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The Process Movement.
A Critical Review

ABSTRACT

The recently (re)popularized process movement has its more or less evident progenitors in the quality movement and in the time-based movement. Altogether, an emphasis on horizontal processes that cut across traditional organizational functions could be argued to be common to all of these approaches. Compared with traditional post-war conceptualizations, processual approaches represent fundamentally different perspectives on organizations and strategy. Nowadays, managers are gradually beginning to perceive their organizations as portfolios of dynamic processes rather than static, vertically driven hierarchies. However, there is no consensus on how to approach business processes and related concepts either theoretically or in practice. One could argue that the discussion related to business processes, reengineering efforts, and the process organization still is at a quite premature stage. The major concepts and methodology related to the "process movement" clearly need to be further developed and refined. Unless alternative, more versatile approaches are created, the entire process idea will soon be labeled a passing fashion, a buzz word from the beginning of the 1990s. Moreover, we also need a better understanding of the meaning of business processes in contemporary interorganizational business. Are they really worth all the attention they have been receiving in the 1990s? Thus, there is an obvious need for a revisionist summary of the central tenets of the so called process movement. The purpose of this article is to aim at filling that gap by critically discussing the background, central concepts and ideology behind the process-oriented perspective.

Key words: *Business process, BPR, process organization*

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INTRODUCTION

During the last ten years, it has often been argued that increasing international competition on the one hand, and increasing intra- and interorganizational cooperation on the other, are gradually changing the structural forms of many companies to a considerable extent. Multi-level hierarchical organizational structures are being replaced with leaner, horizontally integrated network-like structures oriented towards the core competencies of the linked units. (Ghoshal and Bartlett 1990 and 1995, Bartlett and Ghoshal 1989, Prahalad and Hamel 1990 and 1993) This epochal shift to a new social condition with its own, distinct organization principles has often been referred to as a break from modernity to postmodernity[1] that calls for the social embeddedness of business organizations and all business activities (see e.g. Cova 1994, or Cova and Svanfeldt 1993). For an often cited account on postmodernity and its various implications on contemporary societies, see Bauman (1992). The philosophical and social changes often characterized as "postmodern" are increasingly considered the major traits of our times, demanding a drastically different view of the world than offered by "modern" organization or marketing theory (Cova 1994, 278–279). New approaches and theories based on different philosophical assumptions and perspectives are clearly needed in order to promote understanding of phenomena embedded in the more or less postmodern environment encountered in contemporary business contexts (cf. Alvesson and Willmott 1996).

Among other novel perspectives, there has lately been an increasing discussion revolving around the emerging concept of business processes among both academic researchers and practitioners in various fields of management. The theoretical discourse related to this so called "process movement" to business and organizations forms the conceptual basis of this article.

The process idea emphasizes the dominance of heterogeneous business-related organizational processes over traditional corporate structures. Traditionally defined, a business process consists of interrelated activities through which customer value is created within an organization (cf. Porter's value chain, 1980, 1985). The basic objective of process-oriented thinking is to create comprehensive business processes without interfaces from the suppliers to the customers (Hammer 1996, Osterloh and Frost 1996, Ghoshal and Bartlett 1995). At the beginning of the 1990s, process-oriented thinking emerged as a "process movement" in business and the academic world. This process movement can be directly linked to the concepts of business

1 In this article, I relate postmodernity to the current position in world history signifying the change of course of modernity or even its end, and postmodernism to the contemporary, critically oriented ways of describing and assessing societies and social phenomena (e.g. Venkatesh et al. 1993).
2 Henceforth, the term business process re-engineering (BPR) is used to refer to the radical renewal of organizational processes.

processes, business process re-engineering[2] or redesign (BPR), and the process organization. BPR is usually seen as a way to improve the effectiveness of business organizations through streamlining central organizational processes (Hammer 1990, Davenport and Short 1990, Hammer and Champy 1993, Hammer 1996). It may be viewed as one organizational response to the radical, "postmodern" changes in organizations' internal and external environments in recent years (Francis and Southern 1995, 110). BPR is most often perceived as a radical approach to the renewal of organizational processes, in contrast to the more conservative continuous process improvement (Stoddard et al. 1996). Moreover, some researchers have wanted to step a bit further from business process re-engineering and to define entire business organizations as mere collections or portfolios of core processes, i.e. interlinked chains of activities through which the companies' core competencies are realized (e.g. Osterloh and Frost 1996, Rühli et al. 1995, cf. Hammer 1996, chapt. 6). This kind of new organizational form is called the process organization. It is argued to be better capable of meeting the requirements for increasing efficiency, flexibility and innovativeness imposed by the changing societal context of contemporary business activities. The recent notion of business processes as the incorporations of organizations' core competencies forges an immediate link between the process movement and so called resource-oriented "competence-based competition theory" (for the latter, see e.g. Sanchez et al. 1996).

However, there is no consensus on how to approach business processes and related concepts either theoretically or in practice (see e.g. Archer and Bowker 1995, Van Landeghem and Pyis 1996). There has been constant debate on appropriate BPR methodology, i.e. how to effectively design and implement[3] business process reengineering in the organizational contexts of the processes to be altered (e.g. Stoddard et al. 1996). One could argue that the discussion related to business processes, reengineering efforts, and the process organization still remains at quite a premature stage. The major concepts and methodology related to the "process movement" clearly need to be further developed and refined. Unless alternative, more versatile approaches are created, the entire process idea will soon be labeled a passing fashion, a buzz word from the beginning of the 1990s. Moreover, we also need a more thorough understanding of the meaning of business processes in contemporary interorganizational business exchange[4]. Are they really worth all the attention they have been receiving in the 1990s? Thus, I perceive an obvious need for a revisionist summary of the central tenets of the so called

3 Following Stoddard et al. (1996, see also Archer and Bowker 1995), a BPR project is split in two phases: the design and the implementation phase.
4 By interorganizational (business) exchange, I refer here to the predominantly relational exchange between organizations in a business context, characterized by economic, social, legal, technical, informational and procedural bonds (cf. Möller 1994, 347).

process movement. The purpose of this article is to aim at filling that gap by critically[5] discussing the background, central concepts and ideology behind the process-oriented perspective.

BACKGROUND OF THE PROCESS MOVEMENT

The recently popularized process orientation to organizations' business activities is most often associated with the concepts of business processes and business process reengineering. In his seminal article, Hammer (1990) brought business processes and BPR to the attention of business practitioners and academicians by highlighting the use of information technology in redesigning existing organizational processes (also Davenport and Short 1990, Hammer and Champy 1993, for a recent update, see Hammer 1996). During the last few years, BPR seems to have permeated the repertoire of most large management consulting organizations, and has driven organization after organization throughout the world to pursuing BPR initiatives in one form or another (Stoddard et al. 1996, 57).

