, including the time tense in which this discourse was drawn upon, could be interpreted as restricting various actors to look aside or ahead of their situation. Hence, the Present-present time conceptualizations illuminate how the dominant discourse of product development kept the Sissela experts 'trapped' in the present, thus maintaining prevailing organizing and power relations.

Here, one could sense a shift in trajectory as some interviewees shifted occasionally to the 'Past-present' tense (the present as the past). That is, although the Sissela experts were currently involved in a specific project and very caught up with their present tasks, they reflected on the present project as in the past. Moreover, they emphasized what they had learned during the current project. But they also drew on these skills as a resource to move ahead in their career ('Past-future': the past in the future). For example, Neil argued:

'Professionally I see myself, well, after all I have learned, as much more mature to do product development and different applications ... what I really would like to do is ...' (Neil)

As we see, the present project was spoken about it in the past tense ('I have learned'), as if Neil was showing a desire to move away and leave the 'restricting' local conditions behind ('what I really would like to do is...'): a shift in trajectory that could be sensed occasionally in most of the Sissela interviews.

10.1.1.3. Time at EN Systems: Time as standing still

The situation at EN Systems was similar to that at Sissela. However, as we saw in Chapter 8, in this organization, ever since the organization began growing from a small startup company into a medium size organization, order was striven for through dominance and hierarchical control. Here, the product development supervisor's voice was legitimized as 'the most rational'. This implied that each software product development expert was given very specific responsibilities by the supervisor, which he or she was expected to stay in line with. Here, it seemed as if the interviewees, despite various organizational restructurings, gave meaning to time as almost standing still or in terms of continuity; the same conditions were seen to have been prevailing for a long time ('Present-past': the past in the present) and were maintained in the unfolding present ('Present-present': the present as the present). This could be seen in various ways as the following accounts illustrate:

'... the product development has been quite stable...' (Matt)

'The work continued fairly soon as before.' (Timothy)

'We have old generation products, we know what we have and we take what has been experienced as good, so we have a vision, we don't start from scratch.' (Oscar)

'The product development is still centrally planned, product development occurs within one head [the supervisor's head].' (Craig)

As we see here, the EN Systems experts claimed in various ways that product development was 'stable' across the past and the present. That is, various practices from the past were still the same or 'continued' in the present; it was continuously 'centrally planned'. In that sense, past product development practices were upheld in the present.

In some interviews at EN Systems, there also seemed to be signs of Present-future time conceptualizations (the future as the present). More specifically, product development was expected to remain the same or similar in the future despite structural reforms or other organizational restructurings.

'Regarding new, well, learning, there isn't anything very great to be expected.' (Craig)

'The market situation is good, our position there is quite good ... our product development [team] is an important actor, including its results, so on the basis of these we are striving to continue living and to succeed.' (Timothy)

Here Craig claims that his prospects in the company are likely to be the same in the future, which seems to evoke frustration due to the few learning possibilities. Timothy constructs the future as the present by seeing the current position as a ticket to success or a possibility to 'continue living'.

Drawing mainly on present time conceptualizations (Present-past, Present-present and Present-future), the software product development experts at EN Systems seemed to be

able to construct stability in their daily work practices. However, interestingly, all EN Systems interviewees suggested in various ways a desire to take up new task, hence also suggesting movement and a wish for new future trajectories.

'I would like to win on lotto ... Well, I don't know, to be honest I can't see the future, I can't see myself retiring from an IT company.' (Craig)

'I've been thinking that I would like to expand my job description.' (Oscar)

'Now really, on the other hand, I have the feeling that I would like to look at it, get sort of some education and skills.' (Ryan)

Here, Craig, Oscar and Ryan, as the other interviewees at EN Systems, seem to express a wish for new work tasks in the future, which perhaps suggest a silent contestation of the 'stabilized' prevailing ways of organizing.

10.1.1.4. Time at Q-Software: A rosy portrait of the past?

A movement towards increasing desire for order could also be seen in the interviews with the core software product development interviewees, who had worked at Q-Software. As shown in Chapter 5, in the early days of Q-Software the discourse of product development drawn upon in the company promoted improvisation, autonomy and growth. It seemed as if stability was achieved through embraced, improvised, autonomous work in the present through which efforts were made to set the grounds for a successful company in the future (perhaps a mix between 'Present-present' and 'Future-present' time tenses). This time focus on the present to ensure a good yet different future was reinforced and perhaps even made stronger when the recession hit the company and a downsizing process unfolded. More specifically, the product development experts, as many other employees, made great efforts to save the product from being destroyed or lost due to Q-Software's financial problems and thus continued working without a salary nearly as before. However, as bankruptcy was in the end unavoidable, the main product was sold to Piranha Solutions before that. The product development experts then moved on to new employment.

An analysis of time conceptualizations in the Q-Software interviews show that, as the software product development experts began working in various ICT companies, the past Q-Software experiences were transformed into discursive resources. For example, the past was brought into the present in efforts to sympathetically point out mistakes:

'I didn't have much to do with the marketing and sales departments ... in that way we failed or I failed.' (Peter)

'I made the mistake ... I haven't been able to give up power and assign power in a manner that I clearly should have done.' (Frank)

Here we see how Peter and Frank highlighted issues around ways of organizing that they labelled as mistakes or failures and which they felt they needed to learn from. In that sense, past experiences of, for example, improvised ways of organizing acted as discursive recourses that framed present actions. That is, many of the interviewees now embraced and argued for more order in the present and future ('Future-past': the past in the future in terms of lessons learned from the past):

'We didn't really have a system for the specifications ... you never knew where it was, but here at EN Systems, where I work now, we have Lotus Notes and despite some exceptions, in most projects, always the same database.' (Scott)

‘So then [at Q-Software], becoming detached from the actual thing [the daily product development] wasn’t necessarily a good thing. So now [at Volcano Tech] I have managed to stay attached to it in a better way. ... One should keep it simple in every way and not begin to do things in many different ways. And then force everyone to work in accordance with a certain model.’ (Peter)

Both Scott and Peter criticize here product development at Q-Software as disordered, while emphasizing their efforts and satisfaction with more ordered practices in their new workplaces. Kevin seemed to adopt the same time tense but drew on his past experiences at Q-Software as a coping mechanism to mitigate the effects of organizational restructurings (also ‘Future-past’ tense: the past experiences as a resource in the future).

‘Well, I’m sure it was useful, that one had [interrupts himself], that we had gone through the Q-Software story [downsizing process and bankruptcy] before. I was able to relate to it by thinking: it doesn’t mean that it is that serious if you are dismissed or if there is a bankruptcy, it is not that serious in the end.’ (Kevin)

As we see, many of the interviewees seemed to argue that they had learned from past experiences at Q-Software and showed a desire to use the lessons learned in the present and the future. This suggests that there had perhaps been a disruption in most of the interviewees’ perspective on the ideal ways of organizing product development around the times of the bankruptcy of Q-Software. The past relatively stable product development practices (upheld by a mix between ‘Present-present’ and ‘Future-present’ time tenses) at Q-Software were replaced in the present with more ‘formalized’ ways of organizing (mainly through ‘Future-past’ tense).

Nonetheless, as the analysis of Q-Software illustrated, despite the transforming views on ideal ways of organizing, the past was given a rosy portrait and talked about in positive and nostalgic terms (‘Past-past’: the past as the past):

‘At the moment I’m only so to speak an employee here. Then [at Q-Software] it was a combination of work, leisure and hobbies sort of.’ (James)

‘I think the communication improved when things started to go wrong [at Q-Software]. Somehow, it was, I think it was maybe mainly because the group cohesiveness became stronger especially at that point of time. At least I felt that way. I felt more solidarity with the others who worked for the company.’ (Scott)

‘Everyone was happy and the atmosphere was good [at Q-Software]. That’s what I think. Then you sure get this drive. That’s what I mostly remember. Sure, we worked hard, but that doesn’t matter when the atmosphere is good.’ (Adam)

‘We had a certain attitude at that stage [during the downsizing at Q-Software], that nothing can hurt us, a certain confidence in our own professional skills.’ (Peter)

To conclude, within the Q-Software cluster it seemed like there was, on the one hand, a transformation towards aligning with more business-oriented thinking emphasizing, order, efficiency and productivity (perhaps a currently dominant discourse of product development), and on the other hand emotional and aesthetic relations to the past.

10.1.1.5. Reflections on time, change and stability

It is perhaps unsurprising that companies in a new and growing industry search for new ways of organizing, organizations through which they often strive for greater order. On the other hand, the ICT sector and specific ICT companies are often described as

turbulent. In that sense, ICT companies seem to have to juggle with the tension between a search for useful ways of organizing product development and ways of dealing with or sometimes specifically creating change. From this point of view, the findings of this study, in particular, when looking from a time perspective, provide a detailed illustration of how such heterogeneous micro-processes unfold in the local conditions of specific organizations.

By exploring product development and organizational change at this level, the study draws attention to how the discourse of product development and the discourse of change are constructed, maintained and modified, hence highlighting certain movements and trajectories. More importantly, the study suggests how these practices are felt in the organizations and taken up in action. Here, the examination of conceptions of time alerts us to how individuals and groups are addressed, controlled and disciplined by the prevailing discourse of product development and discourse of change, and how they position themselves in relation to these discourses and conditions. For example, some interviewees actively engaged in contesting these discourses, while the time conceptualizations of the majority of the interviewees seemed to suggest that the interviewees felt 'trapped' or had little possibilities to exercise power and influence their own work. Therefore, many expressed a rosy picture of the past and/or a desire to move away from the contemporary and often highly formalized ways of organizing. As Hodgson and Cicmil (2007) argue, standardization in, for example, project management, may have various implications for control in the contemporary workplace and hence have suppressive effects as standardization and various forms of formalization restrict the discursive resources available to different social actors. The potentially most important contribution of the analysis is then related to the implications for social actors that follow from the specific constructions of organizational change, relations to products, organizations and subject positions.

10.1.2. Subjectivity work: Implications from the increasing desire of order

Being interested in the implications of certain constructions around organizational change and time for social actors, I will discuss subjectivity work in this section. By subjectivity work I refer to process of positioning in and through which the software product development experts negotiated subject positions and which provided them with the 'content' of their subjectivity (Davies and Harré, 1990; Burr, 1995). In other words, by discussing subjectivity work rather than subject positions, I wish to highlight the ongoing and often active work that the interviewees engaged in, in order to take up and transform particular subject positions offered in discourse.

The discursive practices illuminated in the analysis chapters and specifically addressed in the discussion about time conceptualizations clearly seemed to have implications for the software product development experts' subject positions. Moreover, the construction of product development during organizational restructurings seemed to involve active subjectivity work. When discussing this subjectivity work, I wish to emphasize the importance of power relations as power relations seemed to be important as the subjectivity work unfolded. For example, at EN Systems, the supervisors' voices were strongly prioritised and at new.comer the interviewees engaged in struggles to gain voice to express themselves.

The analysis of the clusters illustrate how the interviewees actions and possibilities to 'negotiate voice' were dependent on how they were addressed and positioned in relation to prevailing discourses that provided them with certain structures of rights and

obligations (Davies and Harré, 1990). In that regard, the study has touched upon issues of agency. How one understands agency is of course dependent on perspective and on how one views discourse (Burr, 1995). In this study, subjectivity work, discourse and agency are seen as mutually and dynamically produced and therefore studied as emerging in the interaction between different actors (rather than turning the focus on the individual). As Bergström and Knights (2006, 370) have argued:

‘In short, subjectivity is neither wholly determined by organizational discourses nor simply a product of human agency. Rather, the research indicates that subjectification is a complex condition and consequence of the mutually interdependent relations of agency and discourse, not a determinant of either.’

Drawing on this view emphasizing agency as intertwined with subjectivity and discourse, agency can be seen as potentially taking different forms in different contexts at different points in time. More specifically, particular discursive practices, for example, around Q-Software, new.comer, Sissela or EN Systems, may contribute to different forms of agency for different social actors, which in turn may change over time. Agency is hence interconnected to the social actors’ differing ‘access’ to discourse and varying possibilities to ‘manipulate’ them (Burr, 1995). Here, the analysis of this study sheds light on the relationship between discourse, subjectivity, agency and context, as well as how these processes can be studied (Bergström and Knights, 2006). Let me illustrate this below.

Although the clusters analyzed were different in many respects, they all seemed to share an increasing desire for greater order and patterned ways of organizing as shown with the analysis of time conceptualizations in the previous sections. When looking at this more closely, we can see that the movement towards shared patterns in important ways seemed to contribute to transforming ways of addressing software product development experts. More specifically, during the early days of the companies studied, ways of organizing were constructed as more improvised and informal. In this context, software product development experts were addressed, for example, as creative and autonomous experts or craftsmen, non-business minded multi-tasking actors, committed team members, doers and workers. Table 39 summarizes some important subject positions offered in discourse in the context of various improvised ways of organizing in the different clusters analyzed. The various subject positions are also illuminated with quotes from the interview material. The subject positions should not be read as fixed or as addressing all software product development experts as the aim of the table is to later contribute to illustrating various and shifting subjectivity work.

