



Conceptions of ‘Us-and-Them’ in Organizational Reification, Translation and Legitimation Processes

-Two ‘Best practice’- and business process initiatives in Statoil oil and gas operations

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Abstract

How does the conception of ‘us-and-them’ develop in change initiatives that have the aim to develop new business processes? The redesign of major business processes are presented through the experiences of two ‘best practice’-projects in Statoil (the state oil company of Norway). Very different notions of ‘us-and-them’ developed between users and developers in these cases, as a consequence of boundary and identity construction by various organizational groups. We address how communication, and coordination (via different enrolment strategies and role playing) in ‘best practice’ development or business process projects lead to different results because of different conceptions of ‘us-and-them’. Reification, translation and legitimation are three aspects of communication and coordination processes that are addressed in the cases in order to understand how conceptions of us and them develop between users and developers in business process development.

Keywords: Process orientation, reification, translation, legitimation, enrolment, information system design & redesign and best practices.

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1 Introduction

There is a growing interest in the communication, representation and action mediated by information technology in work organizations. An important reason for this is that a growing part of the properties of the organization and its environment is accessed by digital representations (signs) and because an increasing part of work consists of interpreting these representations (action) (Andersen & Goldkuhl 2005). Such representations tend to be closely linked to boundary and identity construction, in the sense that groups or communities in organizations will use these representations to categorise themselves vis-à-vis others. Representations and signs are mediums for communication and collaboration, and therefore crucial in order to understand how notions of ‘us-and-them’ develop. In the end representations made by particular groups will signify ‘us-and-them’ relations. This signification process will also have conse-

quences for how groups view and act towards each other in business process development.

In this paper we are especially interested in addressing a particular representation often spread via information technology; tagged 'best practice'. 'Best practice' development is comparable to what Mikael Lind (2006) has called a business modelling approach. This is an endeavour that tries to describe a present organizational practice (as is), reflect over this practice and envision a future organizational practice (to be). The aim is to map (read represent) concrete daily work activities and the various tasks of which this activity consist, the internal relations between tasks, relationships with other activities and what organizational actors do what tasks. Various IT systems are used to represent the 'as-is' and the 'to-be' and to enable the subsequent implementation of the 'best practices'. These representations can have various symbolic manifestations, as that of hardwired workflows in ERP IT systems like SAP, in flowcharts or in texts. We understand 'best practices' to be written (textual) or symbolic representations of roles and work processes (i.e. flow charts) that describe a more or less legitimate conception of what is 'best in class' in relation to a specific activity or business process. 'Best practices' are vital subsets or elements of organization business processes, regardless of the classification of these business processes, see for instance Lind (2006) for such a classification.

There exists a substantial literature on 'best practice' development in organizations and the reader should go elsewhere to obtain details on this (Hammer & Champy 1993; Davenport 1993; Hammer 1996; Lind 2006). Much of this literature uses 'best practice' development often integrated with business modelling, provide a recipe for how to embark on such projects, whether it is within business process re-engineering (i.e. Hammer & Champy 1993) or knowledge management (Nonaka 1994). However, whether these representations are 'best practices' or more abstract 'business processes' they tend to describe what Gasser (1986) called primary work tasks. Primary work is the activities that directly address the specific agendas and goals of the work situation often tied up into a larger formal structure via an espoused division of labour. It does not address all the necessary improvisation and articulation work that Gasser (1986) argues is necessary to handle contingencies in the primary work tasks.

Further, there also exist numerous examples in organization studies that the idea of 'best practice' development, (that a representation developed in one context can be reified and moved to a new context) is absurd or a fad (Huczynski 1996, Hepsø, V 2002). Still, the development of these 'best practice' representations can trigger sense-making processes, and arouse processes that are more than purely instrumental. For the organizational researcher 'thin descriptions' (Geertz 1973) of representations like 'best practices' can become a vantage point for 'thick descriptions' of work practice and action that invoke human sense making, communication and construction of meaning in organizations. The authors have a pragmatic conception of 'best practice' development. We acknowledge that 'best practice' development can be both instrumental and reductionistic, but still argue that much interesting organization development work has been conducted under that flag. As a consequence of this it should be given a decent research attention.

