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Beata Segercrantz

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PRODUCT DEVELOPMENT DURING
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Constructing Stability in Software Product Development during Organizational Restructurings

Key words: product development, organizational restructurings, stability, discourse

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Constructing stability in software product development during organizational restructurings

Beata Segercrantz

Abstract

We all have fresh in our memory what happened to the IT sector only a few years ago when the IT-bubble burst. The upswing of productivity in this sector slowed down, investors lost large investments, many found themselves looking for a new job, and countless dreams fell apart.

Product developers in the IT sector have experienced a large number of organizational restructurings since the IT boom, including rapid growth, downsizing processes, and structural reforms. Organizational restructurings seem to be a complex and continuous phenomenon people in this sector have to deal with. How do software product developers retrospectively construct their work in relation to organizational restructurings? How do organizational restructurings bring about specific social processes in product development? This working paper focuses on these questions. The overall aim is to develop an understanding of how software product developers construct their work during organizational restructurings.

The theoretical frame of reference is based on a social constructionist approach and discourse analysis. This approach offers more or less radical and critical alternatives to mainstream organizational theory. Writings from this perspective attempt to investigate and understand sociocultural processes by which various realities are created. Therefore these studies aim at showing how people participate in constituting the social world (Gergen & Thatchenkery, 1996); knowledge of the world is seen to be constructed between people in daily interaction, in which language plays a central role. This means that interaction, especially the ways of talking and writing about product development during organizational restructurings, become the target of concern.

This study consists of 25 in-depth interviews following a pilot study based on 57 semi-structured interviews. In this working paper I analyze 9 in-depth interviews. The interviews were conducted in eight IT firms. The analysis explores how discourses are constructed and function, as well as the consequences that follow from different discourses. The analysis shows that even though the product developers have experienced many organizational restructurings, some of which have been far-reaching, their accounts build strongly on a stability discourse. According to this discourse product development is, perhaps surprisingly, not influenced to a great extent by organizational restructurings. This does not mean that product development is static. According to the social constructionist approach, product development is constantly being reproduced and maintained in ongoing processes. In other words stable effects are also ongoing achievements and these are of particular interest in this study. The product developers maintain rather than change the product development through ongoing processes of construction, even when they experience continuous extensive organizational restructurings. The discourse of stability exists alongside other discourses, some which contradict each other. Together they direct product

development and generate meanings. The product developers consequently take an active role in the construction of their work during organizational restructurings. When doing this they also negotiate credible positions for themselves.

Keywords: *product development, organizational restructurings, stability, discourse*

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1. Introduction

In this working paper I present my ongoing work on social processes in product development during organizational restructurings in IT companies. This is a part of my Ph.D. project, which began as a result of some experiences in an IT firm in which I worked as Human Resource Manager. While working for nine months in this organization I experienced both a period of rapid growth and a downsizing process, followed by bankruptcy in the company. I conducted 29 semi-structured interviews with the employees during the period of rapid growth and 28 interviews during the downsizing process. These experiences and interviews raised many interesting questions and therefore I began my doctoral studies while I was doing the second round of interviews. In my ongoing Ph.D. project, I take a closer look at issues which arose in the analysis of the interviews.

In my Ph.D. project I explore product development during organizational restructurings in IT firms. The objective is to examine social aspects of product development, for instance, how work is understood by product developers during organizational restructurings.¹ The study is conducted in the IT industry, which is an appropriate context to study organizational restructurings in, as many organizations and product developers in this field have repeatedly faced changes since the IT boom. The IT firms studied mainly develop software solutions for public and privately owned organizations. The organizational restructurings studied are limited to rapid growth, downsizing, and structural reforms, as these are the organizational restructurings the interviewees have brought up in the interviews.

The theoretical frame of reference and the methodology are based on social constructionism and discourse analysis to attempt to develop explanations that are difficult to explore with mainstream theories on social processes. This approach

¹ In this study I focus on social aspects of software product development, which are assumed to be constructed in relation to, for example, technical aspects of product development.

facilitates the analysis of stories, which sometimes are diverse, fragmented or incoherent and therefore not easily analyzed with mainstream, rationalistic approaches.

In this working paper I first outline the theoretical frame of reference and the methodology. Then I describe my interview material and present the results of the analysis of nine interviews. These results open up interesting alternatives for future analysis of 16 further interviews.

1.1 Aim

In line with the over all aim of my Ph.D. project, the aim of this working paper is to develop an understanding of how software product developers construct their work during organizational restructurings. Therefore I explore the following questions:

- How do software product developers retrospectively construct their work in relation to organizational restructurings?
- How do organizational restructurings bring about specific processes in product development?

2. A social constructionist approach to organizational restructurings

Much mainstream organization studies have viewed organizations and individuals as rather independent entities, which are thought of as having content specific characteristics, for example, attitudes and structures (see Hosking 1999, 2000). The focus of these mainstream studies is on what goes on between these independent entities (individuals and organizations). An entity, for instance a knowing person, is hence defined as the subject. S/he is independent of others. The other is viewed as passive and only knowable and changeable by the subject or knowing person. The subject is active in the relations with the other in gaining influence or knowledge about her/him. For example a leader may be seen as a subject who motivates employees. The focus of

many mainstream studies is often thus defined only from the subject's point of view. Therefore, relations, knowledge and influence are seen as instrumental for the subject's understanding of order (Dachler & Hosking, 1995).

In contradiction to the described mainstream understanding of relationships, for example, between leaders and subordinates, we can explore alternative ways of looking at relations in organizations. To do this I adopt a social constructionist approach and, in line with this perspective, discourse analysis. In the remaining part of this section I elaborate on how this can be done.