Table 39 Subject positions around improvised ways of organizing

Cluster	Subject positions	Example quotations
new.comer	creative and autonomous, yet subordinates experts (at Piranha Solutions)	'... we view it as art, what we create ...' 'We're not doing any assembly line work ...' 'I, although I knew the product really well, didn't get to influence such powerful decisions.'
Sissela	autonomous craftsmen	'What is mainly emphasized is the use of heuristics and the designer's own visions.' 'But what increased my enthusiasm to some extent in that stuff was really that it wasn't compulsory work. Rather I wanted that the end result would be really good. And then one has worked overtime, too, and it may have gone late, but I've had the feeling that I want to work ... I've controlled it.'
EN Systems	autonomous multi-tasking actors non-business minded	'Everyone had been doing whatever they felt like doing in whatever ways they felt like doing them.' 'I've had the type of role ... to supervise ... [the product development experts to change] from a strict technology focus to seeing our business.'
Q-Software	committed team members doers workers	'[We] did everything together.' 'I'm more of a doer type of person rather than a manager' 'I felt myself to be "a ditch digger" or a worker'

As Table 39 above illuminates, the improvised ways of organizing seemed to provide discursive practices that invited the interviewees to bring about effects in software development as rather autonomous and active social actors. The interviewees in the clusters of Q-Software, Sissela and EN Systems seemed to have relatively good possibilities to 'negotiate voice and agency', although the autonomy seemed to be viewed as a threat to business oriented thinking (as opposed to aesthetic or technological thinking) at EN Systems, thus invoking increased efforts to restrict the experts' possibilities to 'negotiate voice'. In contrast to the other clusters, at new.comer the autonomy seemed to isolate the product development experts from others consequently restricting their possibilities to gain voice beyond the immediate team.

As a shift occurred, from rather improvised ways of organizing towards more patterned ones, we could simultaneously see how the interviewees were addressed more in terms of 'instrumental resources', passive receivers and communicators of tasks, and hence more subordinate to certain guidelines or power structures, though with the exception of new.comer, where in contrast, the product development experts seemed to gain more voice. Table 40 illuminates this with typical subject positions and related quotations from the different clusters analyzed.

Table 40 Subject positions around patterned ways of organizing

Cluster	Subject positions	Example quotations
new.comer	participative actors actors in control co-constructors and equal actors	'In my current job you can at least influence what you do.' 'Now we are starting to have some control over the code.' 'Now one can create the kind of processes one wants to have.'
Sissela	passive receivers of tasks, experts at specific parts of a product, resources compliers	'... internally our customer has created an overall project plan, according to which parts then are just handed out "to you", "to you" and "to you".' 'There is quite a chain of checks. You always have to ask so many in higher quarters "Can I do this?".'
EN Systems	compliers communicators	'Each [team member] has had a very narrow scope in it. One hasn't let them intervene in everything. Instead they have been, well, let's say that their scope has been kept narrow with dictatorial means.' 'So basically, my role was just to be a communicator or in some sense I was an internal Project Manager, so I divided tasks to developers and then I made sure that they were implemented.'
Q-Software	instrumental resources product development experts (in contrast to experts specifying products) excluded actors threatened doers and workers	'Here I can most clearly influence the company by bringing in money.' 'In a way I throw off the responsibility for defining what this product should be used for.' 'It never became clear to me where the decisions were made.' 'If you want to remain in Finland and do this stuff, I believe you have to focus on tasks in the early stage of the life cycle [of software development].'

Here, Table 40 illustrates how subject positions were altered over time, as more patterned ways of organizing increased (compare Table 39). At Sissela, EN Systems and Q-Software, it seemed as if the discursive practices addressing the interviewees as instrumental resources, compliers, passive receivers and communicators of tasks, threatened workers, and so on implied decreasing possibilities to 'negotiate agency'. For example, the product development experts 'scope was kept narrow' or they had to search for approval through a 'chain of checks' to conduct their work. In other words, typically they were expected to follow plans or delegated instructions, giving them little possibilities to 'negotiate voice'. Again, new.comer seemed to form the exception, as the more 'formalized' ways of organizing seemed to guarantee the software product development experts better possibilities to express themselves.

Yet, after having given account of their experiences of product development during organizational restructurings, most interviewees argued that the more formalized ways of organizing were efficient and a necessity:

'It [the project] was successful because it was so well defined, it was of the right size; it was small and easy to grasp and the whole was easy to control, and didn't cause any large scale surprises.' (Timothy, EN Systems)

'Having these tools makes it easier in the sense that there is a certain practice that everyone is committed to.' (Neil, Sissela)

As we see, both Timothy and Neil, as most interviewees, seemed to accept and legitimize the specific ways of organizing. It is in relation to this that the time conceptualizations become most interesting. This is because the analysis of time conceptualizations shows how most interviewees legitimize the specific formal ways of organizing and simultaneously dissociate themselves from them, even at new.comer where most experts seemed to have better possibilities to negotiate agency.

'I'm becoming rather bored.' (Phil, new.comer)

'But of course I wish that I could return to doing handicraft.' (Ben, Sissela)

'Their scope has been kept narrow with dictatorial means. It is maybe doubtful in a social sense.' (Craig, EN Systems)

The Q-Software interviewees did not seem to explicitly dissociate with the 'formalized' ways of organizing, but they did give a rosy portrait of the past and constructed emotional and aesthetic relations to it.

In sum, over time, as stability was constructed in the context of increasing formalization of product development, many interviewees engaged in active subjectivity work and showed different modes of distancing. These forms of distancing are here interpreted as forms of dis-identification. For example, some interviewees drew on time conceptualizations that seemed to suggest a desire for returning to past ways of working with software as handicraft or art; others saw the future as unpredictable but as an opportunity to take up totally new undertakings even outside the ICT sector.

In the light of these processes of dis-identification, it is interesting that the interviewees still, through humble obedience (Lindgren and Packendorff, 2007), reproduced the power relations and practices that they sought to escape (Fleming and Spicer, 2003). More specifically, although many of the product development experts, through their subjectivity work, dis-identified with the increasing desire for order and 'formalization' of product development practices, they continued to perform their tasks, produce stability and take up the offered subject positions. In so doing, they reproduced the dominant power relations, and hence, interestingly, dis-identification was shown to have the potential to promote the established power relations. In that regard, these interviewees did not seem to 'threaten' or challenge the companies, ways of organizing and power relations to a greater extent than the interviewees, mainly at new.comer, who seemed to perform more identification.

10.1.3. Gender in the research material

When describing the interviewees in Chapter 4, I showed that the interviewees form a rather homogeneous group in terms of gender and certain other social categories. This means that this study has been a study of men. Studying men is not anything new or special; literature on product development and project work, such as most mainstream social science, typically studies men; however, usually this is done implicitly or 'unintentionally' without a link to gendered and critical approaches (Hearn, 2004;

2006). Therefore, I now wish to come back to the issue of the gender of the interviewees as it seems important to recognize that the analyzed interviews were produced from the perspective of men, with only one exception. In particular, I wish to raise issues around gender positioning, homosociality, gender-absence and gender non-conscious talk. This is an effort to contribute to a more explicit and specific focus on men (Hearn, 2004; 2006) engaged in IT work.

Schwalbe and Wolkomir (2002) point out that men may potentially 'do gender' in interviews, although to some extent in differing ways and that this can be turned into useful research material. However, as this study partly did not begin as a gender study and the interviewees were not asked to elaborate on their identity and positioning in relations to gender and so on, the interview material includes very few 'explicit' accounts of gender. What we have is interview material that does not explicitly address issues of gender and social categories but yet turned out to become very gendered. I will therefore discuss gender issues here as a reading of a research material that primarily concerns other issues, for example, product development projects and organizational restructurings (see also Korvajärvi, 2002). Moreover, lacking explicit elaborations by the interviewees of themselves as gendered persons of a certain age, education, nationality and ethnicity, the interview material can be read as a text in which the interviewees talk about daily product development practices in relation to organizational restructurings and in so doing implicitly also construct a sense of a gendered self. Having explored how this homogeneous group of men constructed organizational change and their work in relation to these changes, the question becomes then: Can we say anything about how gender is done and constructed in the interview material? Can we say anything about how gender relations as discursive practices are performed in everyday activities at work (Korvajärvi, 2002, 121) through processes of positioning?

Implicitly and explicitly the analysis illustrated how men 'connect' with each other and potentially form bonds or friendships (Kiesling, 2005), for example, through homosocial bonds mediated through interaction with technology (Mellström, 2004). That is, at Q-Software, the product development experts were very focused on saving the products during a downsizing process, and through these efforts a very strong feeling of cohesiveness emerged. At new.comer, certain products were seen, for example, as tightly intertwined with the persons developing them, thus connecting individuals with products but also with the whole team developing it. Moreover, at both Q-Software and new.comer, unity and solidarity between men clearly seemed to be important to the interviewees, as Adam said regarding the downsizing process at Q-Software:

'I kept it in mind all the time, that if we don't succeed, then we will just do this again, we have a great team and we will just start all over.' (Adam, Q-Software)

Lucas from new.comer also claimed:

'I think the solidarity between the employees has improved or become much tighter even if people have been dismissed. Instead a rather supportive atmosphere has emerged there. Well, during the last stage we still tried as a united group to search for solutions so that people wouldn't be kicked out.' (Lucas, new.comer)

Here we see how the male-dominated groups and homosociality were important to the product development experts in these organizations. At Q-Software, the product development experts showed solidarity, dedication and loyalty, in particular during a downsizing process; even when the company went bankrupt most of the experts continued working hard on saving the main product and believing in each other as a

group. Likewise, the interviewees from the company *new.comer* produced a sense of homosociality that grew stronger through the shared experiences of various struggles, processes of positioning and organizational restructurings. That is, at *new.comer*, the project settings and organizational restructurings seemed to provide arenas for, on the one hand, solidarity and homosociality, and, on the other hand competition and contestation (which in turn seemed to reinforce homosociality).

In contrast to Q-Software and *new.comer*, the interviewees from Sissela and EN Systems displayed less homosocial desire (Kiesling, 2005), although the situation may have been different in the early days of these companies. Nevertheless, in the more recent projects in these organizations relatively strict hierarchies structured various relations to the extent that the interviewees seemed to have a rather instrumental view of these relations rather than emphasizing bonding or developing close friendships. For example, at Sissela the relations to others were mainly important in striving for meeting timeframes and setting objectives:

'I have about 8-9 [smaller] organizations within our customer's organization that I'm constantly in touch with. I tell them about our problems and ask them about their experiences in their projects so that everything will go according to the customer's overall plan.' (Richard, Sissela)

'I knew the people [at a former workplace] well and we were sort of friends, and that was a disadvantage. Now at Sissela, as I didn't know the people in advance, they [the relations to others] are rather distant and I have no hostile relations ... I have, what should I say, good, proper, distant relations [sneers], which has made working much easier.' (Neil, Sissela)

As we see, Richards and Neil seemed view their complex webs of relations through which work was controlled and carried out as means for achieving goals set for them. Likewise, in the context of hierarchical ways of organizing at EN Systems, the relations were described in 'professional terms', as Ryan said, the relations were relaxed and professional, rather than being constructed in terms of friendships or bonding. Each individual was addressed in discourse in relation to the organizational hierarchy, which invoked certain ways of being and taking up obligations. This involved authoritative control:

'He was in a technological sense very gifted, in all senses a smart person and so on, but I thought, on the basis of my own experiences, that I had a stronger vision of how the technology was to be implemented.' (Ryan, EN Systems)

Here we see how hierarchies at EN Systems structured the power relations between various product development experts in rather instrumental ways. In sum, both at Sissela and EN Systems, discourses promoting control, subordination, obedience, dominance and dis-identification seemed to dominate and structure the relations in these male-dominated environments.

Together, the different empirical illustrations demonstrate how the relations in specific male-dominated software development projects settings are characterized by nuance and contradiction, by cooperation, homosociality, struggle, instrumentality, conflict, hierarchies, control, subordination, and so on. As Collinson and Hearn (1996) have pointed out, men often identify with one another, thus creating a sense of unity, but this unity should not be overstated as the relations also can be shifting and instrumental.

Perhaps, as probably also in most ICT companies during the last decade, the various repeated organizational changes which have occurred in the clusters studied, have contributed to an arena for increasingly active processes of positioning, including

gender positioning, constructing both unities and tensions. Moreover, the repeated organizational changes in the ICT sector can, on the one hand, potentially provide the actors involved with an important arena for identification and for seeking support through homosocial bonding to deal with the implications of the changes and, on the other hand, contribute to tensions, competition and contradiction. The analysis certainly illustrates examples of this. Tallberg (2009) has suggested that a move from more to less bureaucratic forms of organizing (for example, the movement towards project-based work in rapidly transforming business environments) may contribute to 'gender as logic' becoming more central in structuring organizational relations of coordination, cooperation and recruitment, hence making men's homosocial practices more central. Likewise, other social categories, such as, age and generation may structure, together with gender, social divisions and social connections. This in turn may have implications for gendered power relations and subjectivities as the studied clusters illustrate.