From the beginning of the century, the importance of organizational processes – activity chains within organizations – has been recognized from time to time. Mechanistic Taylorian management science is one example of an attempt to make business organizations' work processes more effective. After the Second World War, the "strategy – structure – systems" doctrine focused most management attention on the vertical relationships of classic hierarchical organizational structure. Vertically driven, financially oriented, authority-based processes dominated most companies' operations and paid little attention to horizontal processes that cut across intraorganizational boundaries. (Ghoshal and Bartlett 1995, 88)

The world-wide success of Japanese companies led to the emergence of Japanese principles in Western management literature during the 1980s. One could argue that this development, together with value chain analyses (Porter 1980, 1985), gradually brought horizontal business processes back to the focus of management attention (e.g. Juga 1996, Hannus 1993). For example, total quality management (TQM) was a horizontal process cutting across the boundaries separating organizational units in order to leverage quality in companies' products and activities (Ghoshal and Bartlett 1995, 89). More recent notions such as lean management (Womack et al. 1990) and time-based competition and management (Stalk and Hout 1990) also contain the same basic ideas. Finally, reengineering is aimed at showing companies how to organize functionally separated tasks into unified horizontal business processes creating value for customers.

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5 However, no explicit theoretical connection is made to critical theory (CT) as a metatheoretical frame of reference in management research (for an application of CT in management research, see e.g. Alvesson and Willmott 1996).

"*Through such experimentation, managers are beginning to deal with their organizations in some fundamentally different ways. Rather than seeing them as a hierarchy of static roles, they think of them as a portfolio of dynamic processes*" (Ghoshal and Bartlett 1995, 89). Ultimately, that kind of approach leads to the emergence of the process organization, a horizontally integrated collection of different kinds of processes in which the company's core competencies crystallize. Figure 1 summarizes the primary concepts in management literature that can be perceived as contibutors to the emergence of a process-oriented approach to organizations. These originate from two primary sources or schools of thought: the quality movement and the time-based movement. In the late 1980s/early 1990s, the above-mentioned schools could be argued to have formed a sort of synthesis, revolving around such concepts as lean management, activity-based management and, finally, business process reengineering. The main difference between the quality and the time-based movements on the one hand and business process reengineering on the other, is the latter's emphasis on radical, clean slate change
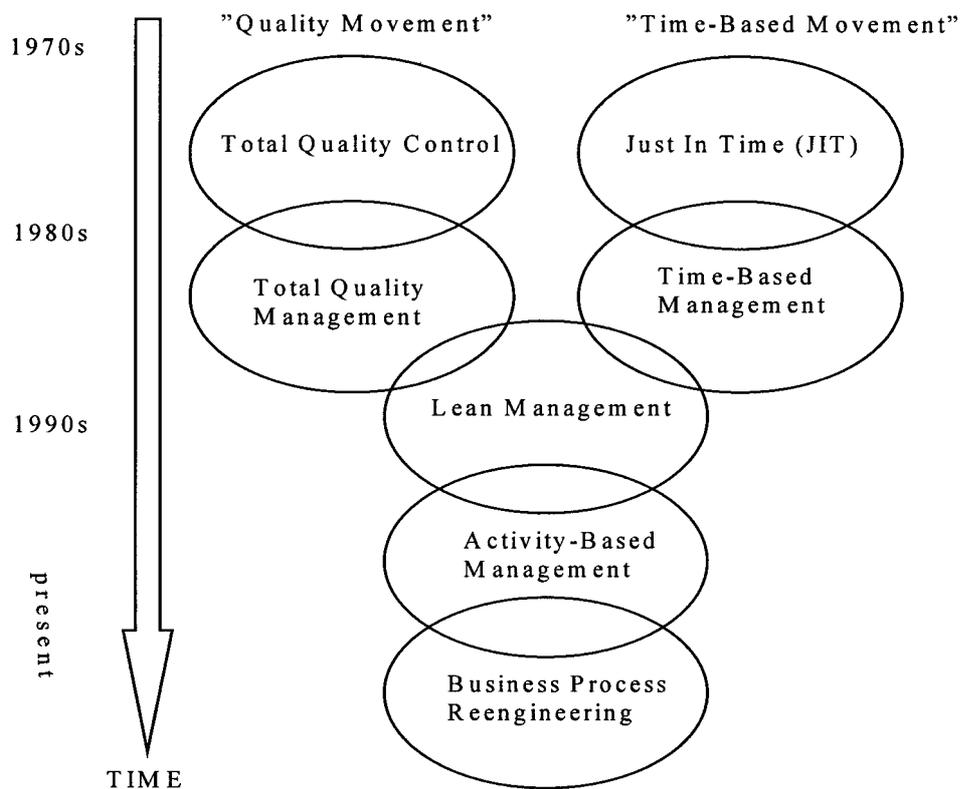

FIGURE 1. Core Concepts of the Process-oriented Approach to Organizations.

projects, whereas the former normally rely heavily on the gradual, countinuous improvement of existing processes (e.g. Hammer and Champy 1993, 49, Davenport 1993, 14–15, 25).

MAJOR CONCEPTS OF THE PROCESS MOVEMENT

Business Process

Davenport (1994, 134) has defined the concept of an organisational process as follows: "*A process is simply a structured set of activities designed to produce a specified output for a particular customer or market. It has a beginning, an end, and clearly identified inputs and outputs. A process is therefore a structure for action, for how work is done.*" Davenport's conceptualization is a good example of the this far dominant, more narrow and strict approach to business processes primarily based on value chain thinking. Archer and Bowker (1995, 32) represents a broader, less mechanistic approach: "*...the concept of business process... is the paradigmatic change in the way in which organizations are designed and subsequently managed. It represents a decisive movement away from the traditional functional concept, with its high emphasis on vertical differentiation and hierarchical control to a view which stresses horizontal integration across intra- and interorganizational functions.*" At first sight, the focus of the literature is upon business processes as flows of work and cost within and through an organization, cutting across the functional structures of the firm (Taylor 1995, 84, cf. Tinnilä's 1995 operational perspective on business processes). However, some recent contributions to the discussion on business processes have regarded them as much more than mere work and cost flows (Hammer 1996, Osterloh and Frost 1996, Rühli et al. 1996, cf. Ghoshal and Bartlett 1995). Moreover, they are seen as the means through which companies are able to realize their core competencies, i.e. what they really can perform, for the customers. Customers, suppliers and supporting horizontal organizations should be integrated in the organizational process configurations in order to leverage efficiency (doing things right) and effectiveness (doing right things) in companies' business (Osterloh and Frost 1996, 3–5, cf. Tinnilä's 1995 combined organizational and strategic perspectives to business processes). As stated in the introductory section of this article, the competence-based approach to business processes has an immediate link to the emergent discussion on organizations' strategic (core) competencies and capabilities sometimes called "competence-based competition theory" (e.g. Prahalad and Hamel 1990, Hamel and Prahalad 1993, Sanchez et al. 1996). Without entering into that discussion more thoroughly, my intention here is primarily to connect the competence idea to the concept of organizational capabilities realized through interaction within business relationships and networks (Håkansson and Snehota 1995, cf. Kirjavainen 1996, 320).

Business processes have been categorized in various ways (for a more thorough review, see e.g. Tinnilä 1997, chapter 2). For example, in Earl's (1993, also Earl and Khan 1994) categorization, four kinds of organizational process are identified according to their focus in the value chain and the structuredness of the process: core processes, support processes, business network processes and management processes. Earl's framework can be applied to the categorization of practically all interlinked chains of activities within an organization including, for example, order fulfillment, product development, marketing and selling, customer service, network creation and operations, procurement, facilities, systems, finance, human resources, regulation, and governance (cf. e.g. Stoddard et al. 1996, 59).

