LANCASTER UNIVERSITY

Organizational Learning and Knowledge

5th International Conference

Friday, 30th May – Monday, 2nd June, 2003

Engineering Knowledge

Theme: The Social Processes of OL and KM

Diedrich, Andreas

Gothenburg School of Economics and Commercial Law

Contact author:
Diedrich, Andreas
Gothenburg School of Economics and Commercial Law
University of Gothenburg
Box 610
SE-405 30 Göteborg
Sweden

Telephone: +46 31 773 54 04
E-mail: Andreas.Diedrich@mgmt.gu.se

Abstract

Knowledge management is a recent phenomenon, one of the latest in a series of managerial ideas aimed at improving the efficiency and productivity of organisations. It is often defined as the generation, transfer, storage and exploitation of organisational knowledge. Proponents have argued that the availability of certain new technologies such as the Internet or Lotus Notes has been instrumental in the promulgation of the knowledge management movement, but have failed to take into account the relational, provisional, political, mediated experiences of organisational life when examining how knowledge management models are introduced in organisations.
In this paper I will use ideas from Scandinavian Institutionalism and the Studies of Science and Technology in order to study these "messy" (McCabe and Knights 2000) organising processes by examining how a group of engineers attempts to introduce knowledge management in form of a best practice model in a large industrial company in Sweden.

Introduction

People in organizations are often interested in improving things; in making the world a better place, preferably by using novel means. Hardly ever does their interest revolve around doing things the same way they have always been done. Ideas in form of *new* management models, *new* technology and generally *new* forms of organizing work arrive at organizations on a daily basis. New organizational ideals continuously emerge, and a perennial stream carries ideas and techniques on how to change and improve organising practices (see e.g. Czarniawska and Sevón, 1996). The interest in improvement is exemplified by the way in which the new practice appears on stage as the perfect model for how the business activities should be organised. Knowledge management is one of the latest in a series of such managerial ideas aimed at improving the efficiency and productivity of organisations. It is often defined as the generation, transfer, storage and exploitation of organisational knowledge (Leonard-Barton, 1995; Nonaka and Takeuchi, 1995; Ruggles III, 1997; Davenport and Prusak, 1998; Dixon, 2000).
One of the most popular approaches when getting started with knowledge management has been identified by Davenport and Prusak (1998) as the compilation and leveraging of best practices or effective ways of performing certain processes that have been identified within or outside of the firm. O'Dell and Grayson (1998) suggested that "there appears to be a growing consensus that the fastest, most effective and powerful way companies can manage knowledge assets is through the systematic transfer of best practices." The belief is that the "transfer of best practices helps others in the firm learn better, faster, and more effectively" (O'Dell and Grayson 1998).
Proponents argue that the availability of certain new information and communication technologies (ICTs) such as the Internet or Lotus Notes has been instrumental in the promulgation of the knowledge management movement. As Davenport and Prusak (1998:123) suggested so eloquently: "Since knowledge and the value of harnessing it have always been with us, it must be the availability of these new technologies that has stoked the knowledge fire."
These discussions about 'technology-enabled' knowledge management involve talk about their effects. Woolgar (2002) argued that this is rather unremarkable, because this "'technology talk', as we might call it, is quintessentially about effects, outcomes, impacts and changes that may or may not result from the development, adoption, and use of new

technology." The accounts of outcomes and effects are expressed in definite terms: we have the technology today, and based on it, this will happen in the future. The deterministic, definite character of these descriptions of technology, which are generally taken-for-granted and not reflected upon, come to the forefront when things start going wrong, when the claims made about the technology contrast sharply with the actual effects that it produces, or when technology does not operate according to expectations. It will be argued in this paper that employing such a deterministic perspective ignores the dynamic social aspects of organising brought about by the new technology and thereby blackboxes (Latour, 1987) what needs to be explained: the mutual constitution of society (i.e. the organising processes) and the technology.