In this paper we address the communication and coordination practices that mould the career of representations like 'best practices' through action. To be able to analyse the career of representations like 'best practices' we will use the concepts of

legitimation, translation and reification. These are concepts that are particularly fit to address the career and the pragmatic tests such representations go through in action and practice. We describe a process of legitimation, translation and reification that goes on continuously on several arenas. Well-described distinctions between developer and users matter here. We intend to show how the developer's arenas translated the organizational practices and challenges and reified the solutions, while the users on the other side translated the symbols and solutions made by the developers, reified them and legitimated it or not. This is a setting where user and developer looked upon the situation as that of *us-and-them*.

Our research question is as follows. *How will different enrolment strategies and role playing in 'best practice' development projects lead to different results because of different conceptions of 'us-and-them' between users and developers?* We address how communication, and coordination (via different enrolment strategies and role playing) in 'best practice' development or business process projects lead to different results because of different conceptions of 'us-and-them' among users and developers. We address the role representations play in the development of notions of 'us-and-them'. Further we describe why these two initiatives led to different results, and we seek to explore the explanatory factors of different conceptions of 'us-and-them'. We start by describing the methodology used in the two cases. From there we describe reification, translation and legitimation, three concepts that are vital if we are to understand the career of the representations in the case and how these representations are linked to notions of 'us-and-them'. We then go through the cases one by one, describing it as an enrolment process in the light of reification and translation perspectives. Apparent links between representations, boundary and identity construction by various organizational groups are presented. Here we focus on the scope of work or goals, the dominating actors and their roles, the process of developing best practices or business processes, the use of representations in articulating and spreading the best practices and the development of 'us-and-them' relations in the cases. Finally, we try to compare some aspects of the cases using them as analogues to address implications for action. Here we use legitimation in relation to reification and translation in order to describe how conceptions of 'us-and-them' develop in business process development.

2 Reification, Translation and Legitimation

Our assumptions on communication, representation and coordination are based on the constructionist idea that what we do is a consequence of our internalized ideas (Berger & Luckman 1966). When it comes to 'best practice' or business process development, this means that the actors act in accordance with his or her conceptions of the most appropriate alternatives when acting. If a group of actors are to behave in a common way, they have to internalize common ideas. If we are to work according to common business processes we have to internalize the same understanding of the business processes and how to execute them. Representations or signs play an important role in conveying this understanding. Such common ideas are here defined as local knowledge (Geertz 1973) and tend to be the result of collaboration. Ideal 'best practices' becomes common practices as a consequence of this internalization process, where notions of primary work develop articulation work through practice.

In the light of the articulation work tradition (i.e. Gasser 1986; Hepsø, V 1997; Hepsø, V 2000) this local knowledge will manifest itself in action as both primary work and articulation work and institutionalized practices are manifestations of this local knowledge. By collaborating and communicating, people develop a shared notion of the appropriate ways to act. This shared notion of how to act cannot be taken for granted, it must be continuously maintained in practice to remain a working order. To maintain this working order groups use various material and immaterial symbols to mark the terrain of who is inside or outside the group. Some of these symbolic markers are maintained by legitimating and justifying narratives (Bowker and Star 1999; Douglas 1986). This categorization helps to draw a pretty clear insider and outsider boundary. People learn these categories when being part of community of practice, when learning the ropes and rules of the practice, engaging in the objects of the practice, whether these are texts, hardware tools or information technology. The more you are inside a community the more you forget the strange and contingent nature of these categories seen from the outside.