Core processes are processes central to actual business operations creating value for the customers. Thus, they usually involve direct links with external customers and involve various functions in the organization's value chain. Goodman (1995, 26–28) splits Earl's concept in two: end-to-end (complete) processes starting from customer needs and returning to the customer's processes in terms of a finished product, and partial (not end-to-end) processes containing only part of an end-to-end process. As stated above, Osterloh and Frost (1996, cf. Barney 1991, Armistead and Grant 1996) perceive core processes as the foci of an organization's core competencies. In other words, organizations' competencies are realized or made functional thorough interrelated chains of activities constituting the core (business) processes. Furthermore, *support processes* act as necessary supporting functions to other organizational processes, e.g. accounts payable can, in most cases, be viewed as a typical support process. They are always linked to an internal organizational customer or customers in need of them in performing core, business network or management processes. (Earl and Khan 1994, 21) *Business network processes* transcend organizational boundaries and connect organizations with their co-operative partners. They are usually linked closely to core or support processes. Organizations plan, implement and control the use of their resources through *management processes*, which typically focus on issues such as human resource management, strategic planning and budgeting, or financing. (Earl 1993, Earl and Khan 1994, 21) However, it is my opinion that business network processes and management processes actually could be viewed as integral parts of central core processes or relevant support processes. They might not need to be regarded as separate, distinct business process forms in most organizational contexts (cf. Hammer 1996).

The basic idea behind conceptualizing and categorizing business processes in organizations is to identify/design repeatable business processes that have enough elements of consistency (e.g. clearly identified inputs and outputs) to justify developing a common, "averaged" process for an organization (Stoddard et al. 1996, 66). However, these common processes do not necessarily have to appear similar to the customer. Tinnilä (1997, 8–11) uses the concept

of process divergence to refer to several internally rather similar or similar types of process serving customers with different types of service. In diverged processes, the service or interaction part is differentiated, but the internal (e.g. manufacturing) part may be almost identical in several processes serving various different customer segments. That is why the division between business and service processes is seen as necessary. The service process is defined as the specific part of a business process that has a customer interface (Tinnilä 1997, 10). Furthermore, Tinnilä (1997, 8) sees process divergence as one of the most important modes of differentiation and strategic repositioning in contemporary, open markets with fierce international competition and rapid technological development. While accepting Tinnilä's (1997) reasoning on the benefits of a certain degree of divergence as a source of differentiation, I do not agree with him on the necessity of subdividing business processes into service and other-than-service (e.g. manufacturing) parts. I do not automatically see e.g. production processes as the core processes of any manufacturing firms. In my opinion, "service" activities performed in interaction with the end-customer of the process can be analyzed in the same manner as further activities related to the process under investigation. However, the idea of process divergence in accordance with different customer segments, or, better, customer relationship portfolios can still be seen as very fruitful. Moreover, even important individual customer relationships might be identified as potential focal units for such differentiation efforts.

Business Process Re-engineering

As stated above, general interest in organizational business processes has resulted in efforts to design and implement new, streamlined business processes as radical renewal projects in organizations. For example, Stoddard et al. (1996) have defined BPR as a *cross-functional*, *business-process focused* initiative including *simultaneous change* in organization design, culture and information technology to enable *radical* (at least 50%) performance improvements. This definition appears to be in line with Archer and Bowker's (1995) findings about BPR definitions used in the consulting business. Words and phrases such as "a holistic view", "radical", "dramatic", "cross-functional", and "quality" kept popping up in a study of 98 consultancy companies in the USA and Europe as the companies were asked to define their approach to the concept of BPR (Archer and Bowker 1995, 31).

Several authors (e.g. Hammer and Champy 1993, Davenport 1993, Hannus 1993, Clemmer 1994, and Arnold et al. 1994) have perceived business process reengineering and continuous process improvement as opposite ends on a continuum of alternative forms of improving organizational business processes. The idea of continuously improved business processes has its origins in Japanese management philosophy, where the concept is called "kaizen" (e.g. Hannus 1993). However, there seems to be no objection to using both continuous improvement

and BPR at the same time in an organisation (Arnold et al. 1994, 95–96, Davenport 1993, 15). Davenport (1994, 138) argues that every organisation should develop its own formula for process improvements, whether radical, gradual, or both at the same time, in order to cope successfully with the growing need for process-oriented thinking in the contemporary business environment.

As stated in the introductory section, there is no monolithic methodology for the design and implementation of BPR projects in organizations. Already the fact that there is no consensus on the definition of the basic concept of BPR might lead one to the same conclusion. As Archer and Bowker (1995, 33) found in their study, practitioners have approached BPR in several very different ways, including change management on the basis of a form of portfolio assessment, and using mathematical modelling. Leading management consultancies seem to have developed their own of BPR models. Neither were Archer and Bowker (1995) able to identify a dominant approach to the design and implementation of BPR initiatives in consulting companies. They grouped the primary sources of consultancy methods in eight main schools of thought. These are: (Archer and Bowker 1995, 34–35) (1) scientific management, (2) IT systems engineering, (3) business planning/strategic management, (4) quality movement, (5) systems thinking, (6) organizational development/change management, (7) human resources management, and (8) the process movement itself.

The quantitative, management science and IT systems – oriented approaches have sometimes been referred to as "hard BPR", whereas the more recent, qualitative approaches have been labelled "soft BPR" or "second-generation BPR" (Coombs and Hull 1995). "...*Soft Systems Methodology and "ethnographically-informed" methods embody the systematic, holistic and essentially contextual or "social" nature of communication, knowledge and decision-making* (in real-life organizations, text in parenthesis added).", "*In many senses then, soft BPR is indeed an advance on its predecessor...*" (Coombs and Hull 1995, 129). For an elaborated discussion on the differences between the earlier and the more recent approaches to BPR, the reader is referred to the final section of this article.

On the basis of the above-mentioned study on different approaches to BPR adopted by consulting companies, Archer and Bowker (1995) were able to identify many similarly named stages and even structures. Most approaches seemed to include an inititation/preparation phase, a process understanding/analysis phase, a process redesign phase, an implementation phase, and a continious improvement phase. On the basis of their findings, Archer and Bowker (1995) were able to develop a processual model for the generic structure of BPR projects (cf. e.g. Burke and Peppard 1993). However, and as Archer and Bowker (1995, 36, cf. Tinnilä 1995) note, there is an obvious lack of visionary, strategic orientation in most approaches to BPR projects. Only a few (7 of 98) studied consulting companies had included a separate vision

creation phase in their BPR methods. *"This vision should encompass the process capabilities required to compete for the future both in existing and new markets"* (Archer and Bowker 1995, 36).

Many recent studies on BPR projects indicate that the more comprehesive the completed projects are in terms of their breadth, i.e. the more processes that have been redesigned at the same time, the better the overall results (e.g. Tikkanen and Pölönen 1996, Hall et al. 1993). This would seem to imply that companies should primarily aim at the re-engineering of complete business areas with several core processes, or even at the transformation of the entire corporation at the same time. As far as the author of this article knows, however, there have not been any comprehensive longitudinal academic studies on broad BPR projects in large corporations. Understanding of the design and implementation of BPR projects, and of the related critical success factors is still quite limited. On the other hand, recent research has been able to point out some, more or less mechanistically stated critical areas of concern[6]. For example, as Hall et al. (1993, 124) point out, *"Even with sufficient breadth and depth, a redesign project will fail unless top-level managers are actively involved"*.