In this paper I will use ideas from Scandinavian Institutionalism (Czarniawska and Sevón, 1996) and the Sociology of Translation (Latour, 1986; 1987) in order to study the "messy" (McCabe and Knights, 2000) provisional, dynamic social experiences of organisational life by examining how the idea of best practice was spread and made sense of in the form of the Best Practice Implementation (BPI) project at a large Swedish industrial manufacturing firm, here referred to as Industri AB or IAB. BPI was described as a process that would facilitate the reuse and spreading of already proven improvements, i.e. best practices, and the evaluation and management thereof. A project group was given the task of implementing BPI at IAB and ensuring that engineers and process development managers out in the factories started working according to the process model.

Diffusion vs. Translation

By early 2003 BPI was still not implemented at IAB, and many people were referring to the project as a failure, in terms of acceptance by the users. How can we understand this fate of the BPI project? One way is to look at the characteristics of the process of spreading the model itself. How does this happen? How do ideas in the form of models or technologies, etc. go from one place to another, i.e. travel? Traditionally it has been suggested that this spreading of ideas takes place through diffusion. The concept of diffusion generally provides three possible explanations for the fate of technology change projects in organizations. Either the social context was hostile to the technology or the technology did not possess the inherent qualities its engineers claimed it possessed, or a combination of both. We are left with overly simplistic explanations: society (the people; the organization) was not ready or the technology was not working.

Recently a number of researchers have argued that the physicalist and chemical connotations of the diffusion metaphor have proved to be a doubtful utility in a social context, and have instead rallied around the notion of translation (Latour, 1986; Czarniawska and Sevón, 1996). Latour (1986:267) suggested that an idea such as an artefact (e.g. technology), a model, a claim or an order is in the hands of people who may act very differently upon or with it, thereby doing something essential for the maintenance and existence of the idea. They may, for example, alter it, betray it, change its direction, appropriate it or change its shape or contents, or drop it altogether. There is a chain of actors, and since the knowledge is in everybody's hands in turn, everybody acts upon it depending on their own different projects and experiences. This is why Latour called it the model of translation. Instead of the *transmission* of the same idea, which according to the traditional model can merely be deflected or slowed down by friction, but remains essentially the same the translation model proposes a continuous transformation of the idea. This thought has been reiterated more recently by Czarniawska (2002). The concept of translation, she argued, focuses our attention

on the fact that a thing moved from one place to another, from one time to another, and therefore could not emerge unchanged.

Mimesis and Mimetic Machines

The concept of mimesis in organizing has been acknowledged and developed by Czarniawska (2002) in order to understand why translation takes place to begin with, and acknowledge how we create meaning about past experiences and relate our actions to the actions of others (Czarniawska, 2002).
Mimesis is Greek and means imitation. In biology the term is used to describe the close external resemblance of one animal to another animal that is distasteful to predators. Mimesis means imitation in the sense of resemblance or re-presentation, rather than copying. What makes it different from copying is the implicit openness in mimesis for the idea that what is imitated, such as words, artefacts (e.g. technology), symbols or actions (e.g. practices), changes during the process – in other words, is reinterpreted and transformed.
Through mimesis we can get a broader understanding of how ideas are spread, received and translated into action in local practice. Translation means that the creative aspects of the process are considered, something that is recurrent in the idea of mimesis. This means that mimesis does not have to lead to isomorphism or tight couplings between actions.
Mimesis can be seen as a way of organizing that builds on seeing or hearing what others do, and based on that imitating these activities (Czarniawska, 2002).
If the aim is to imitate a practice, the way to enhance mimesis is to facilitate both contact and copy with that practice. In Germany for example students of business administration are today still doing a "Praktikum" (internship) at a company, the idea being that they get the chance to do what is supposed to be learned in a context where a given practice is well developed.
Czarniawska (2002:87) has argued that in times of mass education, mechanical reproduction and electronic communication, this strategy is often not considered to be feasible, mainly due to the costs involved. Instead practices are embodied in people or machines in order to be sent from one place to another and as such rely completely on 'mimetic machines' to simulate contact.
By employing a translation approach (Latour, 1987) and using the concept of mimesis as an explanation for why translations take place in the first place, I will provide a different reading of the fate of BPI (not one based on the evaluation of results), compared to the more traditional one informed by the notion of diffusion.
I will argue that although one of the main aims of BPI is the imitation of the BPI process and subsequently the imitation of "best" practices throughout the organization, the focus of the project rests with the facilitation of copy and not so much contact, thereby not achieving complete mimesis. The discussion will hopefully provide for a deeper understanding of the complexities that are involved in the introduction and imitation of ideas, in this case in the form of a knowledge management project, in organizing processes.