According to Berger and Luckmann (1966), reality is socially constructed and they analyze the *processes* in and through which the construction occurs. People are considered to together create and maintain all social phenomena through social processes. This leads us to focus on both the empirical variety of knowledge in human societies and the processes by which societies socially establish knowledge as reality. Therefore, we must pay attention to what is viewed as knowledge in a society and seek to understand the processes by which knowledge is developed, transmitted and maintained.

The general approach of Berger and Luckmann (1966) has been further developed in a great number of social constructionist studies, but there is no one feature, by which a social constructionist approach can be defined. According to Burr (1995, 2-8), however, there are a few assumptions, which are central in most social constructionist studies. Let us take a closer look at them. If reality is socially constructed in daily interaction between people, as Berger and Luckmann (1966) suggest, then, for example, members of an organization construct the organization through their actions and interpretations; organizations are thus a social construction that varies from context to context (Czarniawska 2005, 16). Consequently Burr (1995, 5) explains that there cannot exist a determined or fixed nature of the world and people. In other words, there is no simple, definable, and discoverable nature of organizational or individual characteristics. However, many mainstream organization studies are not based on such an assumption and thus assume, in contradiction to the social constructionist approach, that

organizations are built on independent entities with specific characteristics. This implies that organizations exist regardless of organizational members.

Furthermore, Burr (1995, 6) argues that knowledge is always developed through looking at the world from some perspective and hence knowledge is not a direct perception of reality. Instead we all construct our versions of reality in interaction with each other. Gergen (1973, 309) explains that as we construct social reality, the concepts and categories we use in everyday life are primarily reflections of contemporary history and culture. Organization theory is then also time and culture bound and does not produce once-and-for-all descriptions of human nature.

Additionally, language plays a central role in social constructionist thought. According to Gergen and Thatchenkery (1996), language is not a by-product of organizational interaction or a representation of the rational mind of an individual. Burr (1995, 6-7) suggests that language is a pre-condition for thought and is reproduced constantly by those who share a culture and language. When the world is constructed through interaction between people, we can view language as not merely a tool for expressing ourselves; it is a form of action that constructs the world.

Following the social constructionist assumptions outlined above, the main focus of social constructionist studies is on social processes and the interaction between people in contradiction to mainstream organization studies. Many mainstream studies favour explanations of organizational phenomena that can be found in organizational or individual characteristics, for example, economic structures or attitudes, not in interaction and social practices. Social constructionist studies explore how certain knowledge or phenomena are achieved in interaction. The focus must then be on processes, not structures. (Burr 1995, 7-8.)

2.1 Product development and organizational restructurings as social practices

The mainstream view of people and organizations, as independent entities, is also reflected in many studies of organizational restructurings. Some studies focus on individuals and changing individual characteristics, while others focus on organizations and environments and their characteristics. Organizational restructurings are viewed as planned and achieved through changed organizational characteristics to meet the demands of the environment. (Hosking 2004.)

Dissatisfaction with this view on organizational restructurings has led many researchers to examine organizational restructurings in alternative ways (Anderson 2005). In contradiction to mainstream organization studies we can then theorize about organizations and their members as arising in ongoing processes of interaction in line with social constructionism (Hosking 2004). Therefore our view on organizational restructuring changes radically as our attention is turned away from entities with characteristics to social processes.

In more detail this means that we view persons (product developers) and organizations as social realities which are constructed, maintained and changed through relational processes and always exist in relation to each other. Mead (1934) argues that “self” is constructed in relation to someone else (“other”) in relational processes which is why “self” and “other” only exist in relation to each other. Hosking (2004) explains that “self” and “other” are two sides of the same coin. She continues, if we no more focus on entities and characteristics, the focus is also turned away from specific or fixed persons and organizations. Instead, we study construction and reconstruction processes of social realities and relationships. We can leave aside questions concerning individual or organizational characteristics, which influence change and product development. We can now view organizational restructurings and product development as ongoing relational processes. The focus of my study is therefore on processes and how they

construct, reproduce and change product development as a social reality during organizational restructurings. (Hosking 2004.)

To sum up this section, continuous transformation is the normal condition of organizational life, not the exception (Tsoukas & Chia 2002, 567; Czarniawska 2005, 15). This means that organizations and product development change continuously, not only during organizational restructurings. Likewise, this study examines continuous transformations during rapid growth, downsizing processes, and structural reforms. Consequently, I focus on how organizations and product development became what they are by exploring how product developers retrospectively construct knowledge of the social world during organizational restructurings. The retrospective constructions are not to be seen as illustrations of product development during organizational restructurings, but as examples from the data itself.

2.2 Studying discourse in organizational restructurings

The analysis of this study is based on discourse analysis in line with the social constructionist approach described. According to Silverman (2001, 178), discourse analysis studies are rather heterogeneous and hence difficult to define. In this section I therefore explain how I have adopted discourse analysis.

As I have already argued, according to social constructionism and discourse analysis, reality during organizational restructurings is socially constructed in daily interaction between people. Following this assumption, the aim of discourse analysis cannot be to find a determined or fixed nature of organizational or individual characteristics. Therefore the focus of the analysis in this study is not on discovering “accurate truths” beyond the interview material but to treat the transcripts and other social texts in their own right. Potter and Wetherell (1987, 160) write:

Participants' discourse or social texts are approached in their own right and not as a secondary route to things 'beyond' the text like attitudes, events or cognitive processes. Discourse is treated as a potent, action-oriented medium, not a transparent information channel ... The concern is exclusively with the talk itself and how it can be read.

According to Potter and Wetherell (1987), discourse analysis cannot be treated as a traditional method like, for example, an experimental method or content analysis. Instead this framework deals with the role of discourse in social life, as well as giving a number of proposals for appropriate ways of studying discourse, which should ensure to production of convincing findings of good quality. The practical skills and methods needed when analyzing data develop, as one tries to make sense of interviews and other material.