Despite nuance and varying desires for homosociality in various projects, there is one issue that is evident throughout the whole interview material, that of gender-absence. The concept of gender-absence draws attention to accounts making 'no distinction between women and men: it is the "people position"' (Hanmer and Hearn, 1999, 107). Hamner and Hearn (1999) argue that gender-absence is, however, unattainable as gender-absence does not eliminate power relations between women and men, but on the contrary tends to obscure them.

Gender-absence in the interviews could be seen both within the clusters that had strong and weaker desires for homosocial bonds. For example, in the analysis of Q-Software, we saw how the interviewees, with little reference to gender, in various ways positioned each other during the startup stage and rapid growth as 'friends', as 'likeminded', as members of a cohesive group, as equal, as productive 'doers' and as complementing each other in terms of expertise. During downsizing they referred to each other as committed, efficient, focused on work and almost heroic; they kept on coding 'even if the walls fell down'. One interviewee added that the product development experts formed a 'social department' that worked and went to the pub together.

Gender-absence was also apparent in the analysis of the new.comer cluster, where the interviewees maintained close relations to one another over time. A shared and frequent use of 'us' and 'we' in the interviews illustrate both the closeness and gender-absence. For example, as the interviewees said 'when we came to Piranha Solutions...' or '...I thought, or we all from Noburu Zone thought, that everything here [at Piranha Solutions] was chaotic'. The common use of 'us' and 'we' also suggests distancing to other individuals and/or groups, who in turn often were positioned in relatively neutral terms such as 'management', 'other product developers', 'users', 'customers', 'friends', 'somebody', 'gang' et cetera, and at other times in more contesting ways, for instance, as 'non-process people', 'social democrats', 'people not equipped with an ability to deal with downsizing' and so on. Simultaneously the interviewees referred to themselves as 'engineers', 'innovators', 'process people', 'outsiders', 'survivors' and 'productive people', typically locating the selves as active subjects, sometimes with superior expertise compared to individuals in other groups. However, the two interviewees in the new.comer cluster who had not worked previously for Noburu Zone accounted for their experiences to some extent differently. Typically, they positioned themselves in terms of their hierarchical position and subordination. Only very occasionally did the interviewees explicitly refer to each other as men, in terms of, for example, guys, pals and gang. In most interviews such gendered terms were not used at all even though the immediate project group consisted of only men.

The analysis of the Sissela cluster shows that, in general, the interviewees referred to each other as 'genderless' colleagues and experts, rather than as friends. Words used when talking about each other were, for example, 'I', 'we', 'people', 'customer', 'managers', 'supervisors' and 'pals': 'I believed in those pals', 'we have slowly developed towards a real organization ... people have slowly been placed into "boxes" ...', 'we are only working on this specific part of the project ...', and so on. An exception was one interviewee who briefly discussed the advantages of working within a homogeneous group:

'All people, who join, are young and quite open-minded and this sector is like that, that it attracts specifically this type, so there's not really any problems with anyone ... same type of people ... so it's flexible.' (Cliff, Sissela)

As we see here, Cliff thought it was an advantage to work within a relatively homogeneous group of people in terms of, for example, age and outlook on life.

When analyzing the cluster of EN Systems, we could see that the interviewees' accounts of themselves and one another were relatively dependent on their hierarchical positions but referred to in rather neutral terms such as 'we' and 'customer', but also in terms of 'guru' and 'communicator': 'As a company we...', 'The first version is in a way married to this first customer ...', 'It doesn't matter who we are on the organizational chart ...', 'We are the customer in practice in product development, while there is an external customer in the customer projects ...', 'My role was just to be a communicator ...', '... the person who is pulling the strings, the major guru ...'.

As we see, the product development experts at EN Systems, as the interviewees in the other clusters, positioned themselves and their colleagues with no or little 'conscious' reference to gender even though the settings in which the interviewees worked were male-dominated, and the interviewees mainly interacted with other men. Egeberg Holmgren and Hearn (2009, 404, emphasis as in original) point out that much of men's practices are not seen in gender-conscious terms:

'it is necessary to note that much of what men do is *not* seen as 'about gender', related to gender equality or about making gender relations and gender divisions more or less equal or unequal – in fact it is not seen as *political* activity at all. Much of men's practices, in public and in private, are commonly not seen as gendered. They are often done, perceived and felt as (if they were) 'normal'. They are *not* usually *gender-conscious* activity: they 'just happen!'

Likewise, in the interview material, product development and organizational restructurings seemed to 'just happen' and were thus typically talked about in gender-non-conscious ways or as not being about gender. This was seen in the interview material through the interviewees talk about each other in terms that typically only were implicitly gendered. The software product development experts, for example, referred to each other as 'we', 'friends', or as being members of cohesive groups, and so on. Only on very rare occasions did a few interviewees draw on concepts such as 'pal'¹⁵, 'staff'¹⁶ and 'bloke'¹⁷, which at least at first glance may appear as more gendered terms. For example, when describing emerging solidarity and homosociality during rapid growth or shared efforts to handle downsizing, certain interviewees used more gendered words:

¹⁵ Pal has been translated from the Finnish word 'kaveri', which was used to refer to groups of men. 'Kaveri' can also refer to a friend (both male and female).

¹⁶ The Finnish word 'esikunta' has been translated to 'staff'. 'Esikunta' seems to have a stronger link to the military context (referring to a certain hierarchical layer in the army) than the English word 'staff'.

¹⁷ The Finnish words 'ukko' and 'äijä' have both been translated into 'bloke'.

‘There was enough room for all of us blokes to work in the same room and we went to lunch together and did everything together, so we ended up spending a lot of time together.’ (James, Q-Software)

‘Our supervisor says that it is his staff.’ (Oscar, EN Systems)

Nevertheless, although some terms were more gendered, they all seemed to typically be used in a rather gender-non-conscious way. When analyzing such accounts, gender almost seemed to become invisible (see also Korvajärvi, 2002) despite the strong presence and visibility of men.

None of the men explicitly expressed themselves as men, while the only female interviewee did talk about her relations to others (mainly male product development experts), for example, in terms of: ‘as a female person¹⁸...’ and ‘the boys think ...’. However, as soon as she was asked more about her gendered subject positions, she became uncomfortable and returned to a more supposedly gender-absent way of talking, the dominant way of talking within her project team.

Korvajärvi (2002, 136) argues that the ‘distant location of gender hides the cultural and symbolic aspect of gendering processes’. As we have seen, if gender is not talked about or is talked about in gender-neutral terms, issues of gender and gendered power relations are difficult to address and contest (Hanmer and Hearn, 1999). This issue is not just important in practising software development projects but also in theorizing organizational change, product development and project work. Therefore, I will return to issues of invisibility of gender positioning in the final chapter as I discuss the main contributions of the study.

¹⁸ The interviewee used the Finnish term ‘naishenkilö’ meaning ‘female person’ rather than ‘nainen’, which means woman. The concept ‘female person’ suggests a construction of the self as a ‘woman’ and yet as a ‘person’ which perhaps creates a link to male colleagues.

11 CONCLUSIONS

The aim of this study has been to explore the discursive construction of organizational change in the context of software product development from the viewpoint of software product development experts. More specifically, my research questions were as follows:

- How do software product development experts construct organizational change?
- How do software product development experts construct their work in relation to organizational change?
- What kind of phenomenon is organizational change when seen through the lens of discourse and practice?

I explored the research questions drawing on social constructionism and discourse analysis, and analyzed interview material consisting of four clusters of software product development experts. In the analysis, I drew attention to three key aspects of product development, namely, *products*, *ways of organizing*, and *subject positions*. These three aspects were understood as central discursive resources drawn upon by the software product development experts as they gave account of product development in relation to organizational restructurings. Moreover, through an analysis of these key aspects, I have attempted to further enhance understandings of the relationship between organizational change, product development and stability.

The analysis of the three key aspects – products, ways of organizing, and subject positions – illustrated how the relationship between organizational change, product development and stability may take different forms in various local conditions at different points in time. To highlight this plurality around practice and discourse, I therefore ended each of the Chapters 6-9 with a *reflection* around data and theory. In so doing, I also wanted to draw attention to ‘what was going on’ in the different clusters. I emphasized issues that empirically and theoretically were distinctive to the individual clusters. However, many theoretical issues covered in the reflections were also relevant in all clusters, but they were discussed in relation to the clusters that illuminated them most clearly.

Chapters 5-9, highlighting the variety and distinctiveness of product development during organizational restructurings in four different clusters of experts, were then followed by an analysis of *cross-cutting themes*. In other words, Chapter 10 provided an analysis of three themes that could be said to cut across all clusters analyzed. These themes were *time*, *subjectivity work*, and *gender positioning*. Although conceptually different in character, these cross-cutting themes together contributed to an analysis of implications that may follow from organizational change.

In sum, the analyses of stability in product development during organizational restructurings in Chapters 5-10 have included: (1) analyses of three key aspects understood as discursive resources, namely, products, ways of organizing and subject positions in four different clusters, (2) four reflections on the analyses highlighting distinctiveness and some commonalities in the clusters in relation to data and theory, and finally (3) an analysis of three cross-cutting themes in all clusters.

Being somewhat different ‘ingredients’ of the analysis chapters, one might ask how the three points above are connected to each other. A brief answer is that the ‘ingredients’ of the analysis are to a certain extent interdependent, but conceptually some differ significantly from each other. More specifically, the three key aspects – products, ways of organizing and subject positions – were analysed both as discursive resources used by the interviewees as they gave account of product development and organizational restructurings, and as providing empirical insights into NPD during organizational change. The reflections summarized these empirically-grounded insights and connected them to theorizing of organizational change. The cross-cutting themes, on the other hand, focused more specifically on the implications following particular relations to products and ways of organizing during organizational change. The objective of this final chapter is to draw together some empirical and theoretical conclusions in respect to these intertwined aspects, themes and reflections.

This chapter is structured as follows. First, I summarize the empirical contributions and discuss processes of stability in product development during organizational change. My intention is to illustrate the distinctiveness and commonalities in and between the clusters studied. I proceed by discussing all clusters on a general level and then more specifically those implications that potentially may follow organizational change. Second, I discuss various methodological and theoretical contributions to product development and organizational change. I begin by theorizing an approach to organizational change and NPD. Third, I continue with more specific contributions to the theorizing of change, stability and organizational change. Finally, I discuss the strengths, limitations and future recommendations for research and organizations.

In the different sections of this final chapter, structured as described above, I draw on the different ‘ingredients’ of the analysis chapters in various ways and combinations. In the first section, the three key aspects – products, ways of organizing and subject positions – are foremost used as a foundation for the summaries of the empirical contributions. The third key aspect, subject positions, is particularly important when I discuss implications as active subjectivity work and gender non-conscious positionings were found to be crucial implications following frequent organizational changes. Hence, the third key aspect, subject positions, acts as a link to two of the cross-cutting themes (subjectivity work and gender positioning). When theorizing an approach to organizational change and NPD, in the second section of this chapter, the third cross-cutting theme, time, is made relevant. As I move on to the third section of this chapter, I discuss more specific contributions of the study to theorizing change, stability and organizational change, and in so doing make use of the insights gained from the cross-cutting themes and from the reflections.

11.1. Achieving stability

Let me begin the discussion of the findings of the study by focusing on the first research question in order to explore how the software product development experts interviewed constructed organizational change.

What seems to be apparent throughout the interview material is that nearly all individuals had experienced several organizational changes and restructurings, such as rapid growth, downsizing, restructurings of departments and organizations, formalization of product development processes, mergers, acquisitions, and changes arising from employee turnover. Here, the software product development experts working in new.comer (Chapter 6) formed perhaps the most extreme example, where

many organizational changes had occurred simultaneously, sometimes with dramatic effects. One could say that the findings of the study correspond with the common assumption that organizations such as software providers today frequently engage in various organizational changes and restructurings.

The analysis in Chapters 5-9 also illuminated how the discourse of change most typically articulated and constructed by the interviewees did not seem to change significantly during the periods discussed in the interviews, nor did there seem to be many competing constructions of change. This is not to say that there had not been any 'micro' changes or differences of opinion. Rather, I wish to highlight that the practices studied were typically not critically reflected upon or contested, and seemed to primarily reinforce, not deconstruct, the established constructions of organizational change.