Best Practice in Sweden

In the empirical part of this paper I will introduce the host company, and promote an understanding of the context within which the idea of best practice was translated and made sense of.

I will introduce the concept of 'best practice' as a fashionable idea associated with knowledge management, change and improvement in organizations, look at how it is translated into the BPI project at IAB and then elaborate on the BPI-initiators'[1] work with gaining acceptance for the technology in the organization. Here I will draw on the material collected from the meetings between the BPI initiators and the local process managers and engineers from the factories.
I came into contact with IAB in August 2001. Over a year had passed since BPI had been "launched". I did 12 interviews with the BPI-initiators and users[2] in order to get an understanding of the BPI project; about what had happened so far, and about future goals. Apart from the interviews, I followed 12 meetings and telephone conferences involving the BPI-initiators and the users over a period of 1 year. I recorded all of the interviews and all but two of the meetings I attended, and transcribed these word for word. I was given access to a large amount of documents, presentation material, manuals, memos, etc., which further enhanced the descriptions from the field.

Industri AB

IAB was the leading global producer of products and components for among others, the electrical and heavy machinery industries. Its management had sensed recently that the company's competitive advantage over its rivals in the market had been at risk. Low-cost producers from Asia were flooding the market with their goods whereas IAB manufactured its products in a number of high-cost European countries. According to management a corresponding way to compete was through superior quality and new and innovative products and services. Therefore IAB is described as having changed its strategy over the past few years from being a "manufacturer of industrial components to being a global supplier of products and services." The stronger focus on continuous improvements in quality, and the supplying of new and innovative service solutions, for example in the form of monitoring systems or periodic inspections, brought with it a stronger focus on gaining *new* knowledge and the standardization of this knowledge, as expressed by one of IAB's Senior Vice Presidents:

> Knowledge means more to us than what it did 2 years ago. […] We have come to realize that knowledge is a sellable item…it's what we sell. We do not sell steel components […] we sell knowledge and skills. It is therefore of the utmost importance for us to constantly enhance, improve, develop and describe the knowledge we have. [bo010821:13]

"Reinventing the Wheel"

The aim of management was to find out what knowledge IAB already possessed and based on that what types of knowledge were needed in the future. Every employee should *know what he or she knows* and stop *reinventing the wheel over and over again*.[3] As one technology development manager said:

[1] I will refer to the people who worked with the implementation of the BPI process as part of the daily work activities as *BPI-initiators*.
[2] The process development managers and engineers out in the factories who were targeted by the BPI-initiators will be referred to in this paper as *users*.
[3] This is a metaphor often used in a knowledge management context. It was particularly appropriate in the case of IAB.

I see it as very important that one doesn't reinvent the wheel again, so to speak. All the problems that one has solved once before…hopefully one doesn't have to solve them again in a different place. [u021106:6]

At IAB the issue of knowing *what* one knows across functional or communal boundaries was described as highly complex. People working in similar practices with similar problems were often separated in time and space. This is why managers at IAB claimed that their employees *reinvented the wheel over and over again*: an engineer working with product design in Brazil did not know that the problem he had just spent 2 weeks on solving had already been solved before by an engineer working in the company's Jakarta plant. The managers argued that had he only known, he could have saved a lot of time and effort and could have spent more time on being innovative, on gaining new knowledge.
But it was not enough to simply gain new knowledge. How was management to know whether what they gained was really knowledge of value, or not? One senior vice president stated the need to be able to measure their knowledge in some way in order to be able to evaluate what they know. "We're not doing knowledge management for knowledge management's sake, we're doing it in order to save money,"[4] he said.