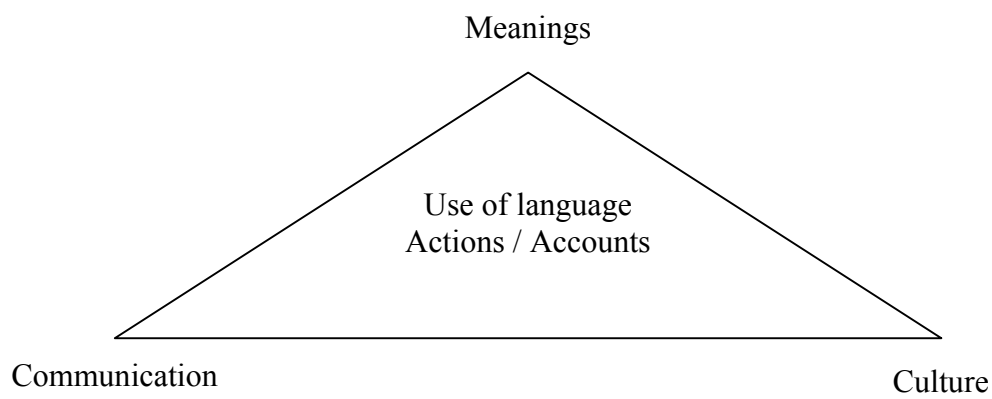
Lets us now take a more detailed look at how the concept of discourse is defined within this framework. According to Suoninen (1999, 17), the focus of discourse analysis is on language processes. Language is viewed as action, which is produced in social practices and thus constructs the social reality. Gergen (1999, 62) explains that language is the central means by which the organizational members, like other social actors, carry on their work, carrying the past into the present to create the future. This process of construction of meaning helps the members to make sense of everyday life during organizational restructurings (Jokinen 1999, 39-40). Therefore the ways of talking and writing about organizational restructurings become the target of concern (Gergen 1999, 62). By interacting individuals construct meanings in various groups and consequently construct discourses.

According to Burr (1995, 48), discourses can be referred to as sets of meanings, stories, representations or metaphors, which together produce particular versions of events for instance during an organizational restructuring. Discourses gain different meanings depending on in which context they are used and by whom. In the context of this study, the shared discourses are assumed to either produce or exclude social actions by product developers. In the next section I describe in detail how discourses are approached and analyzed in this study.

2.3 Level of analysis

When defining the focus and level of analysis, I apply the framework on different dimensions of texts in Figure 1, which was developed by Jokinen and Juhila (1999, 54-97). They argue that the core of discourse analysis can be seen as a triangle consisting of (1) meanings, (2) communication, and (3) culture.

FIGURE 1: The framework of discourse analysis



(Jokinen & Juhila 1999, 55)

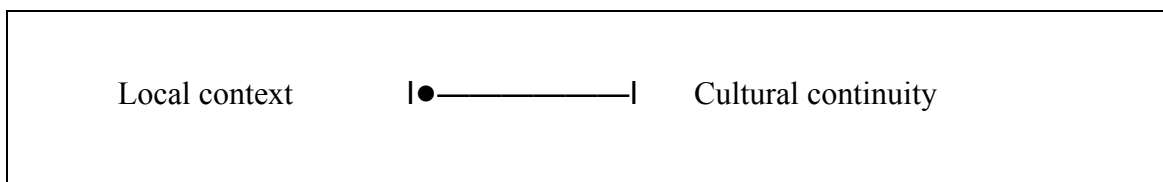
Discourse analysis research is based on the whole triangle and therefore one needs to take into account all three points as they are seen as inseparable. Hence, in discourse analysis the focus is not on any meaning, but on cultural meanings, that is the collective and social construction of reality. The cultural meanings are found in the interaction and communication between people.

There is a great variety of different kinds of discourse analysis studies. To explore the triangle above, Jokinen and Juhila (1999) analyze these differences by highlighting central methodological dimensions that are present in different studies. Each dimension is perceived in terms of distance. In every study based on discourse analysis both ends of the dimensions are present, but the study can rely more on one of the ends or be in the middle. The focus may also vary during the study. The dimensions are summarized in Figure 2.

FIGURE 2: Dimensions of discourse analysis (Jokinen & Juhila 1999, 55)

Local context	—————	Cultural continuity
Meanings	—————	Process of meaning-making
Rhetorical studies	—————	Responsive studies
Critical discourse analysis	—————	Analytical discourse analysis

In the analysis I use the dimensions to explore how to adopt discourse analysis in analyzing my interview material. The study of meanings is always connected to the **local context** that construct the meanings and therefore the construction of meanings are viewed as “here and now” actions. At the same time the construction process is also more or less connected to general cultural meanings, processes of meaning-making and language practices. Therefore it is of importance in each study to reflect on how to approach the simultaneous presence of the local context and **the cultural continuity**. In the analysis of this study I focus on the local context in which meaning is constructed. The dot in Figure 3 shows where on the dimension my study is situated.