The discourse of change promoted an idea of organizational change as constantly present, often quite unpredictable and relatively inevitable yet not desirable or an ideal. Even when the continuous organizational changes were seen as problematic, they were at the same time constructed as inevitable. But perhaps most importantly, organizational change was conceived as 'an object', for example, a managerial initiative arising from market changes, which rarely enables considerable new ways of talking or acting. Moreover, organizational change was constructed as an object, which it is typically legitimate to 'ignore', thus often producing a sense of stability during times of organizational restructurings. This was perhaps one of the most important issues that the interview material 'revealed' and that the analysis therefore attempted to shed light on.

However, the study does not only alert us to the frequent organizational restructurings in IT companies and the construction of stability in this context. More importantly, it provides insights into *how* stability was achieved in the organizations studied. To explore how stability was achieved, the second research question, which asks how software product development experts construct their work in relation to organizational restructurings, seems useful. More specifically, the analysis of how the interviewees constructed their work (mainly products and ways of organizing) in relation to the organizational restructurings experienced illuminated in more detail how stability was achieved.

To illustrate how stability was constructed, I will begin by summarizing the findings from the analysis. The summary is divided into four sections as the analysis was conducted on four clusters of software product development experts. The four summarizing sections discuss the organizational changes that had occurred in each organization studied as well as how they can be linked to discourse and stability. My aim is not to make comparisons or final 'truth claims', but to illustrate various practices around product development during organizational restructurings.

11.1.1. Summary of new.comer: Distance, struggle and formalization

new.comer, as a company, had a rather complex history of numerous organizational restructurings, such as acquisitions, structural reforms, downsizing and spin-offs. new.comer had recently gone through a split from a large company called Piranha Solutions when I conducted the interviews at new.comer. The majority of the interviewees had been employees of a company named Noburu Zone before the split and acquisition by Piranha Solutions. The majority of the interviewees had thus been

working on the same product ever since their employment with Noburu Zone and developed over time close relations to their products. They continued to work on various projects around the same product at Piranha Solutions and new.comer, which contributed to perhaps even stronger relations to the products.

The development of the products required only limited interaction with new colleagues as the product development experts moved on from Noburu Zone to Piranha Solutions. Likewise, most other product development groups in this context seemed to work on projects and products that did not demand interaction with many actors outside the immediate work group. Being a company without broadly shared product development process or common forums for interaction, Piranha Solutions therefore was constituted by many different locally established ways of organizing and views on products. Consequently, the interviewees were able to reconstruct stability in their daily tasks by working at a distance from other groups. Not even the repeated organizational changes, some of which were specifically initiated to create new ways of organizing, seemed to enter into and significantly alter the product development practices. Instead, products and projects seemed to act as 'stable focus points' and sources for organizing.

However, projects and products were increasingly to be combined, and thus Piranha Solution became a site for tensions and struggles as various organizational restructurings unfolded and differing ways of organizing product development 'crashed'. More specifically, Piranha Solutions seemed to have been a competitive arena in which certain groups of social actors attempted to 'negotiate voice' and contest dominant understandings of products and ways of organizing. Such tensions and struggles seemed to reinforce, rather than transform, established ways of organizing. At the same time, many other software product development experts who also seemed dissatisfied with the ways of organizing only expressed this dissatisfaction in quietness and through humble obedience (Lindgren and Packendorff, 2007), hence reproducing established organizations while simultaneously dis-identifying with them (Fleming and Spicer, 2003).

In relation to this social setting, the interviewees expressed a relatively strong desire for increased order, such as, formalization and standardization in product development processes. In particular, the interviewees, who had worked together in various organizations over many years and had developed certain shared development processes and products, found the fragmented ways of carrying out work in the different corners of Piranha Solutions disordered and chaotic. For them, increased order and shared product development processes were the key to productivity, to control over quality and to equal access to the code (rather than all programmers having small parts of the code saved on their own computers). By engaging in processes of micro-politics to reinforce or challenge discourse (Thomas and Davies, 2005), the interviewees were successful in maintaining and engaging others in organizations that were in their preferred interest, thus producing a sense of stability for themselves. One could perhaps conclude that, in contrast to many others in the organization, the interviewees mainly drew on a discourse of product development that highlighted the formalization of shared patterns in product development processes.

11.1.2. Summary of Sissela: Compliance, focus and productivity

Sissela had a history of rapid growth, downsizing and adaptation to subcontracting. All interviewees worked on the same project as subcontractors in their customer's premises. Two of the four interviewees had worked at Sissela prior to the

subcontracting project with Internet service projects rather than with NPD. These projects were rather short term but high pace and often required long work hours, which contributed to improvised ways of organizing. The projects typically only involved a small number of social actors, which provided the interviewees with a sense of control over their own work. While engaging in these projects, Sissela went through a period of perhaps exceptionally rapid growth and a dramatic downsizing process. However, by being very occupied and preoccupied with their work, the interviewees said they were able to take a distance from others, ‘ignore’ the downsizing process and produce stability in their work.

The downsizing process resulted in changed ownership of Sissela. This was followed by a new period of recovery, growth and an emerging enthusiasm. This is when an NPD project was sold to a large customer: a team of software product development expert from Sissela was to develop a certain part of a large and complex product for a customer while working as subcontractors in the customer’s premises. While working as subcontractors, the interviewees did not experience any organizational changes, but the move to the customer’s premises involved adapting to the customer’s ways of organizing. Here, product development was described as an arena for predictable, planned, structured and relatively stable processes; almost the opposite of the practices in the previous projects and thus a significant change regarding how work was organized and power was exercised. The product development processes followed a pre-specified overall plan made by the customer that formed a powerful source for organizing and which was carried out through a complex network of people. To ensure that all different parts of the product contributed to a coherent solution, an institutionalized chain of checkups had emerged involving hierarchical relations, regularized checks and reinforcement through the daily practices. In that sense, the product seemed to act as a source for discipline and ‘stable’ practices. The Sissela interviewees viewed this NPD model as a productive and efficient one, and as a model providing them with the possibility to focus on the narrowly defined work task, building on their particular expertise. In other words, the interviewees mainly drew on a discourse of product development that promoted compliance, focus and productivity.

11.1.3. Summary of EN Systems: Dominance and rationality

EN Systems had gone through a number of organizational changes rapid growth, adaptation to the burst of the IT bubble and employee turnover. The company had gradually established departments and specific ways of organizing as the company had grown, and many social actors felt a need for reducing disorder and enhancing predictability. Some of these organizational changes are of particular interest here. For example, when the IT bubble burst the company felt a decline in sales returns. At this particular point in time, some crucial decisions were made within the company: the customer projects and NPD projects were separated into two different departments. As a consequence the software product development experts were provided with better opportunities to learn new skills in the latest technology and develop new products for when the recession was over and customer requests began to increase again. This strategy was successful and no one was laid off. This also enabled the software product development experts to maintain established ways of acting and to produce stability in their daily practices.

Through these various ways of organizing, which highlighted control and planning, certain power relations emerged. More specifically, meanings ascribed to the products were typically strongly related to future customer needs. Here, the supervisor of the

product development department had gained a central position in identifying business potentials, specifying the products and delegating members to project teams. This implied that the software development experts acted as communicators by taking up certain responsibilities given by their supervisor, which they then further delegated to programmers. Hence, the focus was strongly on instrumental and functional views of products invoking hierarchies, delegation, and an emphasis on the supervisor and his ideas. The software product development experts argued that the hierarchical way of organizing, which legitimized the supervisor's voice as the 'best knowing', was an efficient and 'rational' model. Moreover, efficiency and rationality were celebrated, and the product development supervisor, even referred to as the 'guru', was seen as best equipped to plan, specify and control the practices, products and future of the organization. Perhaps one could claim that the interviewees celebrated 'rationality' and drew mainly on a discourse of product development emphasizing hierarchical dominance.

11.1.4. Summary of Q-Software: Autonomy, preoccupation and increasing desire for order

The main organizational restructurings that had occurred at Q-Software were rapid growth and downsizing followed by bankruptcy. Accounts of these restructurings were gathered during three different interview phases: phases 1A and 1B (Chapter 5) and phase 3 (Chapter 9).

When analyzing how the organizational restructurings and software development experienced were talked about in the phase 1A and 1B interviews, we could see that practically all attention and actions were targeted at the main product, which many thought potentially could be a widely used software product. To produce this product certain ways of organizing had emerged. The ways of organizing were non-hierarchical and relatively improvised, often building on friendships. Moreover, there were few guidelines and rules for how product development was to be organized and carried out. It seemed as if it specifically this autonomy was significant for the satisfaction of those participating in the product development. This autonomy created possibilities to be occupied and preoccupied with specific tasks and products, as well as to 'isolate' oneself from others, hence in turn producing stability in daily tasks.

When the company began a downsizing process, the focus on the product remained and indeed increased. Although all employees had been dismissed, the majority of the employees continued working as usual, but without a salary, until the company went bankrupt and the personnel were asked to return their keys to the office. In that sense, it seemed as if the product acted as a source for exceptional commitment, organizing and construction of stability in daily tasks regardless of the organizational restructurings. The commitment also highlighted and intensified the solidarity and friendship between the product development experts. However, the process was not uncontested, and a few critical voices were raised; the improvised and informal ways of organizing were experienced as disordered and as leaving the product development experts without direction.

In sum, during the rapid growth the interviewees seemed to draw on a discourse of product development that promoted autonomy and 'limitless' growth. As the downsizing unfolded, with rather dramatic effects, an even stronger commitment to and focus on the product emerged through efforts to 'save' the product. However, the

emphasis on autonomy now left the product development experts without direction, which partly was met by critical voices, although only through ‘unofficial whisperings’.

Two to three years later, I interviewed the same software product development experts a third time (interview phase 3). During these interviews, the same experiences of rapid growth and downsizing were addressed. The ways of organizing software product development were still described as improvised and informal, as during the previous interviews. However, now retrospectively, the improvised ways of organizing were thrown into question and ascribed with different meanings. Many, but not all, argued that the ways of organizing had isolated individuals and groups from each other as well as been disordered or even chaotic. Consequently, in the ‘post-bankruptcy interviews’ a desire for order seemed to have emerged. The software product development experts drew increasingly on a discourse of product development emphasizing order and control; they embraced more formalized and shared product development processes, often by raising certain emotional relations to products, in an effort to avoid mistakes made during organizational restructurings at Q-Software. More strict guidelines offered a sense of security regarding what to expect around the corner by more clearly defining the individual’s part in the chain of product development. As one interviewee argued, this made him less dependent on others. Perhaps this was an effort to construct possibilities of autonomy and stability in new ways.

11.1.5. On the findings

The summaries of the studied clusters illustrate and explore some of the ways in which software product development experts constructed their work, such as products and organizings, in relation to organizational restructurings and in so doing achieved stability. It is probably fair to say that the software product development seemed to mainly involve rather mundane daily practices; the typical public image of the ‘exciting’ and cutting edge technology development was not apparent in the interview material. Instead, software product development was given account of in terms of rather ordinary practices, routines and organizings; being at work seemed to be about carrying out certain tasks in ‘an ordinary office environment’ day after day. Although far-reaching organizational restructurings occurred and there sometimes seemed to be a desire for creating different local conditions, most interviewees tended to focus on carrying out their work ‘as they always had done’, thus showing humble obedience (Lindgren and Packendorff, 2007) and only rarely contesting dominant meanings.

Nonetheless, despite the strong presence of mundane practices, it is clear that in the interviews analyzed software product development was a site for a multitude of different discursive practices and ways of organizing. In that respect, the analysis showed how mundane IT work can take shape in a variety of different ways. Plurality seemed to best describe the software product development practices, organizings and relations to products. Moreover, the analysis illustrated that software product development in various ways can be far from plannable, predictable, controllable, non-political and neutral. This I think is an important issue to emphasize.

It is perhaps here, in the various mundane practices, that we could see the construction of stability. More specifically, in all the clusters of software product development experts we could hear how the interviewees in various ways claimed that their work had not significantly been influenced by most organizational restructurings. As some interviewees said, not even a downsizing process through which approximately 80 employees of 100 were laid off work had had any significant effects on their daily

practices. Here, the study has shown the various, sometimes even contradictory, mundane practices in and through which product development experts achieved such stability. These practices involved, for example, working at a distance from other individuals or groups, solidarity, friendship and homosociality, forming close relations to products, developing instrumental or functional views on products, being occupied and preoccupied with certain tasks, showing humble obedience, compliance, or engaging in processes of micro-politics, and/or emphasizing formalization and order. In that sense, on the basis of the plurality of the mundane product development practices, it seems perhaps more appropriate to talk about *varieties of stability*. This also emphasizes how change and stability are interlinked, intertwined and often performed simultaneously, how change and stability are coterminous (Sturdy and Grey, 2003) and often coexistent.