Best Practice Implementation (BPI)

In order to "counteract the reinvention of the wheel," share and evaluate the knowledge at their disposal, several knowledge management projects were up and running or in a state of being implemented at IAB in 2001. In this paper I will focus on the work with implementing one of them: the BPI project.

The BPI Project

Senior members of the Technical Board, the highest authority with respect to technology development and innovation at IAB came into contact with the idea of best practice in 1999 in the form of a report on knowledge management compiled by Sweden's Technical Attachés (STATT), a government-run institute specializing in studies and evaluations of innovative developments all over the globe. The report contained the example of how Ford, the American carmaker, worked with knowledge management in form of their Best Practice Replication (BPR) process.[5]
The Technical Board decided to establish a project group with the task of examining how BPR could be implemented at IAB. Ford had licensed its BPR process to a number of other companies and members of the project group met with the Ford representatives on three occasions at which the BPR process was presented and details of a possible transfer of the technology from Ford to IAB were discussed. In the beginning of 2000 the licensing process had to be aborted because of legal considerations concerning the software licences. The BPI-initiators decided to develop their own best practice system and were given the go-ahead and resources from senior management.
The system envisioned was very similar to Ford's and wherever possible the American carmaker was used as a role model. Both companies were considered to have so much in common, especially with regards to the workflow in their manufacturing processes, that

[4] Interview with a Senior Vice President [010821]
[5] According to the BPR homepage the process aimed at "Collecting knowledge, in this case gathering valuable practices, communicating knowledge about the practices to communities of practice/networks, and leveraging knowledge by actively managing the process" [www.fordbetterideas.com]

according to the BPI-initiators, even without licensing the BPR system its inherent properties and functionalities would be easily transferable and compatible with IAB's business activities.
Even though the BPI-initiators' aim was to "copy" the BPR system from Ford, the fact that they did not licence it prevented them from using the BPR terminology and software. Best Practice Replication became Better Practice Implementation (BPI)[6].

The BPI Technology – A New Vocabulary

The BPI-initiators defined two problem areas they would focus their efforts on. First, they had to translate the ideas from Ford to IAB and establish a "structure" for the BPI process. They did this by introducing a new vocabulary, a method frequently used when ideas are presented as new in organizations. One of the new terms was 'best practice'. According to the BPI-initiators a best practice was "an already implemented good practice (improvement, application)"[7]. It should already have been proven to work, and not "simply some fancy idea."[8] Three different types of best practice were identified: *organizational*, *work method* and *technical innovation*. The first type concerned the way work was organized and the identification of people or groups of people that *know*. The second type had to do with methods for engaging in certain work sequences. The third type concerned technical innovations, which ranged from "simple" work activities such as tightening a screw on a machine in a certain way, to complex activities that resulted in the development of new components or materials. The project leader defined best practice in the following way:

> I believe that it is important that one says that it is something which has already been done, which is proven, and from which you can calculate a profit…so that you can describe the process in terms of something else…. So, one part of this has to do with coming over the barrier of 'not invented here.' Because, if I do something and describe it to you, you shouldn't have to say to me: I don't know whether this works. It should instead be well documented and so believable that one has no reason to question it. It also becomes apparent that this is a very complex issue, because there are so many different levels of best practices. [b011112:2]

The BPI-initiators described the process of identifying, describing and spreading best practices as complex and in order to be able to organize, structure and control this complexity a whole new structure with new roles, new hierarchies and new terms was developed. It included the establishment of best practice communities organized around different parts of the manufacturing processes, different fields of knowledge, such as machine design, assembly, resetting[9] or metallurgy, for example. These communities formed the basis for the BPI process and were described as "platforms for sharing knowledge and experience" and a "competence area where Better Practices are spread" (BPI Handout Reference, 2000). A community encompassed a number of different factories and is constituted by people with different roles and different privileges: C*ommunity Head*, *Best Practice Coordinator* and *Reader*. According to the BPI-initiators such a standardized process would also allow for the description of best practice "in terms of something else", in this case in monetary terms, which played a central role in the BPI process.