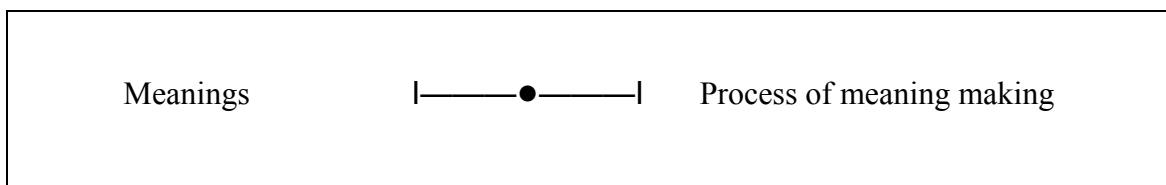
FIGURE 3: Local context and cultural continuity in discourse analysis

The cultural continuity is left aside during the analysis but can be brought up in the discussion and conclusions after an analysis. The choice of emphasizing the local context and not the cultural continuity in the process of analysis has consequences. The aim is not to analyze the actual cultural continuity and the interview material is not contextualized before the analysis. My main research interest is limited to the gathered interview material and the focus is on being sensitive to anything that arises from it in the analysis. The interview material is not framed in a strict manner for example by an

external (explaining) theory, to enable the possibility to be sensitive to surprises and to the richness of the texts. If a phenomenon is approached by looking at it with categories or explanations defined in advance, there is a danger that the phenomenon of the study disappears. This is why the broader context outside the data is described only to the extent that is necessary to help the reader understand the analysis. After the analysis the results may be related to a broader context concerning institutional and cultural limitations. In other words, I do not want to define product development processes, for instance, in advance, since this is the target of concern in my study. The aim is to develop an understanding of product development processes throughout the study.

The second dimension concerns the relationship between **meanings** and **meaning-making processes**. Studies, which explore meaning are usually based on “what questions” and focus on the content in the analysis of texts. In other words the research interest is on what kinds of meanings people produce when talking or writing. However, questions that aim at answering “how questions” explore those language practices by which people construct meaning. Meanings and the practices through which they are produced are always connected to each other, despite the main emphasis on meanings or processes. Therefore this dimension helps us to make an analytical separation between meanings and the productions of them, as well as making us aware of what we analyze. This study explores both meanings and the process of meaning-making and therefore I have placed my study as a dot in the middle of the dimension.

FIGURE 4: Meanings and the process of meaning making

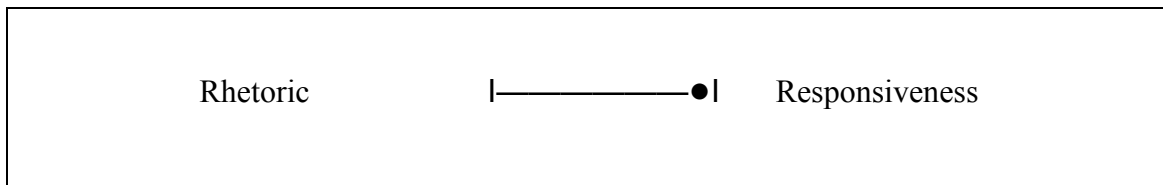


The analysis focus on how product developers use language to talk about product development and organizational restructurings. By using language product developers not only describe things, they construct meaning concerning the reality of product development and organizational restructurings. They do this in a number of different

ways, in different contexts, by explaining their actions in their accounts. In the analysis I also pay attention to the content of the accounts product developers give to their work during organizational restructurings.

The third dimension deals with accounts as **rhetorical** and **responsive**. Both analyses of rhetorical and responsive accounts help us to explore “how questions”: how meaning is constructed. Hence, this dimension is connected to the previous one. Analyses of rhetorical accounts aim at understanding how a specific meaning or social reality is being presented in a convincing way to convince an audience to accept it. Analyses of responsive accounts focus on how different parties in a discussion react to each others’ accounts and together construct specific meanings and social realities. Thus both dimension helps us understand interactive language usage, but in different ways. Both rhetorical and responsive aspects can be present in the same study. In the analysis of my interview material I mainly focus on responsive accounts and hence I have placed a dot in Figure 5 in one end of the dimension to clarify my focus.

FIGURE 5: Rhetoric and responsive accounts in discourse analysis



Product development and organizational restructuring are not studied as such, consisting of for example structures and characteristics. They are studied as being constructed, maintained and developed in the interaction in the interview situation. Therefore it is of interest to see how the interviewees and I respond to each others’ accounts and build social realities of product development during organizational restructuring.

The fourth dimension concerns the role of discourse analysis in scientific discussions. According to the discourse analysis perspective, research is seen as one voice amongst many others. The aim of studies based on discourse analysis is to open up new discussions, rather than closing them by offering universal explanations of reality. Following this, we need to consider, which discussion we want to participate in with a

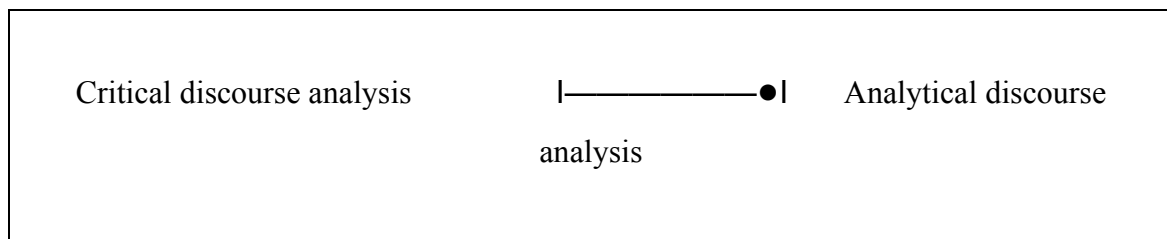
specific study. A study can then be placed on a dimension between **critical** or **analytical** discourse analyses.

The starting point of a critical discourse analysis is usually an assumption of existing relationships of domination, to explore the language practices by which these relations are maintained and justified. In many critical studies, discourse analysis is not only used as a methodology, but also as a means for achieving political goals, for example when a study shows the existence of relationships of domination, the goal may be to change these conditions.

The research interest of analytical discourse analysis is in the data. The aim of the research is to be as open as possible to the data and various meanings arising from it. Therefore, there are no assumptions made about the existence or nature of for instance relationships of domination as in critical discourse analysis. However, after the analysis the researcher may discuss how particular conditions have been constructed.