But what are the potential contributions of exploring varieties of stability and their interconnections to change? One important contribution, I think, is found in the possibilities that the study of stability offers in regard to problematizing dominant articulations of the discourses of organizational change and NPD. As Sturdy and Grey (2003, 652) argue, the dominant organizational change management discourse constructs change as inevitable, desirable and/or manageable and assumes that stability is ‘what happens when nothing happens’. However, as this study has shown, ‘a lot has to happen for stability to occur’. Moreover, the construction of stability involves ongoing and various forms of social action, many which contest the assumption that organizational restructurings are inevitable, desirable and/or manageable. Therefore, the problematization of the assumption informing the dominant discourse of change, as done in this study, helps in bringing forth alternative voices concerning differing and problematic features of the discourse of change (Sturdy and Grey, 2003). I am particularly interested in exploring alternative articulations of the discourse of change and the discourse of product development in order to provide some new insights into the *implications* that follow them. This is, in my opinion, another important contribution of the studying stability in relation to organizational change. Therefore, I will discuss some important implications that may follow organizational change in more depth in the next section.

11.1.6. Implications following organizational change

In this section, I wish to highlight and discuss some specific implications that may follow organizational change. As the findings have shown, the various mundane product development practices in all clusters analyzed seemed to involve a movement from relatively improvised ways of organizing towards rather formalized ones. In that sense, product development has been shown to be a site in which the software product development experts seem to have to cope with constant pressures of change and uniformity. However, we have also seen that, despite the constant pressures of change, software product development experts often still managed to achieve stability in their daily work practices. It seemed that the increasing formalization of product development practices and the pressures of uniformity worked to reinforce this stability by keeping the experts ‘trapped’ in prevailing ways of organizing. This, on the other hand, often required ongoing restructurings of subject positions, that is, active subjectivity work.

The analysis of subjectivity work showed how the software product development experts were typically addressed as autonomous and active social actors during periods of relatively improvised ways of organizing. The analysis also showed how the experts

were increasingly addressed as instrumental resources, passive receivers and communicators of tasks as more formalized product development processes or ways of organizing were introduced. More specifically, over time the experts became more subordinate to guidelines and hierarchical or structured power relations. This shift seemed to be typically experienced as rather undesirable, thus contributing to dis-identification with the subject positions offered in relation to formalized product development processes. Perhaps this was because the new subject positions often denied the product development experts' agency and more desired subjectivities. Nevertheless, despite this dis-identification, the product development experts interviewed reported that they still continued to perform their tasks, thus legitimizing rather than contesting the formalized processes. Consequently, dis-identification seems to call for more research as this phenomenon was shown to require active subjectivity work and to be a central effect of increasing formalization of product development processes, ongoing organizational change and micro-politics.

Thus, looking ahead, it seems important to further critically investigate subjectivity work and dis-identification in relation to organizational change, particularly restructurings imposing increasing formalization in product development, so as to provide new discursive resources for those dis-identifying with formalization. Hodgson and Cicmil (2007, 447) argue:

'The challenge therefore is to provide intellectual and political resources for the reflective and ethical practitioner to move beyond this position of silent adaptation to imposed standardization, and to imagine and construct both projects and their management differently.'

Although referring here primarily to project management standards, Hodgson and Cicmil's (2007) argument may well be most relevant to many NPD and change models or formalization efforts.

Another important potential implication connected to NPD and repeated organizational change concerns homogeneity in terms of social categories such as gender, age and education. More specifically, as this study has shown, the pressures of ongoing and far-reaching organizational change and the construction of stability in IT work together seem to form a site which can maintain homogeneity. For example, the organizations studied, like many workplaces in the IT sector, were very homogeneous in terms of gender, age, generation, education and ethnicity. Yet this fact seemed to become invisible through the micro-processes that the software product development experts engaged in despite the strong presence of men, hence hiding the different aspects of these gendering processes such as gendered power relations (Korvajärvi, 2002). This observation is not just important to recognize in practising software development projects but also in theorizing organizational change, product development and project work.

By taking up more gendered accounts in practising, studying and theorizing product development work at the level of micro-processes and subjectivities, we can develop a more insightful understanding of how processes of gendering, as well as how processes of maintaining 'imagined' homogeneity (Essed, 2005) unfold, are experienced and influence various social actors. Thus, this study raises the issue of the gendering of non-gendered accounts and contributes to the debate concerning to what extent this is possible to do. The approach adopted here can contribute to the gendering of gender-neutral and gender-absent accounts (Hanmer and Hearn, 1999) by providing possibilities to explore foremost the implicit constructions of gender. The strengths of such efforts are the possibilities to analyze issues that tend to 'disappear' when elaborated on explicitly. In that sense, the adopted approach may also have important

critical potential. However, this also calls for special attention to ethical issues in relation to changing the directions of the research focus and interest, and the interviewees' consent (Silverman, 2001). In addition, it may be necessary to link various social categories, such as relations between gender, age and social divisions.

The concept of cultural cloning (Essed, 2005) may be helpful in developing further understandings of the 'distant' location of gender and the maintaining of homogeneity in software development project work. Essed (2005) calls processes that maintain homogeneity in terms of, for example, gender, age and ethnicity, cultural cloning and emphasizes that this phenomenon typically works to preserve privilege. She makes the important point that cultural cloning is particularly strong when social actors work under time and efficiency pressure, as is often the case in software development projects:

'Cultural cloning, choosing automatically for sameness, for the familiar paths in the name of competence, effectiveness, and efficiency while preserving privilege, works even better when there is little time to reflect, when pressures to perform are high, and where there is a premium to quantitative output ...' (Essed 2005, 241)

By making explicit and questioning dominant discourses that constitute gender-absent accounts that maintain homogeneity, we can point out how gender and cultural cloning operates through everyday practices. It is at this level that processes of gendering occur and power implications are felt, but this is also where broader discourses are produced and potentially contested. In that sense, this study contributes by illustrating examples of how gendered relations unfold and are achieved in specific settings: how homosociality, tensions, hierarchies and so forth are constructed in and through gender-absent and gender non-conscious accounts, accounts that do not recognize the way gender operates in specific situations (Hanmer and Hearn, 1999; Egeberg Holmgren and Hearn, 2009). Analyzing these accounts can potentially make the implicit or invisible process of gendering in everyday practices more visible, including implications for not just men but also women as well as other social categories, thus making such processes more contestable (Collinson and Hearn, 1996). This may raise awareness of the possible implications of the positions and discourses we take up in our interactions with one another (Davies and Harré, 1990).

11.2. Theorizing an approach to organizational change and NPDP

In this chapter, I have so far concluded what perhaps primarily can be said to be the empirical contributions of this study. But how did I come to these conclusions? And what type of theoretical conclusions can be drawn at this point? Before I attempt to elaborate on these questions, let me return to something I said in the introductory chapter. When formulating the aim at the beginning of this thesis, I suggested that 'although there is a vast body of literature exploring and theorizing organizational change and new product development or innovation (for a broad overview see, for example, handbooks in these research fields, Poole et al., 2004; Fagerberg et al., 2005; Shavinina et al., 2003; Loch et al., 2008), this literature seems to lack nuanced understandings of the everyday lived experiences of social actors in particular organizational settings, who repeatedly have to accommodate organizational change in relation to their work'. My attempt has been to address this shortcoming.

With this study, I have shown how what at first glance may appear as "no activity", stagnation, a vacuum or perhaps as employee resistance during organizational change can be both explored and theorized in alternative and more nuanced terms. I believe

such theorizing is important as it can offer new insights into organizational change and the following implications for social actors. Consequently, I have developed a particular discursive and social constructionist approach to organizational change and product development that primarily:

- is empirically grounded,
- uses sequential selection of interviewees,
- is at the same analytical and critical (Jokinen and Juhila, 1999),
- relies on abductive reasoning (Coffey and Atkinson, 1996),
- theorizes time in terms of becoming (Chia, 1995; Tsoukas and Chia, 2002) and as discursive resources (Roberts, 2004), and
- attempts to connect discursive micro-processes and broader discourses.

By highlighting and interrelating these issues listed above, this study addresses various issues that often are given little attention in organizational change literature and theorizing.

At the outset of this study, I took a relatively analytical position in contrast to a more critical starting point by sequentially selecting the interviewees over many years and by favouring sensitivity to empirically grounded understandings of organizational change in the interviews. This meant that I avoided defining and imposing specific logics at the outset of the study. This is not to argue that I stepped into the study without any preconceptualizations, nor do I suggest that critical conclusions cannot be drawn from the analysis. The suggestion is that I was cautious with established conceptualizations of, for example, organizational restructurings and power relations (Jokinen and Juhila, 1999). This was an effort to allow for surprises to emerge from the interview material and to generate new, more heterogeneous insights into the phenomena studied as I step by step interviewed more software product development experts.

By engaging in abductive reasoning, I, however, gradually began relating the empirically grounded understandings to previous theorizing in an effort to 'think creatively' with the interview material to generate new insights. Through this process and drawing on an analytical position, I showed how discursive resources can be 'identified' and elaborated on. That is, as the study progressed, products, ways of organizing, and subject positions were found to be important discursive resources to the product development experts interviewed as they constructed organizational change and NPD. It was precisely through the analysis of these three key aspects as central discursive resources to the interviewees that I was able to offer detailed and varied insights into understandings of organizational change.

The approach adopted also has had implications for my own subject positions, and indeed my own criticality. Moreover, in order to broaden the study from my relatively analytical position, I gradually took up a more critical position. In so doing, I used the analysis of the social actors' discursive resources, that is, the three key aspects – products, ways of organizing, and subject positions – also as resources for my own 'criticality' and reflections. This shift towards a more critical position implied an effort to explore the relationship between discourse and broader meanings beyond the specific interviews. This we could see perhaps best in the reflections on data and theory

in Chapters 6-9 and in Chapter 10. For example, in the reflections, I more critically elaborated on the dynamics of micro-processes and micro-politics of changing and stabilizing, how discourse constitutes social reality and vice versa, how micro-processes are intertwined with subject positions, subjectivity work, agency and power relations, and how past experiences of organizational change can be used by social actors as discursive resources. Here, through my own increasingly critical reflections, I was able to relate discourse, in various ways, to broader issues.

I also wish to emphasize the importance of explicitly incorporating time in approaches to change, for example, to develop detailed understandings of shifting mundane micro-processes of product development and organizational restructurings. Time can, as I have shown, be included in the analysis of change in several ways. As we have seen, approaching organizational change in terms of discursive becoming over time can be a useful way of developing deep understandings of the *doing* of change/stability and of the plurality of mundane everyday practices, in contrast to, for example, attempting to specify what organisational change is or should be. Studying the becoming of NPD and/or organizational change over time has in particular been interesting in this study due to the access to longitudinal interview material, which revealed various shifts and tensions. However, as scholars often have to face the facts of tight time schedules, time can also be studied in non-longitudinal data as I have shown. This can be done, for example, by approaching time in discursive terms; by analysing how social actors conceptualize time, use different time tenses and shift between these.

In sum, the specific approach developed in this study has in various ways contributed to a more varied understanding of NPD and organizational change, how change/stability unfolds over time, as well as to interrelating different layers of product development and organizational change. Therefore, the approach has been useful for problematizing organizational change and NPD as inevitable, desirable and manageable, and for theorizing organizational change and product development in new ways.

In addition, this study contributes to the literature reviewed in Chapter 3 by offering an approach to organizational change, product development, innovation and IT work that emphasizes the importance of bringing forth marginalized voices and which is sensitive to nuance, connections, disconnection, complexities, contradictions, tensions, gendering and flexibility around social reality. In so doing, on the basis of the analytical starting point the approach invites analyses of emerging, explicit/implicit and present/absent issues and micro-processes (Hearn, 1998) without giving up critical commitments. As a result, the approach provides promising possibilities to analyze and theorize the production of (for example, gendered) power relations and subject positions in ongoing and mundane interactions and practices. This approach, I believe, can be useful, too, more broadly in management and organization studies attempting to problematize various dominant understandings and theorizing in different contexts around, for example, identity, power relations, (dis-)identification, organizing, formalization and standardization. However, next I will discuss more specific contributions to the theorizing of change and stability.

11.3. Theorizing change, stability and organizational change

This study contributes to the theorizing of organizational change, product development and innovation in several ways by suggesting that it may be beneficial to theorize these phenomena at the level of micro-processes and subjectivities. More specifically, this study theorizes product development and organizational change as:

- processes of becoming over time
- co-existent and coterminous processes of change and stability
- mundane and nuanced practices

In the following section, I discuss each of these aspects of theorizing product development and organizational change. First, as Poole (2004) points out, although time is crucial for the study of change and innovation, until recently it has remained broadly obscure in these fields of research. Even in social constructionist and discourse analytical theorizing that emphasize the ephemeral character of organizational change, scholars have struggled with this issue. With this study, I have made an attempt to address this theoretical shortcoming. This has involved theorizing NPD and organizational change as an ongoing state of becoming requiring detailed and careful examination of discursive movements over time: how product development and organizational change emerge as software product development experts draw on discourse while simultaneously reconstructing and deconstructing discourse and as they engage and shift between simultaneous connected and disconnected processes. However, I wish to point out that time is not only seen here as intertwined with ongoing becoming but also in discursive terms. That is, we have seen how the software product development interviewed used past experiences as discursive resources in the present. In so doing, they produced a particular understanding of their work in relation to which they positioned and re-positioned themselves. This discursive use of time can be assumed to potentially produce trajectories for the future.