Legitimation	Translation	Reification
<p>Four levels of legitimation (Berger & Luckman 1966):</p> <ol style="list-style-type: none"> 1. <u>Verbal descriptions of how</u> i.e. telling how things are done and explaining phenomenon using notions 2. <u>Explanations of why</u>, i.e. myths, stories and other normative expressions for how to do things 3. <u>Formal descriptions</u>, i.e. formalization of right and wrong, general theory decoupled from concrete action 4. <u>General and context independent theories</u>, i.e. encompassing the institutional order in a symbolic totality <ul style="list-style-type: none"> • Establishing 'best practice' as a new standard is about legitimation on level 3 or 4. depending on how general the business process is intended to be • The business process developed have to be aligned with existing descriptions of how and of why, i.e. based on the earlier legitimating practices in level 1 and 2 and translated to the existing local knowledge 	<ul style="list-style-type: none"> • The way a user or developer interpret their interests, in the sense of re-presentation or re-interpretation of others interests to one's own (Latour 1987) • One and the same interest or anticipation can be brought forward in multifarious ways • Users and developers interests are translated into specific programs and agendas of various community of practice. Programs and agendas are further translated as texts into more general and unified requirements within and across communities of practices and become adopted by the users who translate them into the context of their specific work tasks and situations • In the end these requirements might be translated into one and the same 'best practice', if the interests of the various communities are aligned • If not, non-aligned translations will co-exist, unless the user or the developer is strong enough to create the dominant translation and suppress the others • 'Best practices' are moulded into a stable social fact through complex socio- 	<ul style="list-style-type: none"> • The process of objectifying abstract ideas and making the object meaningful in a common way to a group of actors • Help to explain how abstract ideas acquire a life of their own independent of their originators, in such a way that the ideas and the actors behind the ideas no more are visible (Silverman 1971) • Development of best practice and the intended interpretations of the 'best practices' are then to be regarded as reification • Balance between participation and reification (Wenger 1998) The developers and the users have to participate and to be part of the reification • Those interacting in the development of the 'best practices' and in the construction of meaning, develop a common understanding of the 'best practices' and have the possibility to influence the content of the 'best practices'. They also develop a shared interpretation of the 'best practices' • Berger and Luckmann (1966; 106) define reification as "the apprehension of the products of human activity as if they were something other than human products – such as facts of nature, results of cosmic laws, or manifestations of divine will."

	<p>technical negotiation processes</p> <ul style="list-style-type: none"> • Legitimated 'best practices' are the consequence of a process, where a non-aligned group of interests are aligned under an umbrella of acceptable truths 	
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Figure 1: Legitimation, translation and reification defined

We will in this paper *use* the notion of 'us' and 'them' to describe the categorization processes that develop between various social worlds or communities of practice when taking part (read representing, and communicating) in the change of business processes. The development of a notion like 'us-and-them' is therefore a basic categorization process where the group that has developed their local knowledge and institutionalised common practices will identify with this group and think of these people as 'us'. A different group that could be Management, consultants, a change management team or others having the role of developer of 'best practices', will easily be regarded as 'them' since their life world differ in terms of representations, i.e. that categories, objects and their practice is different compared with 'us'.

The categorization and institutionalization processes described by Bowker & Star, Douglas and Berger & Luckman depict basic elements of communication, representation and action. To describe how communities of practice maintain their institutionalization and categorization (of who is inside and outside) in change processes we have chosen to focus on three complementary concepts; legitimation, translation and reification. The major reason for employing these three concepts becomes evident later in our empirical cases where our focus is on the scope of work (goals of the project), the dominating actors and their roles, the process of developing best practices, the use of representations in articulating and spreading the best practices and the development of 'us-and-them' relations in the cases. See Figure 1 for a description of the three concepts.