BPR is always a change management project for the top management of an organisation, but involves more personnel already during the first stages of the process. This is why the concept of BPR and the concept of change management should be seen as an integrated whole (Tikkanen and Pölönen 1996).

The traditional thinking related to change management has revolved around the idea of making change possible in an organization. This has usually turned attention towards "enablement projects", including education and training. However, contemporary research and practical experience of change management have proven it necessary to adopt a broader approach that is able to take the limitations of human performance into account in the redesign of of organizational processes. This, in turn, calls for the increasing integration of the "odd couple" of process re-engineering and human resource management in companies. (Willmott 1995, 89, 96–97, cf. Stoddard et al. 1996) However, this kind of integration has been quite scarce until recently. Change management related to BPR projects is often viewed mechanistically, without taking into account the inherent social nature of change in organizations (Alasoini 1996, 75, cf. e.g. Blackler 1992).

As Stoddard et al. (1996, 71) state *"...putting the innovation to work rarely matches the initial concepts and models of the innovation."* Furthermore, they suggest the following re-

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6 The following five, more or less mechanistic factors common to successful BPR projects emerged from Hall et al.'s (1993) study: (1) Set an aggressive BPR target, (2) Commit 20% – 50% of the CEO's time to the project, (3) Conduct a comprehensive review of customer needs, economic leverage points, and market trends, (4) assign an additional senior executive to be responsible for implementation, and (5) conduct a comprehensive pilot of the new process design in some part of the organization.

vised assumptions in terms of the actual implementation of BPR projects and related change management: (p. 72)

(1) Re-engineering design may be radical, but implementation is incremental.

(2) Re-engineering design assumes clean slate change. However, implementation will be limited by the constraints that management cannot or will not remove.

(3) Re-engineering design focuses on end-to-end process redesign. Re-engineering implementation often focuses on the perceived most-broken pieces in the processes.

(4) Re-engineering design is top-down directed, but implementation requires acceptance from the bottom-up.

(5) Re-engineering design is enabled by information technology, but the implementation might be initiated without much of the assumed IT capability.

Process Organization

Since the late 1960s, there has been ongoing debate and controversy over the philosophical and theoretical foundations of organizational studies. The interest area has become much more pluralistic in its themes and range of standpoints. This transformation of problem areas, theories and methodologies has been paralleled by a growing sensitivity to the considerable changes in the organizational forms that provide the phenomenon under scrutiny for organization research and analysis. The earlier, well-established belief in the Weberian rational bureaucracy with strict formal organizational structures built around differentiated firm functions and rigid hierarchical control has proved to be far too limited and inadequate in many, if not most, contemporary organizational situations. This hierarchical orthodoxy has been challenged by a wide range of alternative, more flexible and less universal organization forms. (Reed 1992)

Without entering into the organization theory-related discussion, it is worth noting that the process organization is perceived here as an interesting alternative organizational form that has lately received increasing attention (Hammer 1996, Osterloh and Frost 1996, Rühli et al. 1995, cf. Grönroos 1997). As Osterloh and Frost (1996, 2) state: "*The process organization could be an alternative to the traditional functional, divisional or project organization*". As such, the concept of the process organization seems quite fruitful, though not yet developed to a completely logical conceptualization of what is actually meant and how organizations could pursue it as their organizational principle. This section tries to highlight the central theoretical underpinnings of the process organization idea.

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According to Osterloh and Frost (1996), the process organization can be understood as a dynamic input-transformation-output model (Figure 2).
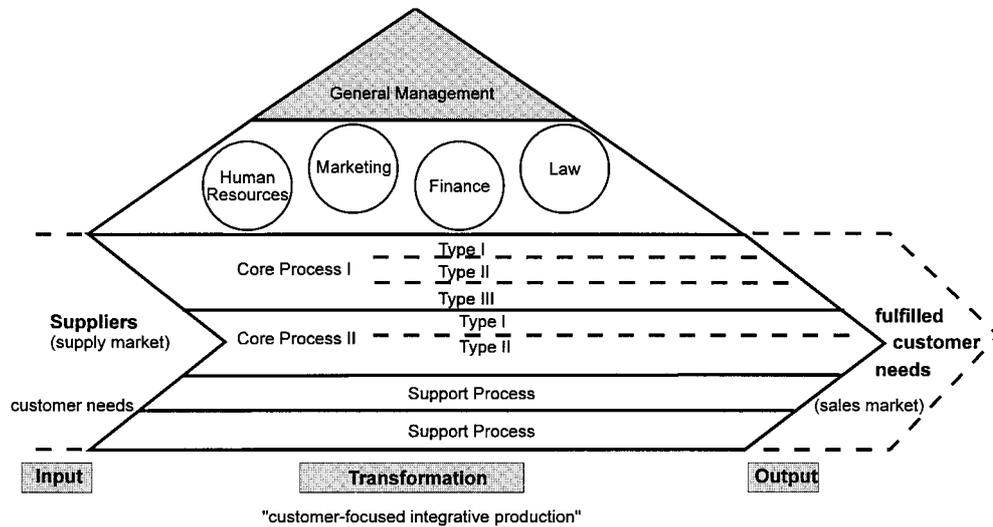
Source: Osterloh and Frost 1996, 2

FIGURE 2. The Company Organized As Processes

In the process organization, the value chain between, first, the customers' processes to which the organization's output is thought to contribute, and second, supplier performance, is newly defined in terms of several different kinds of organizational process. The process organization can be perceived as an update of Porterian value chain-thinking in process terms. In other words, heterogeneous processes form and define the value chain. Basically, the most significant differences between Porter's conceptualization of the value chain and the process organization are the latter's process emphasis[7] and a clearly differing view to strategy, "stretch" instead of Porterian "fit" (see e.g. Hamel and Prahalad 1993[8]). The essential characteristics of the process organization can be summarized as follows: (Osterloh and Frost 1996, 3)

1. All activities – not only those on the operational level – are designed as processes. The only exceptions are the competence centers of the "functional schools", e.g.

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[7] In Porter's (1980, 1985) original value chain conceptualization, value is created through primary activities in different organizational functions, facilitated by various support activities (cf. Freeman and Liedtka 1997). In the process organization, functional boundaries are diminished and management focus is concentrated on processes incorporating the company's central knowhow and competencies.

[8] According to the "fit" strategy concept, a company's strengths and weaknesses are confronted with environmental opportunities and threats, on which the actual strategy formulation is based. The "stretch" strategy perspective seeks to create a dynamic stretch, a fruitful, leveraging misfit between a firm's resources and aspirations, rather than just seeking to find a "fit" between the company's capabilities and environmental conditions. (Hamel and Prahalad 1993)

human resources, marketing, financing, law etc. that act as "internal consultancies", thus contributing to process management.

2. Customers and suppliers can be integrated into this process configuration (cf. Earl's (1993) concept of business network processes). A "seamless organization" is created without clearly distinguishable boundaries.

3. An increasing informalization of the physical processes takes place. The amount of information included and needed grows with every process activity.