Secondly, by theorizing the discursive emergence of product development and organizational change, including various connected and disconnected processes, this study contributes in particular to the theorizing of co-existent and coterminous processes of stability and change during organizational restructurings. Drawing on an ontology of becoming, organizational change has been theorized as ‘merely’ a discursive template (Tsoukas and Chia, 2002) that may or may not trigger changing practices. Change and stability, have on the other hand, both been theorized as emerging in and effects of ongoing practices. Further, constructions of change and stability have been shown to often occur simultaneously, thus in turn illustrating that they are not alternative states but rather often interdependent. For example, as the reflections on the different clusters highlighted, stability can be theorized as an effect of solidarity, homosociality, bonding, distancing from others, relations to technology, a desire for order and patterns, and micro-politics. As these processes are constructed during organizational change, they may at the same time potentially imply relatively radical restructurings of, for example, power relations and subjectivities. Here we can see interdependent and simultaneous processes of stability and change; that the production of stability in certain practices may produce restructurings in other ones.

Third, theorizing product development and organizational change in terms of becoming, time and co-existent processes of change and stability is particularly

interesting when interconnected with mundane practices. Theorizing and exploring the becoming of various mundane practices in relation to change and stability, provides insight into processes that almost are 'microscopic' (Tsoukas and Chia, 2002), processes constituting product development practices that seemingly are stable (perhaps even boring or insignificant) but from the point of view of this study are theorized as constantly changing, if yet minimally. Due to their ongoing, yet 'microscopic character', it is not surprising that these everyday mundane processes take relatively 'invisible' forms and contribute to individuals easily taking them for granted. However, despite the seemingly microscopic or insignificant character of mundane practices, it is nevertheless in these practices that social reality takes shape. Theorizing mundane practices in these terms is therefore crucial and can help us to understand the power of mundane and 'invisible' practices; it is in and through these practices that discourse emerges, with implications for power relations, subjectivities and so forth.

Turning our attention to the mundane practices analyzed in this study contributes to the theorizing of product development and organizational change as political, non-neutral, rather unpredictable and not easily manageable. In other words, rather than theorizing product development and organizational change in prescriptive, best practice or 'neutral' terms, what is theoretically interesting from the point of view of this study is the plurality around these phenomena and the processes through which gendered and other power relations emerge and constitute interactions, dominance, hierarchies, obedience, formalization, and instrumentality, as well as how these relations enter subjectivity work and (dis-)identification. Moreover, understanding organizational change in these terms may help us to theorize how organizational change is felt by the social actors involved, how the social actors are controlled, included/excluded and disciplined by prevailing discourses and how these actors position themselves in relation to them in specific contexts.

11.4. Final reflections: Strengths, limitations, future recommendations and implications

The discussion in the previous sections of this chapter has illustrated that the abductive reasoning and the approach developed and adopted has proved to be useful in many ways. It has been useful because it has provided an opportunity to step into the research process without framing and defining the research topic in a strict manner. Instead, the focus of the study was gradually narrowed down and various ideas were generated throughout the study (Coffey and Atkinson, 1996), ideas that towards the end of the study seem to contribute to critical theorizing and hopefully also to 'critical' discursive resources for software product development experts and other practitioners. However, adopting a specific approach to the phenomenon studied involved taking up a certain perspective on social reality which formed my understanding of what I was studying. Morgan (1997, 4) argues that 'all theories of organization and management are based on implicit images or metaphors that lead us to see, understand, and manage organizations in distinctive yet partial ways'. One could say that taking up social constructionist and discourse analytic perspectives helped me to see and explore the becoming of certain social phenomena, but to the exclusion of other issues (Chia, 2000).

Other approaches to the phenomena studied would have provided different readings and focal points. For example, the focus could alternatively have been turned onto issues of other competing discourses, the success and failure of organizational restructurings, specific forms of organizational restructurings such as change

programmes, institutionalization, the differences between organizational change in different organizations, societal and global linkages, or at another level looked at the stress experienced, learning, resistance or leadership. Different research materials could potentially also have given different insights. I hope, however, that the reader finds my approach, data and reading of the research phenomena to be relevant and useful. I have analyzed the studied phenomena from different angles, and by doing so attempted to open up a thorough understanding of organizational change and product development. Nonetheless, there are many important and interesting issues that remained unexplored as I had to avoid losing the focus of the study. For example, issues of age, generation, education and ethnicity, as well as their interrelations could all have been raised more fully. Likewise, other social actors than just software product development experts could have been included. These are issues that would deserve more attention.

In sum, one could say that in developing the specific focus of the study I began by focusing on organizational restructurings, for example, rapid growth, downsizing and structural reforms, but as I went along the analysis came to be just as much about mundane practices and ‘work restructuring’. More specifically, the study has shown how mundane everyday work is restructured through the micro-processes that social actors engage in. However, little attention was paid to ‘product restructuring’ as, for example, in innovation. It seems plausible that restructurings of organizations, work and products are interconnected through discourse and would gain from being analyzed in relation to one another.

Particular attention should be paid in further research to how the ongoing, mutual and dynamic restructurings of organizations, work and products unfold and are connected to prevailing discourses in society more broadly. For example, at the moment of writing, the financial crisis that hit the USA from 2008 and later contributed to a global economic recession seems to form a central discursive resource with implications for restructurings of organizations, work and products. Likewise, discourses of restructurings take shape in relation to the dominant faith in technology and innovation as important solutions to various threats to our welfare and wellbeing and a common desire for development and growth. Here, I would like to emphasize the importance of further research on the implications that may follow from these interconnections. Such implications may concern subjectivities and the pressures of ordering, control, formalization, efficiency, and flexibility. These pressures may contribute to undesirable effects of different forms for various social actors, which should not be downplayed. Instead, a focus on these could help us to develop a better understanding for what Alvesson and Willmott (2002, 638) call micro-emancipation and ‘new’ forms of subordination and oppression.

Another or related site for future research is that of gender, as well as other social divisions and social connections. Considering the crucial role that the ICT sector has in the Finnish and many other (information) societies and the dominant role that men have in technical occupations (Lohan and Faulkner, 2004), it seems important to more explicitly explore gender relations and gender positioning. This would be essential for the development of a better understanding of how power acts and is sustained in and through the process of restructuring and mundane practices in software development and more generally in IT work (Gherardi and Poggio, 2007). As we have seen in this study, gender seemed to be distant in the accounts of the men studied, making gender invisible or absent despite its strong presence (Korvajärvi, 2002; Gherardi and Poggio, 2007). The study of the very mundane everyday practices as discursive practices can provide a deeper insight into how gender becomes invisible, and how continuous

restructurings potentially provide an ongoing and perhaps exceptionally active site for subjectivity work, leaving little room for gender-conscious positioning (Egeberg Holmgren and Hearn, 2009).

Finally, I would like to discuss some important issues for organizations and those people who are involved in product development and/or who more or less continuously have to cope with organizational change in their workplaces. Before I continue, I wish to point out to the reader how I understand the concept of organization in this context. When directing, in the following, suggestions to organizations, I refer to organizations as social constructions, 'imaginary things' and actions, which are 'active, collective, and momentary accomplishments of agents' (Case, 2003, 158), thus turning attention towards everyday practice and discourse. Moreover, the suggestions that follow this discussion can be understood as potential resources as organizations as 'imaginary things' emerge in and through discourse and practice.

As the analysis of the four different clusters suggests, there is no simple or single answer to what occurs during organizational restructurings or to how organizational change and product development should be managed. For example, as we have seen, all the clusters studied dealt with the burst of the IT bubble in differing ways. Even the same social actors acted differently during similar organizational restructurings; for instance, the first experience of downsizing can be very different from the second one. Hence, it does not seem useful to give a single specific set of suggestions for how to act and manage product development and organizational restructurings. However, the study has produced some important discursive resources that I believe may prove to be useful as a starting point for reflection for people involved in product development and/or organizational change.

To be more specific, just as I have adopted an analytical approach to the study of organizational restructurings, a similar approach could be useful when carrying out product development during organizational restructurings. What guided my analytical approach was an interest in the mundane everyday practices of product development rather than in established NPD models, change programmes, standardized management systems, and so forth. By attempting to get to know these practices on their own terms in contrast to using specific presumptions as a starting point, the study suggests new insights. Consequently, by exploring the continuously evolving everyday practices in specific workplaces, by turning the focus onto micro-changes and routines going on 'outside' the formal organizational systems (Tsoukas and Chia, 2002), various social actors can learn much about, and critically reflect upon, why and how product development has arrived where it is and what is happening at the moment, thus helping in setting directions for the future (Roberts, 2004). This may sound self-evident, but many interviewees claimed that although they were constantly working and living by organizational restructurings they rarely had reflected critically on them: organizational restructurings almost seemed to have taken *invisible* forms. My guess is that stability is an even more marginalized topic in organizations undergoing constant change initiatives. Hence, a more explicit and conscious engagement with organizational restructurings and stability as interconnected and mundane practices may provide more detailed and nuanced understandings of micro-processes, which organize product development and 'quietly' produce stability and/or restructurings.

This is not to argue against organizational restructurings, change programmes, NPD standards, et cetera. What this study highlights is that these often come closer to being initiatives or templates that may or may not help product development experts to take up new ways of talking and acting (Tsoukas and Chia, 2002), and can therefore not be

seen as change as such. The study does, however, raise questions around the potential 'loss of reflexivity' that can occur when standards are adopted (Hodgson and Cicmil, 2007). Hence, people engaged in NPD and change initiatives are encouraged to consider the cost and dangers of imposing and/or translating into action pre-given standards and specific programmes. This is where the study promotes an approach that explores what various social actors do or do not do with change or product development 'templates', as with any other resources. Opening oneself to such reflexive considerations can potentially provide us with insights into how product development takes shape, is kept stable or is restructured. More specifically, by exploring prevailing discourses that are typically taken for granted and not critically interrogated, new views, metaphors, images, and so on, can be introduced, which open up new options for action for different social actors (Gergen and Thatchenkery, 1996).

In exploring the everyday product development practices in relation to organizational restructurings, product development experts and other actors involved may benefit from paying attention in their own context to, for example, the three key aspects of software product development highlighted in the analysis of this study. More specifically, the exploration of these aspects may facilitate inquiries into *products* as more than just neutral objects, into *ways of organizing* as more than merely processes to be optimized, and into implications for the software product development experts' *subject positions and self-understandings* as more than fixed identities.

Consequently organizations and those people involved in product development and/or organizational change may want to elaborate on questions such as:

- Since product development experts (as gendered beings) spend most of their working hours interacting with software, how do they feel and relate to the products they develop? How do the relations to products change over time and in relation to organizational restructurings? What are the implications? How are relations to products and technology related to various organizational practices?
- How are ways of organizing embedded in the mundane daily practices? What acts as the dominant sources for organizing? How are ways of organizing transformed during organizational restructurings? In which ways do ways of organizing control and discipline individuals? How are gender, age, and other social divisions embedded in the everyday product development activities? How can gender equality and other equalities be improved?
- What are the implications of certain organizational restructurings and ways of organizing for the product development experts' subject positions and self-understandings? How do product development experts, men and women, live their lives when working during ongoing organizational restructurings (Lindgren and Packendorff, 2006)? What are the costs and dangers of a potential move towards more formalized and/or standardized product development practices (Hodgson and Cicmil, 2007) for product development experts?

Thus, with this study I wish to encourage people involved in product development and/or organizational change to explore in greater depth their everyday practices and taken-for-granted assumptions in an effort to allow more alternative, sometimes contradictory, voices come forth. These seem to be crucial sources for introducing new options for action while formalization of specific patterns potentially seems to

contribute to a loss of reflexivity in various ways. In particular, I would encourage a recognition of product development during organizational restructurings as a potential arena for exercising power, control, dominance, and struggle – an arena that can be highly homogeneous in terms of, for example, gender, age, education, ethnicity, and thus subject to cultural cloning (Essed, 2005). Such homogeneous cloning may itself be a limiting condition in and of new software product development and organizational change, and in that sense antagonistic to the very activities and processes of NPD.