Critical and analytical discourse analyses do not necessarily exclude each other. In some critical discourse analyses the aim is to be as open as possible to the data and let results, which contradict the assumptions made in the beginning of the study, arise. On the other hand, it is possible that an analytical discourse analysis becomes a critical study, if the study produces critical results. Hence, these results do not just construct a version of reality, but also deconstruct and reconstruct it. My study is an analytical discourse analysis as shown with a dot in Figure 6.

FIGURE 6: Critical and analytical discourse analysis



The analysis is not based on any formulated assumptions about the phenomena studied. Therefore, my aim is to be as open as possible to different constructions of product

development during organizational restructurings. In the analysis I explore explicit constructions of product development; texts in which the interviewees explicitly talk about product development during organizational restructurings. However the analysis also examines implicit constructions of reality. In other words, I analyze how product developers for example negotiate credible positions for themselves by applying various accounts, even when they are not explicitly asked to do so.

2.4 The interview material

I conducted the interviews, on which this study is based, during four different phases. First, I made a pilot study consisting of 57 semi-structured interviews. Based on these interviews as well as on 3 in-depth interviews I then formulated the objectives of my Ph.D. project. Finally, I conducted 22 in-depth interviews during two phases, which form the main source of information in the empirical part of my Ph.D. project. Below I describe the collection of this interview material in more detail.

Phase 1 (12.-23.3.2001 and 16.10.-4.12.2001)

While working in an IT firm (organization A) I conducted 57 semi-structured interviews with nearly all employees from the product development, sales, marketing and administration departments. 29 of these interviews were made during the period of rapid growth. Mainly the same persons were interviewed again when I conducted 28 interviews during a downsizing process. These interviews are the inspiration for my doctoral thesis.

Phase 2 (2002-2003)

During the second phase of the data collection I conducted 3 in-depth interviews. The aim was reflect on the results from the first phase and prepare questions for the main interview phases.

Phase 3 (13.10.-15.12.2004)

As a result of an analysis of the interviews made in phase 2, I narrowed down the focus of my study to product development during restructurings (rapid growth, downsizing, and structural reforms). Therefore six core product developers, who already had been interviewed twice during the first interview phase in organization A, were interviewed. Thus I have interviewed these persons three times. When the last interviews were conducted they worked in five different IT firms.

Phase 4 (21.1.-24.3.2005)

To explore further product development, another 16 in-depth interviews were conducted with co-workers (product developers) of three of the product developers interviewed in phase 3. The same questions were asked as in phase 3.

The selection of the interviewees was made step by step as the study went on and the objectives and limitations were formulated. The interviews that I conducted in phase one can be seen as a pilot study, which was a part of my tasks as Human Resource Manager in the organization and therefore all members of the organization were selected to be interviewed. In the second interview phase I interviewed one person from this IT firm (organization A) and two persons from another IT firm (organization B) with a similar history as organization A, to reflect on the results from the first phase and to develop questions for the third and fourth phase. An analysis of these three interviews helped me to formulate the final research questions of my Ph.D. project, which I limited to product development during organizational restructurings. To gather longitudinal interview data I interviewed the core product developers in organization A a third time. After this I also interviewed 16 of their co-workers (also product developers) to get more depth in my study.

As we can see below in Table 1, the selection of interviewees creates several future possibilities for the analysis of the interview material, which would not have been possible with a random selection. Phases 1 and 3 gives me the possibility to analyze six product developers' accounts at three different points of time. Phases 3 and 4 give me the possibility to analyze the interviews as a whole or based on the different

organizations. I also have the possibility to analyze the product developers, who worked in organization A as against their new co-workers. This research design contributes with a number of interesting possibilities for the analysis, which will be developed in the future.

TABLE 1: The interview material

PHASE	DATA	INTERVIEWEES	RESEARCH POSSIBILITIES	TIMETABLE
1a	29 semi-structured interviews (rapid growth)	Sales 3 Marketing 9 Product dev. 15 Administration 2	-analysis of phases 1a and 1b separately -analysis of product developers against other interviewees	12.-23.3.2001
1b	28 semi-structured interviews (downsizing)	Sales 7 Marketing 4 Product dev. 14 Administration 3		16.10.-4.12.2001
2	3 interviews	Management 2 Marketing 1		2002-2003
3	6 interviews	Product dev. 6 (also interviewed twice in phase 1)	-analysis of product developers in phases 1a, 1b and 3	13.10.-15.12.2004
4	16 interviews	Product dev. 16 (co-workers of 3 product developers interviewed in phase 1 and 3)	-analysis of product developers as one group or/and per organization -analysis of interviews with product developers (from phase 1 and 3) against their co-workers (phase 4)	21.1.-24.3.2005

As a result of the selection of interviewees, eight IT firms participated in the study. The smallest organization employed 2 persons and the largest had over 500 employees. All firms were privately owned and developed and/or implemented software solutions for private and public organizations. However, the interviewees were asked to talk about all organizational restructurings they had experienced, including those at former employers. Therefore the data includes accounts about many more organizations.

According to Silverman (2001, 300-301), qualitative researchers should focus on studying phenomena that organizational members find unremarkable. Therefore researchers should avoid newsworthy studies with the aim of revealing hidden issues. The results from studies of “the unremarkable” can still be “new” without being “newsworthy”. Following this argument I have conducted interviews, which emphasized ordinary, daily conversations on product development and organizational restructurings. My intentions were not to explore exceptional or unique organizational restructurings. Instead my aim was to contribute with a better understanding of the daily product development work during organizational restructurings.

Phases 3 and 4 form the main data in my Ph.D. project. In the interviews of these phases I focused on product development and organizational restructurings. First, I asked the interviewees to talk about their first as well as the most successful and unsuccessful product development process. Then, we moved on to talk about the most important organizational restructurings the interviewees had experienced; I wanted them to define various meaning of organizational restructurings. Finally, I asked how they had experienced product development during the organizational restructurings. In other words the interviewees were asked to reconstruct their work in relation to organizational restructurings.