However, in a recent study on business processes within industrial networks, Tikkanen (1997) found out that value creation and appropriation through a business process clearly does not happen in such a fixed, linear and sequential manner as assumed in traditional value chain analyses or most existing analysis models generated within the process movement. It was stated that such models often lead to apparent oversimplification of real-life business situations and existing activity structures (cf. Freeman and Liedtka 1997, 288)[9]. This may be an important implication that should be taken into account from a managerial perspective when designing process organizations.

In its basic form, the process organization highlighted above comes very close to the two process-based organization variants identified by Armistead and Grant (1996) in their empirical case study of five organizations: the core process structure and the integrated process structure. In effect, the process organization seems to be almost identical to the core process structure associated with the integration of the operational supply chain while at the same time maintaining functionality through expert groups that support the operation of the end-to-end process. On the other hand, the idea of an integrated process structure where all organizational structures are diminished and business activities are realized through interaction between operational, managerial and support processes, still appears to be somewhat unclear. In their article, Osterloh and Frost (1996) strongly argue against the elimination of all firm functions, i.e. internal knowledge centers, an act they perceive as a step towards a "hollow corporation".

Furthermore, Osterloh and Frost (1996) characterize the process organization as a step forward from mere business process reengineering, which is primarily restricted to redesigning only some part of an organization's process collection. The process idea, the idea of horizontal work segmentation, and the idea of information networking, have to penetrate the whole organization, making possible an entirely new organizational form. Furthermore, a solid

9 On the other hand, one can also understand the basic Porterian value chain, or the process organization, as sort of Weberian "ideal cases" that actually never exist, or even cannot exist in practice. Like a traffic sign symbolizing a curve and acting as a guideline for drivers irrespective of the actual shape of the curve, the value chain model or the business process idea can also guide and shape organizational behavior.

"stretch" strategy aiming at the creation of dynamic core competencies should be formulated for the process organization (cf. Lewis and Gregory 1996, Sanchez and Heene 1997). *"Instead of asking 'what is our business' (which is asked in the market-based view) a company has to answer the question 'what are we capable of doing' "*, *"...A company has to concentrate on the right resources and seek to make the best possible use of them. Dynamic core competencies are a prerequisite for a company in order to be able to innovate continuously and to explore new markets with new products. "* (Osterloh and Frost 1996, 4).

Thus, dynamic core competencies crystallized in an organization's (core) processes form the foci of management attention in the process organization. In its most general sense, a core competence then refers to an organizationally embedded capability that can create differential value through a chain of activities that a customer is willing to pay for (e.g. Prahalad and Hamel 1990, Hamel and Prahalad 1993, for an account of the central tenets of competence-based competition theory, see Sanchez et al. 1996, Sanchez and Heene 1997). Thus, as mentioned above, the notion of business processes as the incorporations of organizations' core competencies forges an immediate link between the process movement and the competence-based competition perspective. In essence, it is argued that a core competence must achieve both utility and scarcity. It must deliver something that is perceived by the customer as simultaneously useful and difficult to acquire from alternative sources. (Prahalad and Hamel 1990, Hamel and Prahalad 1993) Many theoreticians and practitioners also define a competence as a system of interrelated resources organizationally integrated in a mostly tacit, firm-specific manner (see e.g. Sanchez and Heene 1997). In my opinion, the competence perspective has proven its usefulness in directing attention towards organizations' core knowledge and skills (cf. Håkansson and Snehota on the meaning of actors' knowledge and skills in networks, 1995, 53). However, both theoretical and practical discussion related to the competence perspective as a relatively new path of inquiry still remains somewhat underdeveloped (cf. e.g. Kirjavainen 1997, 52).

The creation of a process organization does not automatically lead to the generation of dynamic core competencies. In most cases, streamlining and rationalizing will make the company leaner but not necessarily more dynamic. In Osterloh and Frost's (1996) opinion, the stretch strategy paradigm, together with the process organization as the organizational structure, form an appropriate basis for developing dynamic core competencies. Neither one alone will probably not be sufficient for success. Thus, Osterloh and Frost (1996) provide a tentative "organizing map" for a systematic analysis of relevant strategic issues that have to be taken into account when designing process organizations. Issues related to both the "stretch" strategy paradigm and the process organization as a distinct organizational form are highlighted under five broad headings.

In many respects, the process organization concept still seems to be in need of further explication and development. In addition to the quite general organizing map provided by Osterloh and Frost (1996), and the list of catalysts for creating process-based organizations offered by Armistead and Grant (1996)[10], transforming organizations to process configurations needs more sophisticated analysis and implementation methodologies. Clearly, the management of such a transformation cannot be dealt with by means of such a mechanistic, general organizing map. Moreover, the connections between BPR and the process organization remain somewhat unclear. Osterloh and Frost (1996) seem to view the process organization as the next step in the development of process thinking from the redesign of just some organizational processes, towards the transformation of the entire corporation into process terms (cf. Goodman's (1995) transformation concept). However, they also seem to implicitly assume that some sort of BPR initiatives would be used when transferring functional organizations to respective process variants. Should the use of BPR projects end when an organization reaches the process organization stage? If process organizations are to dynamically generate new core competencies in terms of their core processes, does the further development of a once created process organization then have to happen in terms of less radical approaches such as incremental process improvement/kaizen?

Despite these unanswered questions, the process organization as a goal of the processual approach to business activity is still seen as extremely interesting area. As the results of many studies on the preconditions for successful process redesign initiatives show (e.g. Tikkanen and Pölönen 1996, Hall et al. 1993), the broader the project, the better the overall results have been. Managers seeking process improvements in their organizations should focus their attention not only on the renewal of single business processes, but also on the transformation of their entire companies to process organizations (Hammer 1996). However, methodology related to the design and implementation of process organization projects is still more or less nonexistent. The few results derived from studies on successful BPR projects should also be understood as only indicative when thinking about possible issues and problem areas related to the transformation of large corporations to process organizations. For example, political and social issues (e.g. Francis and Southern 1995) as well as HRM-related issues (e.g. Willmott 1995, Alasoini 1996), neglected in traditional BPR studies, probably deserve increased emphasis and attention in studies on such comprehensive transformation projects.

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10 The list includes a commitment to processes, process ownership (teams/individuals), information systems methodology, and expectations of individuals.

SUMMARY AND DISCUSSION

The recently (re)popularized process movement has its more or less evident progenitors in the quality movement and in the time-based movement. Some recent management philosophies, such as lean management and activity-based management, can also be linked to the processual approach to business. Altogether, an emphasis on horizontal processes that cut across traditional organizational functions could be argued to be common to all of these approaches. Compared with traditional post-war conceptualizations, processual approaches represent fundamentally different perspectives on organizations and strategy. Nowadays, managers are gradually beginning to perceive their organizations as portfolios of dynamic processes rather than static, vertically driven hierarchies. In this article, the so-called process movement was explicated through the concepts of the business process and business process reengineering, and that of the process organization.

The (organizational) business process can be perceived as the basic unit of analysis in the process movement. It can also be seen as the basic building block of a company's competitive advantage, incorporating the core know-how and the ability to produce value for the customer. Even if business processes can be categorized in several ways, it usually seems to be enough to differentiate between just two types of processes: core processes and support processes. Core processes crystallize the organization's central competencies and ultimately lead from the suppliers to the customers' processes to which the value produced by the organization is thought to contribute. Support processes function as necessary but not sufficient prerequisites of most activities related to core processes.