REFERENCES

- Alvesson, M. (2001): Knowledge work: Ambiguity, image and identity. *Human Relations*, 54(7): 863-886.
- Alvesson, M. (2003): Beyond neopositivists, romantics, and localists: A reflexive approach to interviews in organizational research. *Academy of Management Review*, 28(1): 13-33.
- Alvesson, M. and Deetz, H. (2005): Critical Theory and Postmodernism: Approaches to Organizational Studies. Grey, C. and Willmott, H. (eds): *Critical management studies: A reader*. Oxford: Oxford University Press, 60-106.
- Alvesson, M. and Karreman, D. (2000): Varieties of discourse: On the study of organizations through discourse analysis. *Human Relations*, 53(9): 1125-1149.
- Alvesson, M. and Sköldbäck, K. (1994): *Tolkning och reflektion. Vetenskapsfilosofi och kvalitativ metod*. Lund: Studentlitteratur.
- Alvesson, M. and Willmott, H. (2002): Identity Regulation as Organizational Control: Producing the Appropriate Individual. *Journal of Management Studies*, 39(5): 621-644.
- Anderson, D. (2005): "What you'll say is..." represented voice in organizational change discourse. *Journal of Organizational Change Management*, 18 (1), 63-77.
- Anderson, N., De Dreu, C. K. W. and Nijstad, B. A. (2004): The routinization of innovation research: a constructively critical review of the state-of-the-science. *Journal of Organizational Behavior*, 25: 147-173.
- Bauman, Z. (1992): *Intimations of Postmodernity*. London: Routledge.
- Beech, N., and Johnson, P. (2005): Discourses of disrupted identities in the practice of strategic change: The mayor, the street-fighter and the insider-out. *Journal of Organizational Change Management*, 18(1), 31-47.
- Berger, P. L. and Luckmann, T. (1966): *The Social Construction of Reality*. New York: Doubleday.
- Bergström, O. and Knights, D. (2006): Organizational Discourse and Subjectivity: Subjectification during Processes of Recruitment. *Human Relations*, 59(3): 351-377.
- Bhattacharya, S., Krishnan, V. and Mahajan, V. (1998): Managing New Product Definition in Highly Dynamic Environments. *Management Science*, 44(11): S50-S64.
- Blom, R. and Pyöriä, P. (2005): The real plight of a knowledge worker. Pyöriä, P., Melin, H. and Blom, R.: *Knowledge workers in the information society*. Tampere: Tampere University Press, 243-268.
- Burr, V. (1995): *An Introduction to Social Constructionism*. London: Routledge.

- Caldwell, R. (2005): Things fall apart? Discourses on agency and change in organizations. *Human Relations*, 58(1): 83-114.
- Case, P. (2003): From Objectivity to Subjectivity: Pursuing Subjective Authenticity in Organizational Research. Westwood, R. and Clegg, S. (eds): *Debating Organization: Point-Counterpoint in Organization Studies*. London: Blackwell Publishing, 156-179.
- Case, P. and Pineiro, E. (2006): Aesthetics, performativity and resistance in the narratives of computer programming community. *Human Relations*, 59(6): 753-782.
- Case, P. and Pineiro, E. (2009): Stop whining, start doing! Identity conflict in project managed software production. *Ephemera theory and politics in organization*, 9 (2): 93-112.
- Castells, M. and Himanen, P. (2001): Suomen Tietoyhteiskunta malli. Vantaa: Sitra and WSOY.
- Chia, R. (1995): From Modern to Postmodern Organizational Analysis. *Organization Studies*, 16 (4): 579-604.
- Chia, R. (1999): A 'Rhizomic' Model of Organizational Change and Transformation: Perspective from a Metaphysics of Change. *British Journal of Management*, 10: 209-227.
- Chia, R. (2000): Discourse Analysis as Organizational Analysis'. *Organization*, 7(3): 513-518.
- Cicmil, S., Hodgson, D., Lindgren, M. and Packendorff, J. (2009): Project Management Behind the Façade. *Ephemera Theory and Politics in Organization*, 9 (2): 78-92.
- Clegg, S. and Courpasson, D. (2004): Political Hybrids: Tocquevillean Views on Project Organizations. *Journal of Management Studies*, 41(4), 525-547.
- Coffey, A. and Atkinson, P. (1996): *Making sense of qualitative data*. Thousand Oaks: Sage Publications.
- Collinson, D. and Hearn, J. (1996): Men at 'work': multiple masculinities/multiple workplaces. Mac an Ghail, M. (ed.): *Understanding Masculinities: Social relations and cultural arenas*. Buckingham and Philadelphia: Open University Press, 61-76.
- Cooper, R. G. (1990): 'Stage-Gate Systems: A New Tool for Managing New Products', *Business Horizons*, 33(3): 44-54.
- Cooper, R. G. and Kleinschmidt, E. J. (1996): 'Winning Businesses in Product Development: The Critical Success Factors', *Research Technology Management*, 39(4): 18-29.
- Czarniawska, B. (2005): *En teori om organisering*. Lund: Studentlitteratur.

- Czarniawska, B. and Joerges, B. (1996): Travels of Ideas. Czarniawska, B. and Sevón, G. (eds): *Translating Organizational Change*. New York: Walter de Gruyter, 13-48.
- Czarniawska, B. and Sevón, G. (1996): Introduction. Czarniawska, B. and Sevón, G. (eds): *Translating Organizational Change*. New York: Walter de Gruyter, 1-12.
- Davies, B. and Harré, R. (1990): Positioning: The Discursive Production of Selves. *Journal for the Theory of Social Behaviour*, 20 (1): 43-63.
- Doolin, B. (2003): Narratives of change: Discourse, technology and organization. *Organization*, 10(4), 751-770.
- Doolin, B. and Lowe, A. (2002): To reveal is to critique: actor-network theory and critical information systems research. *Journal of Information technology*, 17: 69-78.
- du Gay, P. (2003): The Tyranny of the Epochal: Change, Epochalism and Organizational Reform. *Organization*, 10(4): 663-684.
- Egeberg Holmgren, L. and Hearn, J. (2009): Framing 'men in feminism': theoretical locations, local contexts and practical passings in men's gender-conscious positionings on gender equality and feminism. *Journal of Gender Studies*, 18(4): 403-418.
- Eisenhardt, K. M. and Tabrizi, B. N. (1995): Accelerating Adaptive Processes: Product Innovation in the Global Computer Industry. *Administrative Science Quarterly*, 40: 84-110.
- Ellis, C. and Berger, L. (2002): Their story/my story. Including the researcher's experience in interview research. Gubrium, J. F. and Holstein, J. A. (eds): *Handbook of interview research*. Thousand Oaks: Sage Publications, 849-875.
- Essed, P. (2005): Gendered Preferences in Racialized Spaces: Cloning the Physician'. Murji, K. and Solomos, J. (eds): *Racialization. Studies in Theory and Practice*. New York: Oxford University Press, 227-247.
- Fagerberg, J. (2005): Innovation. A guide to the literature. Fagerberg, J., Mowery, D. C. and Nelson, R. (eds): *The oxford handbook of innovation*. New York: Oxford University Press, 1-26.
- Fagerberg, J., Mowery, D. C. and Nelson, R. (eds) (2005): *The oxford handbook of innovation*. New York: Oxford University Press.
- Fagerberg, J. and Verspagen, B. (2009): Innovation studies – The emerging structure of a new scientific field. *Research policy*, 38: 218-233.
- Fleming, P. and Spicer, A. (2003): Working at a Cynical Distance: Implications for Power, Subjectivity and Resistance. *Organization*, 10(1): 157-179.

- Fontana, A. (2002): Postmodern trends in interviewing. Gubrium, J. F. and Holstein, J. A. (eds): *Handbook of interview research*. Thousand Oaks: Sage Publications, 161-175.
- Gergen, K. J. (1973): Social Psychology as History. *Journal of Personality and Social Psychology*, 26(2): 309-320.
- Gergen, K. J. (1985): The Social Constructionist Movement in Modern Psychology. *American Psychologist*, 40 (3): 266-275.
- Gergen, K. J. (1999): *An Invitation to Social Construction*. London: Sage Publications.
- Gergen, K. J. and Thatchenkery, T. J. (1996): Organizational Science as Social Construction: Postmodern Potentials. *Journal of Applied Behavioral Science*, 32 (4): 356-77.
- Gherardi, S. and Poggio, B. (2007): *Gendertelling in Organizations: Narratives from male-dominated environments*. Copenhagen: Liber Copenhagen Business School Press.
- Grant, D., Keenoy, T., and Oswick, C. (2001): Organizational discourse. Key contributions and challenges. *International Studies of Management and Organization*, 31(3): 5-24.
- Grant, D., Michelson, G., Oswick, C. and Wailes, N. (2005): Guest Editorial: Discourse and Organizational Change. *Journal of Organizational Change Management*, 18(1): 6-15.
- Gubrium, J. F. and Holstein, J. A. (eds) (2002): *Handbook of interview research*. Thousand Oaks: Sage Publications.
- Gubrium, J. F. and Holstein, J. A. (2002): From the individual interview to the interview society. Gubrium, J. F. and Holstein, J. A. (eds): *Handbook of interview research*. Thousand Oaks: Sage Publications, 3-32.
- Hacking, I. (1999): *The social construction of what?*. Cambridge: Harvard University Press.
- Hanmer, J. and Hearn, J. (1999): Gender and Welfare Research. Williams, F., Popay, J. and Oakley, A. (eds): *Welfare Research: A Critical Review*. London: UCL Press, 106-130.
- Hardy, C. (2001): Researching Organizational Discourse. *International Studies of Management and Organization*, 31(3): 25-47.
- Hardy, C., Phillips, N. and Clegg, S. (2001): Reflexivity in organization and management theory: A study of the production of the research 'subject'. *Human Relations*, 54(5): 531-560.
- Hearn, J. (1998): Theorizing men and men's theorizing: Varieties of discursive practices in men's theorizing of men. *Theory and Society*, 27: 781-816.
- Hearn, J. (2004): From hegemonic masculinity to the hegemony of men. *Feminist Theory*, 5(1): 49-72.

- Hearn, J. (2006): From masculinities back to men: Tracing diverse psychological, social and political threads. *The Psychology of Women Section Review*, 8 (1): 38-52.
- Heiskanen, T. (2004a): Spaces, places and communities of practices. Heiskanen, T. and Hearn, J. (eds): *Information society and the workplace: Spaces, Boundaries and Agency*. London: Routledge, 3-25.
- Heiskanen, T. (2004b): Information society, agency and identity positions. Heiskanen, T. and Hearn, J. (eds): *Information society and the workplace: Spaces, Boundaries and Agency*. London: Routledge, 193-204.
- Heiskanen, T. and Hearn, J. (eds) (2004): *Information society and the workplace, Spaces, Boundaries and Agency*. London: Routledge.
- Helms Mills, J. (2003): *Making sense of organizational change*. New York: Routledge.
- Helms Mills, J., Dye, K. and Mills, A. (2009): *Understanding organizational change*. New York: Routledge.
- Heracleous, L. and Barrett, M. (2001): Organizational change as discourse: Communicative actions and deep structures in the context of information technology implementation. *Academy of Management Journal*, 44(4): 755-778.
- Hodgson, D. and Cicmil, S. (2007): The Politics of Standards in Modern Management: Making 'The Project' a Reality. *Journal of Management Studies*, 44(3): 431-450.
- Iansiti, M. (1995): Shooting the Rapids. Managing Product Development in Turbulent Environments. *California Management Review*, 38 (1): 37-58.
- Johansson, M. (2008): *Engaging resources for cultural events. A performative view*. Ph.D. thesis: Stockholm, Stockholm School of Economics.
- Jokinen, A. and Juhila, K. (1999): Diskurssianalyttisen tutkimuksen kartta. Jokinen, A., Juhila K. and Suoninen E.: *Diskurssianalyysi liikkeessä*. Jyväskylä: Gummerus Kirjapaino Oy, 54-97.
- Juhila, K. (1999): Tutkijan positiot. Jokinen, A., Juhila K. and Suoninen E.: *Diskurssianalyysi liikkeessä*. Jyväskylä: Gummerus Kirjapaino Oy, 201-232.
- Jyrkinen, M. (2005): The organisation of policy meets the commercialisation of sex. Global linkages, polices, technologies. Ph.D. thesis: *Publications of the Hanken School of Economics No 146*. Helsinki: Hanken School of Economics.
- Kamoche, K. and Cunha, M. P. (2001): Minimal Structures: From Jazz Improvisation to Product Innovation. *Organization Studies*, 22(5): 733-764.
- Kiesling, S. F. (2005): Homosocial desire in men's talk: Balancing and recreating cultural discourses of masculinities. *Language in Society*, 34: 695-726.