[6] The Name "Better Practice Implementation" was later changed to "Best Practice Implementation."
[7] BPI Handout Reference (2000)
[8] Interview with a BPI-initiator [020806]
[9] Resetting is a term used to denote all the activities surrounding the adjustment of a machine from the stable manufacture of one product to the stable manufacture of another product from a predetermined product range.

Once the new structure had been negotiated, the BPI initiators began identifying and defining a "pilot community" and going out and telling as many other process development managers as possible about BPI in order to get them interested in the process. Those people high up in the divisional hierarchy that did show interest in the process were quickly recruited as prospective *Community Heads*, and these in turn then had the responsibility of finding people in the different factories under their authority that could take on the role of *Best Practice Coordinator*. Once these people were found the BPI-initiators held a series meetings and training sessions with them. Apart from showing the future users how the system was supposed to work and what was expected of them, these training sessions also aimed at further promoting the BPI process in the organization.
At the same time as the BPI structure was negotiated, the BPI-initiators and consultants discussed what IT-system BPI should run on. The platform that was decided upon was called Windchill, and had been introduced into IAB in the beginning of 2000 by IT consultants. Windchill was an Intranet-based system targeted at Product Lifecycle Management (PLM). The importance that the technology infrastructure was afforded becomes clear from the information material distributed at one of the training sessions:

"A Powerful communication-network is essential for the success of Better Practice Implementation. Therefore a web-based communication platform built on spider has been developed using Wind-Chill [sic!] as the backbone" [BPI Handout Reference, 2000:6]

Although the Windchill environment was described as complex and rigid, the system nevertheless had a number of advantages, according to the BPI-initiators. It was described as being superior to Lotus Notes, the main communication tool used by the engineers at IAB, because of the ease with which it could be customized and the possibilities it offered of establishing and representing process flows. The BPI project leader explains:

We had lots of discussions on whether it should be Lotus Notes based, or this Windchill system, and in the end we stayed with Windchill. We have to live with that. There are certain limitations with it, but. Windchill has a huge toolbox with a lot of small personal definitions. So, you customize very little of what you see. Lotus Notes on the other hand has a small toolbox and you have to program almost everything yourself. [b011112:5]

BPI was the first application to run on Windchill and the IT consultants worked feverishly in order to "adapt" BPI to the Windchill environment. They frequently met with the BPI-initiators in order to present a status report on their progress.
The efforts of the BPI-initiators concentrated in the beginning on spreading information about BPI and gaining acceptance for the technology. They believed that before it could work as it should a critical mass of communities, people and best practices had to have been identified and defined as part of the system. The engineers and managers out in the factories would not be interested in BPI "if there was nothing in the system," if nobody submitted any best practices and there was no other communal activity of any sort. Their dream was to make BPI the first thing users looked at when they came to work in the morning, interested in finding out whether new best practices had been submitted.

The BPI "Launch"

In 2000 the BPI process was "launched" at IAB. The BPI software had been tested on the Greenhouse server[10] and had been given the go-ahead after trials had shown that it was running smoothly. At the start the system consisted of the "pilot community," which focused on the resetting area of the manufacturing process and included 6 factories. The BPI-initiators were confident that once best practices would come streaming in the BPI process would become self-propelling, attracting more and more participants.

Some of the identified *Community Heads* did indeed begin to define "their" communities and a handful of them were established in the system. According to the BPI-initiators every department in the organization was invited and able to define and establish communities and participate in BPI. They explained the strong focus on the manufacturing process by arguing that it was easier to define and evaluate improvements within this field, because of the concrete, explicit nature of the technical knowledge in and around the manufacturing processes.

Soon after its "launch" it became apparent that the Windchill platform and the whole IT network were not performing as had been expected by the BPI-initiators. At telephone conferences where the aim was to create and submit best practices and send them through the system, the participants often found themselves spending more time on fixing problems with the network or the telephone conference equipment than "simulating the BPI process." While the network performed efficiently in Sweden, Germany and France, simulations and training sessions involving more "remote" places in Asia or South America were characterized by technical difficulties. The time it took for a best practice to be created once the *Best Practice Coordinator* had described it and submitted it on the BPI homepage became a central issue in the meetings and discussions between the BPI-initiators and the users.