The business process idea has led companies towards the creation of new, streamlined business processes as radical renewal projects in organizations. BPR and continuous process improvement (kaizen) are often considered opposite ends of a continuum of alternative forms of improving organizational business processes. Although there is no monolithic definition of the concept of BPR, e.g. Stoddard et al. (1996) seem to have captured its central features by defining business process reengineering as a *cross-functional*, *business-process focused* initiative including *simultaneous change* in organization design, culture and information technology to enable *radical* performance improvements. BPR is a lengthy project consisting of two primary phases: the design phase and the implementation phase. During the design phase, current organizational processes are conceptualized and analyzed, and new, effective processes are designed according to the strategic management's vision. The redesigned processes are implemented during the implementation phase. There is currently no monolithic methodology (neither academic nor practical) for the design and implementation of BPR projects in organizations. The more or less prevailing quantitative, management science and IT systems-

oriented approaches have sometimes been referred to as "hard BPR", whereas the more re-cent, emergent qualitative approaches with a wider organizational and strategic focus have been labeled "soft BPR" or "second-generation BPR".

Ultimately, process orientation in a company should lead to the emergence of the proc-ess organization, a horizontally integrated collection of relevant core processes in which the company's dynamic core competencies crystallize. In such an organization, heterogeneous processes form and define the value chain from the suppliers to the customer. However, even a successfully implemented process organization cannot alone lead to the creation of dynam-ic, continuously improving core competencies. It is argued that an adopted "stretch" strategy perspective aiming at the constant generation of new, innovative competencies could comple-ment the process organization in an efficient way.

Contemporary discussion on business processes, reengineering efforts and the process organization is still at quite a premature stage. The concepts clearly need to be developed and refined; new approaches and methodological perspectives are needed in order to make the existing concepts and theory more applicable in practice. Much more empirical evidence is also needed of how BPR projects are realized in different organizational and business contexts.

The academic discussion on business processes and BPR has had its primary theoretical underpinnings in two sources: information systems and horizontal process management litera-ture. As far as related philosophical orientation is concerned, one could argue that a certain mechanistic, simplifying view of business, organizing and organizations prevails in the above-mentioned literature (cf. Alasoini 1996, Panteli 1996). The seminal literature on BPR seems to share a similar, deterministic approach to the design and implementation of BPR projects (e.g. Hammer 1990, Davenport and Short 1990, Hammer and Champy 1993). The same orientation is also evident if one examines, for example, Archer and Bowker's (1995) findings on the prac-tical methodologies adopted by major consultancies engaged in BPR initiatives. Ideologies such as Taylorian management science and information systems engineering, and traditional busi-ness planning and management models, emerge as strong practical methodologies for the re-alization of BPR efforts.

The bulk of literature related to the process movement seems to totally ignore the recent, gradual shift in our understanding of the nature of social life. It concerns the constructionist recognition that social systems such as organizations are arbitrary and man-made, and result from the actions of those who participate in them, not from some immutable, mechanistic natural laws (cf. Berger and Luckmann 1966). Emergent postmodern approaches, e.g. in or-ganization theory, have tried to deal with that kind of recognition. (Blackler 1992) *"Questions about how social structures constrain or liberate their members, about why social changes are difficult to engineer, or about what alternative social forms are possible, remain to be answered"*

(Blackler 1992, 273). There are some serious doubts about how the mechanistic, "hard" process approach can shed light on the above questions.

As pointed out e.g. by Stoddard et al. (1996), recent studies indicate that the basic ideas (e.g. BPR is radical, top-down directed etc.) presented in seminal BPR literature appear to be far too simplified and straightforward to function in reality. In real-life BPR projects, even Hammer and Champy's (1993, 200) own estimate of a 50–70% failure rate for radical, breakthrough projects has proven to be too modest. The concept of BPR is increasingly being criticized due to reports of extremely high failure rates, and cases where companies are using BPR as a disguise for radical downsizing and layoffs. As Grint and Willcocks (1995, 107) argue "*Business process reengineering is revealed as essentially political in its rhetorical and practical manifestations. Its claims for newness are exaggerated, and its application generally less startling in its outcomes than its promotional literature predicts.*" Furthermore, Grint and Willcocks (1995, 107) especially criticize the inherent violence[11] in the traditional, hard BPR approach. In their opinion, this violence derives from the essentially mechanistic, "seventeenth century" view of how organizations function and how they can be changed.

For example, Coombs and Hull recognize (1995, cf. also Francis and Southern 1995) that a new, "soft" approach has to be created in order to cope with the complex and multi-faceted here and now managers are encountering in designing and implementing BPR projects in real-life socio-organizational contexts. As stated in the previous section, political, social and HRM issues related to BPR projects probably deserve much more attention. However, this second-generation approach to BPR has only recently begun to emerge in the related discussion. It has not yet crystallized into any clear alternatives of how process renewal initiatives might be realized in the future.

The process movement is clearly in need of a fundamentally new approach or approaches. Unless alternative, more versatile approaches are created, the entire process idea, together with BPR, might be labeled as a passing fashion, an outdated buzz word. In my opinion, the emerging new approach, built on the viable basic ideas of the process movement, is most likely to be qualitative and more contextually oriented than traditional approaches. More attention is likely to be paid to the intra- and interorganizational context of the focal organization, in both business and social terms. Strategic considerations are also likely to be emphasized much more than in the previous literature (Tinnilä 1995, 1997, chapter 2).

Rather than being simply another fashionable tool, technique or method, business process development (or whatever term is used) could represent an approach aimed at a fundamental

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11 For example, Mike Hammer is quoted in a Forbes magazine interview in 1993 "*On this journey we ... shoot the dissenters...*".

transformation of the organization by critically reviewing and redesigning all its operations and processes, based on a thorough, holistic understanding of the relevant business and organizational context, and on a vision of their future development.

Thus, there is a strong need for more academic studies from different conceptual and methodological angles in order to extend our understanding of various phenomena related to the process movement. Much more work is needed before we can say we really have sketched a proper overall view of the multiple facets of intra- and interorganizational processes and their renewal in different business settings. Especially, I see enhanced contextuality as one very probable dominant feature in future studies on business processes and BPR. Following Alajoutsijärvi and Eriksson (1998), I conceptualize "context" as something one needs to know about in order to properly understand a structure, action or process. Context functions as the background, environment, setting, circumstances, conditions or consequences for phenomena that we wish to understand or explain. Generally, there is a lack of truly contextual research in management studies, not to mention the process movement.

In Pettigrew's often cited terms (e.g. 1985, 1987, 1990), a contextual researcher has to construct his or her understanding along the three dimensions of context, content and process. For example, a profound understanding of the occurrence of business processes involves examining them within their actual environment, i.e. in the connected intra- and interorganizational network (cf. e.g. Anderson et al. 1994). The here and now of the connected network forms the context dimension, whereas the history of the network is the process that has to be studied in order to undertand the current structure of the context. Furthermore, the content dimension can be conceptualized, for instance, in terms of various theoretical frameworks developed in social sciences. For example, Panteli's (1996, cf. Grint and Willcocks 1995, 106) idea of using Giddens's (1979, 1984) structuration theory in studying BPR projects is an attempt to show that the content of real-life BPR is not as simplistic as has been assumed in the literature, and that one should seriously aim at the development of research approaches that would result in an increased understanding of organizational behavior in change situations[12].