In line with my theoretical frame of reference, I was also, as the interviewer, an active participant in the process of constructing the interview material. I participated in the interview, asked questions and directed discussion to some extent. In other words, I have both produced and analyzed the data of my study. Therefore my role in the interview can be seen as active.

The in-depth interviews took between 40 minutes and two hours. The average interview lasted for 65 minutes. All these in-depth interviews were recorded and transcribed in detail. The interviews in the pilot study were not recorded, but I made notes during the interviews, and then wrote summaries based on the notes and my observations. During most interviews, we spoke the first language of the interviewee, Finnish or Swedish. A few interviews were conducted in English.

2.5 On conducting the analysis

In this section I describe how the analysis was conducted in practice. I also include my personal experiences of this process. The first step of my data analysis was to transcribe the interviews in detail, which resulted in 962 transcribed pages (1.5 line spacing). To be able to manage such a mountain of interview material this working paper is limited to nine interviews in order to open up interesting topics for an analysis of 16 further interviews later on in my Ph.D. project.

When the interviews had been transcribed, the next step was to code the interviews according to different themes in NVivo. As Wetherell and Potter (1987, 167) point out the coding is strongly related to the research questions. However, they continue that the specific phenomenon of interest might not become evident until the analysis has been started. This has been the case in the analysis of my interview material and therefore the process was cyclical; I have moved back and forth between the coding and the analysis. The aim of the coding was to organize the transcriptions into manageable parts or categories.

In the actual analysis I began exploring the accounts of five core product developers who has been apart of this study from the beginning. I then continued by analyzing four co-workers of one of the five core product developers. The analysis itself meant that I had to begin reading and re-reading the transcribed interviews. This involved exploring similarities and differences, consistency and variations, as well as looking at the full range of accounts. Potter and Wetherell (1987, 175) claim that texts which are analyzed based on discourse analysis often at first sight seem to make perfect, consistent sense. This was the case in my study; at first glance the interview material even seemed to be so consistent that there were no interesting phenomena to be explored. The interviewees' accounts dealt with undramatic daily routines, challenges and problems within product development.

Potter and Wetherell (1987, 176) continue, however, by pointing out that “in the later stages of the analysis the same discourse can seem so fragmented and contradictory that it is difficult to see how it could be taken as sensible in the first place”. This statement also fits with my experiences of analyzing my data. After countless re-readings of the interviews the consistency in the interviews was replaced with accounts filled with diversity as well as contradictions. At times it even seemed impossible to make sense of them. However, discourse analysis enables constructions of patterns of variations as well as consistency and thus enriches our understanding of social phenomena by offering wide and hence interesting explanations. As the analysis went on, I began to see a number of themes that could be connected to each other, which led me to the construction of the first discourse in this study. This working paper is limited to the accounts that construct this discourse and the themes that maintain it. There are many other themes and discourses in the analyzed material, but these are to be examined in future analyses.

2.6 Results

In this section I discuss the results of the analysis of nine interviews. I describe one specific discourse and how it has been constructed. In other words I show how a discourse is produced by product developers who base their accounts on a number of themes.

The analysis shows that the interviewees have experienced many organizational restructurings, some of which have had dramatic effects. The main organizational restructurings the product developers had experienced were rapid growth, downsizing processes and structural reforms. A period of rapid growth could, for instance, mean that the employees of a firm grew from 5 to 45 in two years, while a downsizing process could mean that 70 of 100 employees of an organization were dismissed. The structural reforms were in general less dramatic from the product developers’ point of view and refer to changes for example in the hierarchy or management of a firm.

Even though the product developers have experienced many organizational restructurings with extensive effects as described above, their accounts strongly build on a stability discourse, which is produced in all analyzed interviews. According to the stability discourse, product development is not influenced to a great extent by organizational restructurings. When the product developers construct the stability discourse in the interviews, they do this by basing their accounts on various themes. Therefore the stability discourse is built on different themes; the themes define the stability discourse. The meanings of the themes may vary or even contradict each other, but what they have in common is that they all bring forward product development during organizational restructurings as stable.

Before we take a closer look at the themes, I would like to address two aspects of the themes. First, some of the themes contribute to the construct of stability during organizational restructurings by highlighting issues concerning the content of product development. By constructing, for example, the product or the organization in specific ways during organizational restructurings product developers can achieve stability in their work. Second, other themes highlight how product developers position themselves in the context of organizational restructurings. This means that in some themes product developer position themselves in such ways that their work remains stable despite organizational restructurings. In short, product developers construct stability based on themes that concern the content of product development or by positioning themselves in different ways. However, there are also situations in which the positioning and contents of product development overlap each other for example when product developers' positioning have implications for how the content of product development is constructed.

To show how the stability discourse is constructed I have summarized all themes that produce this discourse in Table 2. Then I discuss the three first themes in more detail. Following this, the other themes are defined and illustrated with quotations in Table 3.

TABLE 2: Themes of the stability discourse**Themes of the stability discourse**

-
1. Tasks as a stabilizers
 2. Distancing from others
 3. Unity
 4. Belief in future success
 5. Taking organizational restructurings lightly
 6. Structural reforms without influence
 7. Live with it
-

According to the first theme, **tasks as stabilizers**, product developers construct themselves as very occupied and preoccupied with their work tasks. Hence they can maintain the product development work as stable during organizational restructurings. The main emphasis in this theme is on the work tasks, but this has implications on the positioning of the product developers who are constructed as hard-working individuals. In Extract 1 and Extract 2 we can see how two product developers (A and B) talk about their work tasks as stabilizers during organizational restructurings.

EXTRACT 1

BS²: How have you experienced your job and these processes during those organizational restructurings?

A: Oh then then

BS: How about that? Yes

A: to me it was quite, quite, if one only looks at it 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

BS: yes

A: 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 ...