The response from the engineers and process development managers out in the factories in general fell far short of the expectations of the BPI-initiators. The members of the "pilot community" were not using BPI; very few best practices were submitted and subsequently implemented in other places. Other Community Heads were hesitant to get involved in the process, and said that they wanted to keep a "low profile until they solve the problems with the system."[11]

As a whole the users perceived the project as not very successful from an early stage. Although there were certain aspects of BPI that they described as important to them, their interests had not been sufficiently considered by the BPI-initiators when they began discussing a structure for the BPI process and the system that would facilitate it. One *Community Head* commented on this:

In my opinion more of us users should have been involved from an earlier stage. The system is…how should I say…it is not very flexible, constructed to rigidly. And one problem that we experienced is the fact that there are

[10] The Greenhouse server was IAB's test server, which simulated the IT infrastructure used in the company. Only once the software was working on the Greenhouse server was it given the go-ahead to be 'launched' throughout the organisation.

[11] Interview with a Community Head [020523]

so many passwords in the process, which one has to remember; and they have a limited lifespan. And because we don't work with BPI on a daily basis, we have had the problem that our passwords have expired…and it is very inconvenient to update them again. This is unnecessarily convoluted. And there I believe one should have had more users involved from the beginning. [g020523:14]

Even the improvements that the BPI-initiators had promised – the sharing of knowledge across functional boundaries and the standardization and evaluation of knowledge in the form of best practices were questioned by the users and reluctantly endorsed by senior management.

The BPI-initiators thought that senior management would welcome BPI, because of the possibility it offered of evaluating improvements. They described senior managers as predominantly interested in costs and benefits when it came to change management and work with improvements, and presented BPI as a process that when implemented would result in huge, measurable benefits. These benefits would be there for all who entered the system to see, represented in a list of benefits per community that were added together to produce the total benefits for the whole system. The BPI-initiators were aware of the difficulties that might be associated with measuring best practices, but this did not distract them from describing one of the main advantages of BPI as the possibility of describing best practices "in terms of something else" and making them comparable and open to evaluation. Ford had been able to calculate benefits from their BPR project to amount close to 1 billion US$. The BPI-initiators believed that they would be able to do the same thing once they had found the 'right' way of measuring improvements.

But the users out in the organization found it very difficult, if not impossible to put a value on the best practices they had submitted. As one *Community Head* said:

How is this supposed to work? It is very difficult…to say what the benefits will be. How can we measure things like improvements in the quality of work…worker satisfaction? [c030313]

Because of the difficulties they saw with evaluating the best practices in monetary terms, they did not find it meaningful.

The BPI-initiators were in a dilemma. In their view the main difficulty was to communicate the potential value of the BPI process to the users. The BPI-initiators could not understand why the people out in the factories were not using BPI. They argued that many people were complaining about the fact that so little knowledge was shared between groups or factories. This, they believed, was a real problem. Now that they had created the BPI process, which would facilitate knowledge sharing across the organization the people that had complained were not using it. The BPI-initiators linked this to the problems they were encountering with the technology. The users, a BPI-initiator said, were far too focused on the technology and needed to broaden their mind. Instead of complaining they should start discussing the BPI process with them. They felt that too much time was spent at the training sessions on trying to cope with technical problems and that this time could be spent more effectively on simulating and discussing the advantages of the BPI process.

Although the implementation of BPI was not going smoothly at all, the BPI-initiators saw the idea "as such" as a success and maintained that the only negative feedback they had received from the users was that the Windchill system was complex and unstable, and that the whole process was one more thing to maintain. The BPI-initiators differentiated between the "idea of best practice implementation as such" and the technological environment required to facilitate it, and were thus unable to make any substantial changes, which were required to mobilize more support for BPI.

BPI is in Trouble!