The researcher's main challenge in any contextual research endeavour is to try to use as intensive methods as possible to construct a sufficient understanding of the phenomena under scrutiny in their real-life contexts, based on multiple actor-informants' own constructions of

[12] Another possible framework might be e.g. Bhaskar's TMSA (transformation model of social activity; Bhaskar 1986, 1979). In addition to Giddens's ST, TMSA is another well-known example of a conceptual framework aiming at transcending the dichotomy between individualist and structuralist orientations in social sciences. Moreover, e.g. Blackler (1992) sees Unger's (1987) theory of formative contexts and Engestrom's (1987) activity theory as fruiful, postmodernistically oriented frameworks in order to better understand rapid adjustments and continuous change in contemporary organizations. In my opinion, all of the above-mentioned frameworks might prove useful as initial research approaches to studying business processes in their intra- and interorganizational contexts.

their situations in the context studied (cf. Berger and Luckmann 1966). By sufficient understanding, I basically mean that the researcher is able to longitudinally comprehend the major empirical features of the context studied, allowing dialectical reflection between empirical observations and relevant theory to begin. Of course, many different, phenomenologically and/or hermeneutically oriented, interpretative methods might be applied in the pursuit of this understanding. For an application of the social constructionist orientation to the conceptualization and analysis of business processes, the reader is referred to the network theory-based study of industrial business processes by Tikkanen (1997). ∎

REFERENCES

ALAJOUTSIJÄRVI, K. – ERIKSSON, P. (1998) Paper Life. Making Sense of a Forest Triad in Its Contexts. In *Marketing and International Business. Essays in Honour of Karin Holstius on her 65th Birthday*, ed. by H. Tikkanen. Publications of the Turku School of Economics and Business Administration.

ALASOINI, T. (1996) Business Process Reengineering – onko työelämän suhteilla enää merkitystä? [BPR – Do Workplace Relations Matter Any More?] *Hallinnon tutkimus*, 1/1996, pp. 75–79.

ALVESSON, M. – WILLMOTT, H. (1996) *A Making Sense of Management. A Critical Introduction*. Sage, Thousand Oaks.

ANDERSON, J. C. – HÅKANSSON, H. – JOHANSON, J. (1994) Dyadic Business Relationships Within a Business Network Context, *Journal of Marketing*, Vol. 88, October, pp. 1–15.

ANSOFF, I. (1965) *Corporate Strategy*. McGraw-Hill, London.

ARCHER, R. – BOWKER, P. (1995) BPR Consulting: An Evaluation of the Methods Employed. *Business Process Reengineering & Management Journal*, Vol. 1 No. 2, pp. 28–46.

ARMISTEAD, C. – GRANT, T. (1996) Business Process Management: The Future of Organizations. Paper presented at the *3rd European Academic Conference on Business Process Redesign*, Cranfield University, February 1996.

ARNOLD, P. – DIXON, R. J. – HEINEKE, J. – KIM, J. – MULLIGAN, P. (1994) Business Process Re-engineering: Improving in New Strategic Directions. *California Management Review*, Summer 1994, pp. 93–108.

BARNEY, J. B. (1991) Firm Resources and Sustained Competitive Advantages. *Journal of Management*, Vol. 17 No. 1, pp. 99–120.

BARTLETT, C. – GHOSHAL, S. (1989) *Managing Across Borders: The Transnational Solution*. Harvard Business School Press, Boston.

BAUMAN, Z. (1992) *Intimations of Postmodernity*. Routledge, London/New York.

BERGER, P. L. – LUCKMANN, T. (1966) *The Social Construction of Reality. A Treatise in the Sociology of Knowledge*. Allen Lane, London.

BHASKAR, R. (1986) *Scientific Realism and Human Emancipation*. Verso, London.

BHASKAR, R. (1979) *The Possibility of Naturalism. A Philosophical Critique of Contemporary Human Sciences*. Harvester Press, Brighton, Sussex.

BLACKLER, F. (1992) Formative Contexts and Activity Systems: Postmodern Approaches to the Management of Change, in *Rethinking Organization. New Directions in Organization Theory and Analysis*, ed. by M. Reed and M. Hughes. Sage, London.

BURKE, G. – PEPPARD, J. (1993) Business Process Redesign: Research Directions. *Business Change and Reengineering*, Vol. 1 No. 1, pp. 43–47.

CLEMMER, J. (1994) Process Reengineering and Process Improvement: Not an Either/or Choice. *CMA Magazine*, June 1994, pp. 36–39.

COOMBS, R – HULL, R. (1995) BPR as "IT-Enabled Organizational Change": An Assessment. *New Technology, Work and Employment*, Vol. 10 No.2, pp. 121–131.

COVA, B. (1994) Industrial Marketing and Purchasing in a Postmodern Era, in *the 10th Annual IMP Conference Proceedings*, ed. by W. Biemans and P. N. Ghauri, Vol. 1, pp. 277–296.

COVA, B. – SVANFELDT, C. (1993) Societal Innovations and the Postmodern Aesthetization of Everyday Life. *International Journal of Research in Marketing*, Vol. 10, No. 3, pp. 297–310.

DAVENPORT, T. H. (1994) Managing in the New World of Processes. *Public Productivity & Management Review*, Vol. 18 No. 2 (Winter), pp. 133–147.

DAVENPORT, T. H. (1993) *Process Innovation: Reengineering Work Through Information Technology.* Harvard Business School Press, Boston.

DAVENPORT, T. H. – SHORT, J. E. (1990) The New Industrial Engineering: Information Technology and Business Process Redesign. *Sloan Management Review*, Vol. 31 No 4., pp. 11–27.

EARL, M. (1993) *The Old and the New Process of Business Process Redesign: Some Implications for Information Technology.* Centre for Research in Information Management Working Paper WP94/6, London Business School.

EARL, M. – KHAN, B. (1994) How New Is Business Process Redesign? *European Management Journal*, Vol. 12 No. 1, pp. 20–30.

EDWARDS C. – PEPPARD, J. (1994) Forging A Link Between Business Strategy and Business Reengineering. *European Management Journal*, Vol. 12 No. 4, pp. 407–416.

ENGESTROM, Y. (1987) *Learning by Expanding: An Activity Theoretical Approach to Developmental Research.* Orienta-konsultit Oy, Helsinki.

FRANCIS, A. – SOUTHERN, G. (1995) Epochs and Institutions: Contextualizing Business Process Reengineering. *New Technology, Work and Employment*, Vol. 10 No. 2, pp. 110–120.

FREEMAN, E. – LIEDTKA, J. (1997) Stakeholder Capitalism and the Value Chain. *European Management Journal*, Vol.15, No. 3, pp. 286–296.

GHOSHAL, S. – BARTLETT, C. (1995) Changing the Role of Top Management: Beyond Structure to Processes. *Harvard Business Review* (January–February), pp. 86–96.