² BS stands for my comments in the extracts.

EXTRACT 2

B: It was really that this core group was committed to work so that even if the walls started to fall down, the blokes 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 ... It [product development] is handcraft really.

In the Extract 1 and Extract 2 product developers are constructed as rather absorbed in their work. The strong focus on the working task maintains product development as unaffected by organizational restructurings.

The second theme that maintains the stability discourse is the **distancing theme**. The distancing theme is especially common during rapid growth and highlights how product developers distance themselves from others during organizational restructurings. This theme thus concerns the positioning of the product developers. They may distance themselves from customers or the management and other groups within the organization including other product development groups. By distancing themselves from others the product developers can focus on their work without feedback or inputs from others. Therefore the work routines are maintained as rather unaffected despite for example a period of rapid growth. Extract 3 shows one example of how the distancing theme is constructed.

EXTRACT 3

C: Usually the main hunch is, when one is carrying through such organizational restructurings, then at least temporarily the focus is lost. So then the product development continues on its own without feedback

BS: Mmm. Yes.

C: that is from any direction ...

In Extract 3 a distance is constructed between product developers and people they usually interact with. The product developers continue working in “isolation” from others during an organizational restructuring.

The third theme, the **unity theme** refers to the commitment by many interviewees to a team, organization and/or the management. Therefore the main focus is on the positioning of product developers. This theme is especially common in accounts on downsizing processes. As shown in Extract 4, downsizing processes are constructed as processes that unite product developers and hence in different ways help the product developers to continue working and to cope with organizational restructurings.

EXTRACT 4

D: It [the experience of a downsizing process] helps you to create friendships, as everyone

BS: yes

D: you get this shared warlike spirit³

BS: yes

D: that everyone is in the same boat and then you get support in that way

BS: Mmm

D: well, that it's not too bad if you lose your job

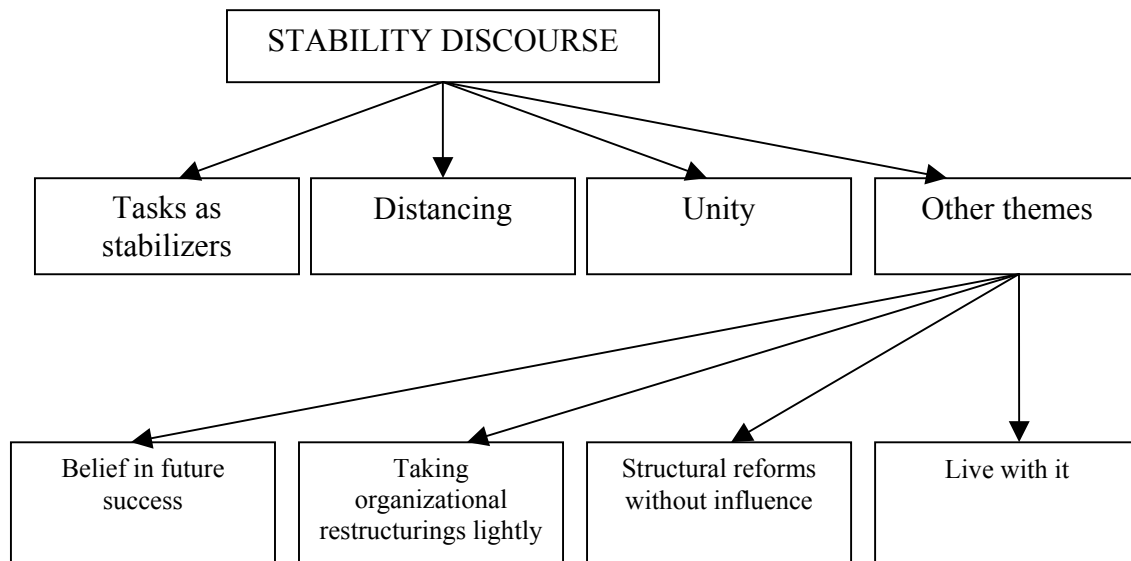
The three themes described above are the most central themes of the stability discourse in terms of how frequently they are used. In Table 3 I have listed and described the other themes, which also contribute to the construction of stability in product development during organizational restructurings even though they are not constructed as commonly. In Table 3 I explain the meaning of each theme and then illustrate them with quotations.

³ This extract has been translated from Finnish to English. I have translated the Finnish expression “taistelutoverimeininki” into “warlike spirit”.

TABLE 3: Description of themes of the stability discourse

THEME	MEANING	QUOTATIONS
Belief in future success	A strong belief in the potentials of a product to become successful in economical terms may maintain product development as unchanged.	<i>“For years you have worked on these big cases... one believes that they have great potential.”</i>
Taking organizational restructurings lightly	Product developers minimize the influence of organizational restructurings by considering for example a possible future dismissal as “harmless”.	<i>“Well, of course restructurings add some insecurity to on-going projects, but other than that, the effects are not in any way dramatic.”</i> <i>“Well, I’m sure it was useful, that one had... gone through that story [downsizing process and bankruptcy] before...even if you will be dismissed or you go bankrupt, it is not that bad in the end.”</i>
Structural reforms without influence	According to this theme structural reforms, for example unsuccessful managerial reforms, do not have any practical implications on the product development.	<i>“Even if we got a new boss, I think the same problems remained.”</i> <i>“... even if it was a big change regarding the organizational structure, it wasn’t on the other hand on the operational level.”</i>
Live with it	Repeated organizational restructurings have contributed to the construction of these restructurings as ever present, as occurrences one has to learn to live with, and in this process the influence of these restructurings is reduced.	<i>“...this is the kind of industry that they [continuous organizational restructurings] always are a part of ... Somehow you take it as such, but it wouldn’t necessarily need to be so, but nonetheless somehow you must get used to them.”</i>

All accounts on stability have been included in the analysis. As I have shown, they were organized into separate themes, which I then analyzed and described as in Figure 7.