The most obvious way to reflect on the fate of BPI three years after its initial "launch" is to view it as a failure of diffusion theory. The BPI-initiators that conceived the project were not able to spread the BPI technology throughout society (in this case the IAB organization). As the BPI process went 'on line' in 2000 most of the prospective users (*Community Heads*, *Best Practice Coordinators* and other process development managers and engineers) remained unimpressed by the promises made by the BPI-initiators and continued to engage in their 'traditional' established routines of sharing knowledge and coordinating their activities, such as periodic face-to-face meetings, telephone conferences or using their *local* 'knowledge systems', information databases built on Lotus Notes. One process development manager said:

> We today have a database that runs on Lotus Notes…and that everybody has access to. And there we have information about the project, our board meetings, surveys of the competitors' products…this customer demand…QFD. There you will also find our improvement tools and local factories have the opportunity to report back…so…we have worked with this for a while now. […] And it is very frequently visited for being a project database. Some of the corporation's big databases are not that frequented. [g020523:9]

The users described the Windchill system as complex and rigid and from the beginning complained about technical problems: the system broke down frequently, it took too long time to create and submit a best practice and it was too complex. Many of the *Community Heads* were responsible for work groups in which they were already actively, and according to them successfully, working with IT systems to help them collect and share their knowledge with one another. They did not see the point in needing new passwords, not being able to add their own documents as templates to the system, having to wait too long when submitting best practices, or having to add, what they described as a whole lot of administrative work to their normal routines. From the point of view of the users, BPI simply did not work well enough for them to bother using it.

From the point of view of the BPI-initiators on the other hand, the users out in the factories simply did not understand the tremendous benefits that they assumed as inherent in the BPI technology. Even though BPI would make the lives of the engineers so much easier, the BPI-initiators argued, they still insisted on doing things the way they had done them before.

Both ways of understanding the fate of BPI, the technological (shortcomings of the system) and the social (shortcomings of the users), are not wrong, but they help us little in explaining why the project went as it did. As Holmström and Stalder (2001) have argued, if we combine these two ways we run the even greater danger of ending up with an obvious and frequently mentioned statement that the *new* technology and the *existing* society did not fit. This lies at the heart of diffusion theory, which Latour (1987) has suggested is particularly evocative for practitioners, because its main ideas can be summarized and used with relatively little effort, but help us little in understanding the context for social action.

For the BPI-initiators the idea of BPI had a fixed, given set of attributes that they assumed to be desirable. They set out and focused their efforts on removing any obstacles in the implementation process, above all, changing the attitudes of the users towards BPI. Their idea of doing so was to make improvements in the system; such as making it more stable, changing its appearance or cutting the time it took to submit a best practice. The IT consultants had to constantly work with these improvements in performance and other more

'cosmetic' issues concerning the appearance of the BPI homepage[12]. Due to the assumed inherent superior attributes of BPI, such as the facilitation of knowledge sharing throughout the organization, continuous improvement, standardization, better quality control and the evaluation of best practices, the BPI initiators believed that the users would eventually "come around."
Many of these apparently inherent qualities of BPI were indeed not inherent because they addressed problems that did not exist, or were simply not significant enough for the users to warrant such a major change in their daily work routines.