GHOSHAL, S. – BARTLETT, C. (1990) The Multinational Corporation as an Interorganizational Network. *Academy of Management Review*, Vol. 15 No. 4, pp. 603–625.

GIDDENS, A. (1984) *The Constitution of Society – Outline of the Theory of Structuration.* Polity Press, Cambridge.

GOODMAN, M. (1995) Business Process Reengineering and Beyond – An Overview. *Andersen Consulting Working Paper*, July 1995, pp. 1–35.

GRINT, K – WILLCOCKS, L. (1995) Business Process Reengineering in Theory and Practice: Business Paradise Regained? *New Technology, Work and Employment*, Vol. 10 No. 2, pp. 99–107.

GRÖNROOS, C. (1997) Relationship Marketing Logic. *Asia-Australia Marketing Journal*, Vol. 4 No. 1, pp. 7–18.

HALL, G. – ROSENTHAL, J. – WADE, J. (1993) How to Make Reengineering Really Work. *Harvard Business Review*, Nov.–Dec., pp. 119–131.

HAMEL, G. (1994) The Concept of Core Competence. In: *Competence-based Competition*, ed. by G. Hamel and A. Heene, pp. 11–33. Wiley, Chichester.

HAMEL, G. – PRAHALAD, C. K. (1993) Strategy as Stretch and Leverage. *Harvard Business Review*, Vol. 71 No. 2, pp. 75–84.

HAMMER, M. (1996) *Beyond Reengineering.* Harper, New York.

HAMMER, M. (1990) Reengineering Work: Don't Automate, Obliterate. *Harvard Business Review*, (July–August) No. 4, pp. 104–113.

HAMMER, M. – CHAMPY, J. (1993) *Reengineering the Corporation: A Manifesto for Business Revolution.* Harper Business, New York.

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HÅKANSSON, H. – SNEHOTA, I., eds. (1995a) *Developing Relationships in Business Networks.* Routledge, London.

KIRJAVAINEN, P. (1997) *Strateginen oppiminen tietointensiivisessä organisaatiossa. Teoriaa luova case-tutkimus oppimisesta kahden tietoyrityksen strategisessa kehityksessä.* [Strategic Learning in a Knowledge-Intensive Organization] PhD Thesis, Publications of the Turku School of Economics and Business Administration, A-2.

LEWIS, M. A. – GREGORY, M. J. (1996) Developing and Applying A Process Approach to Competence Analysis, in *Dynamics of Competence-Based Competition: Theory and Practice in the New Strategic Management*, ed. by R. Sanchez and A. Heene. Elsevier, Oxford.

MÖLLER, K. E. (1994) Interorganizational Marketing Exchange. Metatheoretical Analysis of Current Research Approaches, in *Research Traditions in Marketing*, ed. by G. Laurent – G. L. Lilien – B. Pras, pp. 347–372. Kluwer, Boston.

NEILL, T. – WINSLOW, C. (1994) Growing With Change – Integrating the Heart and Mind of Business. *Outlook*, Vol. 4, 1994, pp. 34–37.

OSTERLOH, M. – FROST, J. (1996) From Business Reengineering to Dynamic Core Competencies. Paper presented at the *3rd European Academic Conference on Business Process Redesign*, Cranfield University, February 1996.

PANTELI, A. (1996) The Unradical Side of Radical Business Process Reengineering. Paper presented at the *3rd European Academic Conference on Business Process Redesign*, Cranfield University, February 1996.

PETTIGREW, A. M. (1990) Longitudinal Field Research on Change: Theory and Practice. *Organization Science*, Vol. 1 No. 3, pp. 267–292.

PETTIGREW, A. M. (1987) Introduction: Researching Strategic Change, in *The Management of Strategic Change*, ed. by A. M. Pettigrew, pp. 1–13. Basil Blackwell, Oxford.

PETTIGREW, A. M. (1985) Context, Culture and Politics. The Development of Strategic Change. In *The Awakening Giant*, ed. by A. Pettigrew, pp. 26–51. Blackwell, Oxford.

PORTER, M. E. (1985) *Competitive Advantage. Creating and Sustaining Superior Performance.* New York.

PORTER, M. E. (1980) *Competitive Strategy: Techniques for Analyzing Industries and Competitors.* The Free Press, New York.

PRAHALAD, C. K. – HAMEL, G. (1990) The Core Competence of the Corporation. *Harvard Business Review*, Vol. 68 No. 3, pp. 19–91.

REED, M. (1992) Introduction, in *Rethinking Organization. New Directions in Organization Theory and Analysis*, ed. by M. Reed and M. Hughes, pp. 1–16. Sage, London.

RÜHLI, E. – TREICHLER, C. – SCHMIDT, S. L. (1995) From Business Reengineering to Management Reengineering – A European Study. *MIR – Management International Review*, Vol. 35 No. 4, pp. 361–371.

SANCHEZ, R. – HEENE, A. (1997) Reinventing Strategic Management: New Theory and Practice for Competence-based Competition. *European Management Journal*, Vol. 15 No. 3, pp. 303–317.

SANCHEZ, R. – HEENE, A. – THOMAS, H. (eds.) (1996) *Dynamics of Competence-based Competition: Theory and Practice in the New Strategic Management.* Elsevier, Oxford.

STALK, G. – HOUT, T. M. (1990) *Competing Against Time. How Time-based Competition is Reshaping Global Markets.* The Free Press, New York.

STODDARD, D. B. – JARVENPAA, S. L. – LITTLEJOHN, M. (1996) The Reality of Business Process Reengineering. Pacific Bell's Centrex Provisioning Process. *California Management Review*, Vol. 38, No. 3, pp. 57–76.

TAYLOR, J. A. (1995) Don't Obliterate, Informate!: BPR for the Information Age. *New Technology, Work and Employment*, Vol. 10 No. 2, pp. 82–88.

TIKKANEN, H. (1997) *A Network Approach to Industrial Business Processes. A Theoretical and Empirical Analysis.* PhD Thesis, Publications of the Turku School of Economics and Business Administration, A-7.

TIKKANEN. H. – PÖLÖNEN, P. (1996) BPR Projects in Finland. An Evaluation of Change Management Practices in 21 Large Finnish Organisations. *Business Process Reengineering & Management Journal*, Vol. 2 No. 3, pp. 10–25.

TINNILÄ, M. (1997) *Division of Service and Business Processes.* PhD Thesis, Publications of the Helsinki School of Economics and Business Administration.

TINNILÄ, M. (1995) Strategic Perspective to Business Process Redesign. *Business Process Reengineering & Management Journal*, Vol. 1 No. 1, pp. 44–59.

UNGER, R. M. (1987) *Social Theory: Its Situation and Its Task.* Cambridge University Press, Cambridge.

VAN LANDEGHEM, R. – PYIS, L. (1996) There are No BPR Projects, Sire: A Field-proven Methodology for Business Process Reengineering. Paper presented at the *3rd European Academic Conference on Business Process Redesign*, Cranfield University, February 1996.

WILLMOTT, H. (1995) The Odd Couple?: Reengineering Business Processes; Managing Human Relations. *New Technology, Work and Employment*, Vol. 10 No. 2, pp. 89–98.

WOMACK, J. P. – JONES, D. T. – ROOS, D. (1990) *The Machine that Changed the World.* Harper, New York.