FIGURE 7: The stability discourse

Many of the themes are closely connected to each other and they could therefore have been organized and combined in alternative ways in the analysis. This in turn could have given us other insights into product development during organizational restructurings. Instead of organizing the themes into categories, as in Figure 7, some of the themes could have been placed in the same category. For example, the ‘distancing’ and the ‘unity’ themes can be seen as being connected to each other. The construction of unity implies that one takes distance to something else and vice versa. Both themes illuminate the same issue, but the distancing theme is usually constructed in the context of rapid growth and the unity theme in the context of downsizing processes. The themes ‘tasks as stabilizers’ and ‘distancing’ could also for instance have been put in the same category. Product developers sometimes distance themselves from others by getting absorbed in their tasks during organizational restructurings.

As we can see there are several options to choose between in the analysis. In the analysis my purpose was to address different themes that produce the stability discourse. However, it is important to recognize that the themes are constructed in a context that link them together in various ways and this opens up many unexplored possibilities for future research, which I discuss in the conclusions.

3. Conclusions

In this final section I summarize this working paper and discuss some further issues regarding the study. In this working paper I have examined how social processes are constructed in software product development during organizational restructurings: How do software product developers retrospectively construct their work in relation to organizational restructurings? How do organizational restructurings bring about specific social processes in product development? To explore these questions I adopted a social constructionist approach and in line with this view discourse analysis. First, I elaborated on how this perspective can be adopted in studies on product development and organizational restructurings. I argued that reality is socially constructed and hence product development and organizational restructurings can be studied as social constructions. The focus of the study was therefore on how product development and organizations become what they are, how people construct knowledge of the social world during organizational restructurings. Finally, I then used this framework in the analysis of 9 interviews.

The analysis shows that the product developers interviewed have experienced many organizational restructurings. Several of the organizational restructurings have had dramatic effects in terms of, for example, the number of employed or dismissed product developers. Interestingly, the product developers' accounts on product development during organizational restructurings are still undramatic. The results suggest that the product developers interviewed build their accounts on a stability discourse. According to this discourse the work of the interviewees is not influenced to a great extent by organizational restructurings.

When we study the stability discourse in more detail, we see that this discourse is built on different themes. Thus the stability discourse is defined by these themes. For instance, according to the theme I have called 'distancing', product developers distance themselves from others and can therefore focus on their work without feedback or

inputs from others. Consequently the work routines are maintained as rather unaffected despite for example a period of rapid growth. Some of the themes touch upon contradicting issues, but still they all produce product development as stable during organizational restructurings. The variety of different themes helps us to see how the stability discourse is built.

If product development can be constructed as stable during extensive organizational restructurings, does this mean that product development is static? According to the social constructionist perspective this is not the case. Berger and Luckmann (1966) explain that reality is socially constructed and people are considered to together create and maintain all social phenomena through ongoing processes of interaction. Following this assumption product developers construct change and maintain different versions of their work during organizational restructurings in daily interaction within local contexts, which at same time are reflective of contemporary history and culture (Gergen 1973). The results of this working paper suggest that the product developers interviewed maintain rather than change their work despite extensive organizational restructurings. This is achieved through ongoing processes of construction; stable effects are then also ongoing achievements. In other words the analysis shows how the production of stability is an ongoing process of meaning making.

The construction of stability in product development during organizational restructurings is done retrospectively in the interviews. The accounts of the product developers interviewed can be seen as examples of stability constructions, not as illustrations of stability in general or once-and-for-all descriptions.

The most difficult methodological challenge in this working paper has been the time consuming analysis. Despite this challenge the benefits of the methodology were many. Discourse analysis, as an alternative to approach to the study of organizational restructurings, contributes with generating new insight concerning change (Grant & al. 2005, 9). As it has become apparent social constructionism and discourse analysis invite us to listen to a rich array of explanations, instead of trying to exclude “the false” and emerge with a single best account. I was able to consider the full range of accounts in

the interviews, by adopting a methodology which promote the analysis of accounts that are sometimes fragmented and contradictory, accounts that include variation and diversity but also for instance consistency. Our understanding of product development during organizational restructurings benefits from this.

The framework of discourse analysis puts emphasize on the context of a study, which proved to be a crucial point in the analysis of my study. Interestingly, taking the context into consideration helped us understand how contradictory accounts (for example ‘distancing’ and ‘unity’) can produce product development as stable during organizational restructurings. The analysis showed that accounts are always constructed in relation to various contexts, for instance, downsizing processes or rapid growth. However, in the analysis the context of the study was not seen to be causing stability. Rather the context and the stability accounts were seen as being dependent on each other. Consequently, meanings of stability accounts cannot be detached from their contexts. The contradictory accounts produced stability only when they were put into their contexts. This shows how language becomes meaningful only when it is attached to a context. (Wetherell & Potter 1992.)

Finally, let us consider issues for future analyses of my interview material. First, this working paper has contributed with broadening our understanding of product development by showing how stability can be achieved despite far-reaching organizational restructurings. The stability discourse is constructed in relation to other discourses, some which contradict each other. Together they direct product development and generate meaning. Therefore it would be interesting to contrast the stability discourse with accounts concerning for example instability and study how these are connected to each other.

Second, it is also of importance to examine how themes that construct a discourse can be read in various ways depending on how the themes are grouped in the analysis. How themes are related to each other may have consequences for the results of a study.

Third, the results of the analysis points out that the interviewees have experienced many organizational restructurings. There for it would be of interest to explore what it means when organizational restructurings are constantly present in the construction of product development, how repeated organizational restructurings become invisible and taken for granted parts of daily routines.

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