Discussion

The BPI initiators at IAB set out to spread the BPI model throughout the organizing processes. When they failed to mobilize support for BPI after its 'launch' they had an explanation for what had gone wrong: the users did not understand BPI properly and the technology was not working.
What they did not realize was that the idea of BPI had to be translated into local contexts, and as such could be deflected, transformed, appropriated or outright blocked by the local actors based on their local experiences. Only if the translation was successful would it inscribe certain properties in the technology (Joerges and Czarniawska, 1998) and stabilize it. In the case of BPI the translation did not succeed, because three conditions for such a translation to take place as outlined by Latour (1987) were not met. First of all, the problems that the BPI-initiators saw, the users did not see. Secondly, the users did not perceive the BPI technology as straightforward and user-friendly and thirdly, the BPI-initiators did not manage to present the BPI technology as an abridgement of the users' existing routines due to the required training sessions, the unfamiliarity of the users with the Windchill system and the difficult processes of establishing communities and submitting and implementing best practices. So, why then should they change their routines and start working with BPI?
The idea is blocked, but this does not mean that the translation stops. It continues in time and is constantly changing and subjected to negotiations, compromises and subversions. In the case of BPI the project members attempted new translations, but because they were informed by a notion of diffusion the learning effect was minimal, and the translations were blocked again and again. They were not able to mobilize the support needed for the BPI technology to move from a prototype to a usable system.
What can we learn from this discussion of the introduction of the BPI model in a large Swedish organization? Although the idea of best practice is a mimetic one, the way in which it was translated at IAB into the BPI model did not enhance mimesis.
Mimesis requires both a contact and a copy, but in the case of BPI, as is the case with many other knowledge management technologies, it is difficult to speak of contact. There was no established BPI process that the engineers and process development managers out in the factories could have contact with, so they had to *copy* a certain procedure, transferred to them in the form of abstract rules – the BPI model. This abstract model had to be translated into local practices where it was bound to be influenced by that with which it had a direct contact. The engineers' contact with their own past experiences for example, was unavoidable. These engineers worked in groups, so –called "Centres of Excellence" for example, where they had well-established practices for sharing their knowledge and expertise. They met on a regular basis to share their experiences and they had there own databases in Lotus Notes, worked

[12] An example of one of these cosmetic improvements was the rearranging of the text fields on the page on which users were supposed to describe their best practices before submitting them.

with them, filled them with content in an unstructured manner and shared that content with other people that were interested in it. Through the BPI project these engineers and process development managers were provided with a new method for using mimesis to organize their activities, but this new method had a tough time competing against the established local practices. It was a recipe for success, which was to be imitated throughout the organization. But local variations to the model were not welcome, because of the technology's constraining mechanisms to standardize, compare and evaluate best practices. As such the BPI-initiators, who pursued the aim of facilitating the imitation of the idea of best practice implementation did not manage to enhance mimesis and create the possibility for both contact with and copy of that idea.

Bibliography

Czarniawska, B. (2002). ***A Tale of Three Cities, or the Glocalization of City Management.*** Oxford, Oxford University Press.

Czarniawska, B. and G. Sevón, Eds. (1996). ***Translating Organisational Change.*** Berlin, Walter de Gruyter & Co.

Davenport, T. and L. Prusak (1998). ***Working Knowledge: How Organizations Manage What They Know.*** Boston, Harvard Business School Press.

Dixon, N. M. (2000). ***Common Knowledge.*** Boston, Harvard Business School Press.

Holmström, J. and F. Stalder (2001). "Drifting Technologies and multi-purpose networks: the case of the Swedish cashcard." ***Information and Society*** 11: 187-206.

Joerges, B. and B. Czarniawska (1998). "The Question of Technology, or How Organizations Inscribe the World." ***Organization Studies*** 19(3): 363-386.

Latour, B. (1986). The Powers of Association. In J. Law (Ed), ***Power, Action and Belief - A New Sociology of Knowledge***. London, Routledge & Kegan Paul.

Latour, B. (1987). ***Science in Action.*** Cambridge, MA, Harvard University Press.

Leonard-Barton, D. (1995). ***Wellsprings of Knowledge: Building and Sustaining the Sources of Innovation***. Boston, MA, Harvard Business School Press.

McCabe, D. and D. Knights (2000). 'Such stuff as dreams are made on': BPR Up Against the Wall of Functionalism, Hierarchy and Specialisation. In D. Knights and H. Willmott (Eds.).***The Reengineering Revolution***. London, Sage.

Nonaka, I. and H. Takeuchi (1995). ***The Knowledge Creating Company***. New York, Oxford University Press, Inc.

O'Dell, C. and J. Grayson, C. J. (1998). ***If Only We Knew What We Know: The Transfer of Internal Knowledge and Best Practice***. New York, The Free Press.

Ruggles III, R. L., Ed. (1997). ***Knowledge Management Tools. Resources for the Knowledge-Based Economy***. Boston, Butterworth-Heinemann.

Woolgar, S., Ed. (2002). ***Virtual Society? Technology, Cyberbole, Reality***. New York, Oxford University Press Inc.