- Knorr Cetina, K. (1994): Primitive Classification and Postmodernity: Towards a Sociological Notion of Fiction. *Theory, Culture and Society*, 11: 1-22.
- Kolehmainen, S. (2001): *Work organisation in high-tech IT firms*. Tampere: Tampereen Yliopistopaino Oy Juvenes Print.
- Kolehmainen, S. (2004): The Dynamics of Control and Commitment in IT Firms. Heiskanen T. and Hearn J. (eds): *Information Society and the Workplace: Spaces, Boundaries and Agency*. London and New York: Routledge, 83-102.
- Korvajärvi, P. (2002): Gender-neutral gender and denial of the difference. Czarniawska B. and Höpfl, H. (eds): *Casting the Other The production and maintenance of inequalities in work organizations*. London: Routledge, 119-184.
- Krishnan, V., Eppinger, S. D. and Whitney, D. E. (1997): A Model-Based Framework to Overlap Product Development Activities. *Management Science*, 43(4): 437-451.
- Latour, B. (1986). The powers of association. Law, J. (ed.): *Power action and belief*. London: Routledge and Kegan Paul, 264-280.
- Lewin, K. (1951): *Field theory in social science*. New York: Harper and Brothers.
- Lindgren, M. and Packendorff, J. (2006): What's New in New Forms of Organizing? On the Construction of Gender in Project-Based Work. *Journal of Management Studies*, 43 (4): 841-866.
- Lindgren, M. and Packendorff, J. (2007): Performing Arts and the Art of Performing - On Co-construction of Project Work and Professional Identities in Theatres. *International Journal of Project Management*, 25: 354-364.
- Lindgren, M. and Packendorff, J. (2009): Project leadership revisited: Towards distributed leadership perspectives in project research. *International Journal of Project Organisation and Management*, 1(3): 285-308.
- Lipman-Blumen, J. (1976): Towards a Homosocial Theory of Sex: An Explanation of the Sex Segregation of Social Institutions. Blaxall, M. and Reagan, B. (eds): *Women and the Workplace. The Implications of Occupational Segregation*. Chicago: The University of Chicago Press, 15-31.
- Loch, C. H. and Kavadias, S. (eds) (2008): *Handbook of new product development management*. Oxford: Butterworth-Heinemann.
- Lohan, M. and Faulkner, W. (2004): Masculinities and Technologies. *Men and Masculinities*, 6 (4): 319-329.
- MacCormack, A., Verganti, R. and Iansiti, M. (2001): Developing Products on "Internet Time": The Anatomy of A Flexible Development Process. *Management Science*, 47 (1): 133-150.
- Mead, G.H. (1934): *Mind, Self and Society*. Chicago: University of Chicago Press.
- Meinander, H. (2006): *Finlands historia*. Porvoo: Söderströms.

- Mellström, U. (2004): Machines and masculine subjectivity. Technology as an integral part of men's life experience. *Men and Masculinities*, 6(4): 368-382.
- Morgan, G. (1997): *Images of organization*. Second edition. Thousand Oaks: Sage Publications.
- Orlikowski, W. J. and Robey, D. (1991): Information technology and the structuring of organizations. *Information Systems Research*, 2(2): 143-169.
- O'Shea, A. (2002): The (R)evolution of New Product Innovation. *Organization*, 9(1): 113-125.
- Oswick, C., Grant, D., Michelson, G., and Wailes, N. (2005): Looking forwards: discursive directions in organizational change. *Organizational Change*, 18(4): 383-390.
- Packendorff, J. (1995): Inquiring into the temporary organization: new directions for the project management research. *Scandinavian Journal of Management*, 11 (4): 319-333.
- Parker, M. (1992): Post-Modern Organizations or Postmodern Organization Theory?. *Organization Studies*, 13 (1): 1-17.
- Pettigrew, A. M. (1985): *The awakening giant: Continuity and change in the ICI*. Oxford: Blackwell.
- Pettigrew, A. M. (1997): What is a processual analysis? *Scandinavian Journal of Management*, 13 (4): 337-348.
- Pettigrew, A. M., Woodman, R. W., and Cameron, K. S. (2001): Studying organizational change and development: Challenges for future research. *Academy of Management Journal*, 44(4): 697-713.
- Phillips, N. and Hardy, C. (2002): *Discourse analysis. Investigating Processes of Social Construction*. California: Sage Publications.
- Pineiro, E. (2003): *The aesthetics of code. On excellence in instrumental action*. Ph.D. thesis: Stockholm, Royal Institute of Technology.
- Poole, M. S. (2004): Central Issues in the Study of Change and Innovation. Poole, M. S. and Van de Ven, A. H. (eds): *handbook of Organizational Change and Innovation*. New York: Oxford University Press, 3-31.
- Potter, J. and Wetherell, M. (1987): *Discourse and Social Psychology: Beyond Attitudes and Behaviour*. London: Sage Publications.
- Prasad, P. (2005): *Crafting Qualitative Research. Working in Postpositivist Traditions*. Armonk, NY: M.E. Sharpe.
- Pyöriä, P. (2005): The rise of the Knowledge work. Pyöriä, P., Melin, H. and Blom, R.: *Knowledge workers in the information society*. Tampere: Tampere University Press, 59-98.

- Pyöriä, P., Melin, H. and Blom, R. (2005): *Knowledge workers in the information society*. Tampere: Tampere University Press.
- Roberts, B. (2004): Biography, time and local history-making. *Rethinking History*, 8(1): 89-102.
- Rogers, E. (1983): *Diffusion of Innovations*. Third edition. New York: The Free Press.
- Rubin, H. J. and Rubin, I. S. (2005): *Qualitative interviewing. The art of hearing data*. Second edition. Thousand Oaks: Sage Publications.
- Schwalbe, M. L. and Wolkomir, M. (2002): Interviewing men. Gubrium, J. F. and Holstein, J. A. (eds): *Handbook of interview research*. Thousand Oaks: Sage Publications, 203-219.
- Segercrantz, B. (2007). Constructing stability in software product development during organizational restructurings. *Working papers of Hanken School of Economics No 527*. Helsinki: Hanken School of Economics.
- Segercrantz, B. (2009): Towards a (more) critical and social constructionist approach to New Product Development projects. *Ephemera theory and politics in organization*, 9(2): 182-194.
- Shavinina, L. V. (ed.) (2003): *The international handbook of innovation*. Oxford: Elsevier.
- Silverman, D. (2001): *Interpreting Qualitative Data. Methods for Analysing Talk, Text and Interaction*. Second Edition. London: Sage Publications.
- Statistics Finland (2006): *Tietoyhteiskuntatilasto 2006* [Information society statistics 2006]. Helsinki: Statistics Finland.
- Sturdy, A., and Grey, C. (2003): Beneath and beyond organizational change management: Exploring alternatives. *Organization*, 10(4), 651-662.
- Sveiby, K.-E., Gripenberg, P., Segercrantz, B., Eriksson, A. and Aminoff, A. (2009): Unintended and Undesirable Consequences of Innovation. Conference paper: *XX ISPIM Conference The Future of Innovation*, ISPIM, June 21-24, 2009, Vienna, Austria.
- Tallberg, T. (2009): The gendered social organization of defence. Ph.D. thesis: *Publications of the Hanken School of Economics No 193*. Helsinki: Hanken School of Economics.
- Tapia, A. (2004): The power of myth in the IT workplace. Creating a 24-hour workday during the dot-com bubble. *Information Technology and People*, 17(3): 303-326.
- Thomas, R. and Davies, A. (2005): Theorizing the Micro-politics of Resistance: New Public Management and Managerial Identities in the UK Public Service. *Organization Studies*, 26 (5): 683-706.
- Thomas, R. and Linstead, A. (2002): 'Losing the Plot? Middle Managers and Identity'. *Organization*, 9 (1): 71-93.

- Thurlow, A. (2007): *Meaningful Change. Making sense of the discourse of the language of change*. Ph.D. thesis: Halifax, Saint Mary's University.
- Tiainen, T. (2002): *Information system specialist predispositions*. Ph.D. thesis: Tampere, University of Tampere.
- Toffler, A. (1970): *Future Shock*. London: Bodley Head.
- Tsoukas, H. (2005): Afterword: why language matters in the analysis of organizational change. *Journal of Organizational Change Management*, 18 (1), 96-104.
- Tsoukas, R. and Chia, R. (2002): On Organizational Becoming: Rethinking Organizational Change. *Organization Science*, 13(5): 567-82.
- Van de Ven, A. and Poole, L. R. (1995): Explaining Development and Change in Organizations. *Academy of Management Review*, 20(3), 510-540.
- Weber, R. (2004): The rhetoric of positivism versus interpretivism: A personal view. *MIS Quarterly*, 28(1) iii-xii.
- Weick, K. (1979): *The Social Psychology of Organizing* (2nd ed.). Reading, MA: Addison-Wesley.
- Weick, K. (1995): *Sensemaking in Organizations*. Thousand Oaks: Sage Publications.
- Weick, K. (2001): *Making sense of the organization*. Oxford: Blackwell Publishing
- Weick, K. E. and Quinn, R. E. (1999): Organizational change and development. *Annual Review of Psychology*, 50: 361-386.

Internet sources

- <http://www.tem.fi/index.phtml?l=enands=2069> (Finnish Ministry of Employment and the Economy, accessed August 26, 2010)
- http://www.tilastokeskus.fi/til/vtp/2009/vtp_2009_2010-03-01_tie_001_en.html (Statistics Finland, accessed October 12, 2010)
- http://www.tilastokeskus.fi/til/vtp/2009/vtp_2009_2010-07-15_tie_001_en.html (Statistics Finland, accessed October 12, 2010)

APPENDIX 1 INTERVIEW AGREEMENT

DOCTORAL THESIS ABOUT ORGANIZATIONAL RESTRUCTURINGS

The aim of my doctoral thesis is to explore product development processes during organizational restructurings in ICT companies. The research is carried out at the Swedish School of Economics and Business Administration. The project is financed by the funds at the Swedish School of Economics, KATAJA Graduate School and the fund of Marcus Wallenberg.

Beata Segercrantz

M.Soc.Sc., Researcher
 Swedish School of Economics and Business Administration
 Perhonkatu 6 B / P.O. Box 479, 00101 Helsinki
 E-mail: beata.segercrantz@hanken.fi
 Mobile: +358 (0)50 563 58 81

RESEARCH AGREEMENT

This is a research interview. The interview data is collected as well as used for research purposes and is confidential and anonymous.

This agreement has been made in two copies, one for the interviewee and one for the researcher.

Beata Segercrantz

Researcher

Interviewee

APPENDIX 2 INTERVIEW GUIDES

Phase 1A interview guide

Themes to discuss:

- Previous work experience and education
- Competencies, skills, expertise
- Company vision and goals
- Recruitment: own experiences and future needs
- Motivation, interests, ambitions
- Organizational culture
- Organizing and management

Phase 1B interview guide

Themes to discuss:

- Practical issues concerning the downsizing process
- Issues regarding the downsizing process: thoughts regarding the redundancies, positive experiences, negative experiences, suggestions for actions, coping strategies
- Practical issues regarding possible efforts to search for a new job
- Additional questions, comments and concerns

Phase 2 interview guide

Themes to discuss:

- Background information of the interviewee
- Company history, visions, atmosphere, culture and ways of organizing
- Job description and personal background in the company
- Organizational changes
- Personal experiences of the organizational changes
- Interaction during organizational changes (individual and group)
- Additional questions and comments

Phase 3 and phase 4 interview guide

A. Background information

- A1 Interview identification number:
- A2 Date:
- A3 Starting time:
- A4 Length of interview:
- A5 Place of interview:
- A6 Language:
- A7 Name of interviewee:
- A8 Organization:
- A9 Position:
- A10 Title:
- A11 Other comments:

B Organizations

- B1 Please, tell me in which organizations you have worked as a product developer and when.
- B2 What have you worked with before/beside that?

C Product development

- C1 What types of products have you developed and how many?
- C2 Please, describe how you experienced your first product development process.
- C3 Please, describe the most successful product development process you have participated in. (How did it begin and unfold? Which were your tasks? How did you experience this process?)
- C3A Please, describe your interaction with others and how your relationships developed over time in this process.
- C4 Please, describe the most unsuccessful product development process you have participated in. (How did it begin and unfold? Which were your tasks? How did you experience this process?)
- C4A Please, describe your interaction with others and how your relationships developed over time in this process.

D Organizational restructurings

- D1 While working in organization X, Y and Z, what have been the major organizational changes?
- (D2 Please, describe the most important organizational changes.)
- (D3A Please, describe times of rapid growth.)
- (D3B Please, describe times of downsizing.)

E Organizational restructurings and product development

- E1 Please describe how the product development processes unfolded during the organizational restructuring you just described.
- E2A Please, describe your interaction with others and how your relationships developed over time in the product development process during rapid growth.

E2B Please, describe your interaction with others and how your relationships developed over time in the product development process during downsizing.

F Future

F1 What does your future as a product developer look like?

H Additional questions and comments

A2 Additional background information

A12 Age:

13 Sex:

Female

Male

A14 Highest education:

Less than high school

Finished high school

Finished vocational school

Finished vocational high school

Finished Bachelor's degree

Finished Master's degree

Finished Licentiate degree

Finished Doctoral degree

Other _____

A15 Ethnic background:

A 16 Domestic situation:

A17A Economic responsibility for someone:

A17 B Economic responsibility by someone:

A18 Finishing time:

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