The first concept is *reification*. Reification, as used in this paper, is the process of objectifying abstract ideas and making the object meaningful in a common way to a group of actors. To Berger and Luckmann (1966) reification is "a modality of consciousness". Silverman (1971) developed this notion of reification to explain how abstract ideas acquire a life of their own independent of their originators, in such a way that the ideas and the actors behind the ideas become invisible. Wenger (1998) emphasize the development of the modality. Reification is then the construction of meaning where meaning is ascribed to phenomenon as artefacts, actions, symbols or roles. Development of 'best practice' or business processes and the intended interpretations of the 'best practices' are therefore to be regarded as reification. Wenger (Wenger 1998) argues for a balance between participation and reification. The developers and the users have to participate and be part of the reification process. Those interacting in the development of the 'best practices' and in the construction of meaning, develop a common understanding of the 'best practices' and have the possibility to influence the content of the 'best practices'. They also develop a shared interpretation of the 'best practices' or business processes.

The second concept is *legitimation*. If the 'best practices' are to be regarded as the most appropriate practices by the users, they have to legitimate them. We relate our notion of legitimation in relation to communication and coordination of business processes to the discussions of Berger and Luckman (Berger and Luckman 1966). They present four levels of legitimation: i) verbal descriptions of how, ii) explanations of why, myths, stories and other ways of normative expressions, iii) formal descriptions, and iv) general and context independent theories. Establishing 'best practice' as a new standard is about legitimation on level 3 or 4. The level is dependent on how general the standard is intended to be. This model points out that the standard developed have to be aligned with existing descriptions of how and of why. In other words, a new formal standard have to be based on the earlier legitimating practices in level 1 and 2 to be legitimated on level 3 or 4. If the formal descriptions introduced differ from earlier legitimated concepts on level 1 and 2, the new formal descriptions have to be translated to the existing local knowledge, represented by Berger and Luckman's level 1 & 2, see Figure 1.

The last concept presented is *translation*. We want to use the term translation in addition to reification and legitimation to get a firmer grip on the career of 'best practices' or how they appear, evolve, change and often subsequently die. While reification is the process of objectifying abstract ideas and making the objects meaningful in a shared way for a group of users and developers, translation is the way a user or developer interpret their interests, in the sense of re-presentation or re-interpretation of others interests to one's own (Latour 1987;108). With a translation, one and the same interest or anticipation can be brought forward in multifarious ways to create broader support. 'Best practice' or business process development can be seen as translation, where some developers try to enrol some users. In the social and organization sciences Bruno Latour (Latour 1987; Latour 1999) and Barbara Czarniawska (Czarniawska & Sevon 1996) use 'translation' to describe an alternative to how ideas and objects like 'best practices' travel in organizations. Users and developers interests in the two Statoil cases in this paper are translated into specific programs and agendas of various community of practice. These specific programs and agendas are further translated as texts (Hepsø, I 2004) into more general and unified requirements within and across communities of practices and become adopted by the users who translate them into the context of their specific work tasks and situations. In the end these requirements might be translated into one and the same 'best practice', if the interests of the various communities are aligned. If not, non-aligned translations will co-exist, unless the user or the developer is strong enough to create the dominant translation and suppress the others.

In our perspective, that coincide with Latour's and Czarniawska's world, new representations or signs like 'best practices' have very little inherent 'energy' and need to continuously be filled up with new forces by aligning and enrolling human and non-human forces in the targeted organization. For 'best practices' to travel within Statoil EPN people must pass 'best practice' ideas on to each other and translate these texts to their own frame of reference. 'Best practices' can only be moulded into a stable social fact through complex socio-technical negotiation processes. Legitimated 'best practices' are the consequence of a process where non-aligned groups of interests are aligned under an umbrella of acceptable truths.

The cases are built around the following structure. We give an introduction to the cases, where we present the business of Statoil briefly, set up the *scope of work or*

goals and the *dominating actors and their roles*. When introducing the case we also present the *methodology* that was used in the cases. A more detailed presentation of the cases follows after this introduction. Here we focus on *the process of developing best practices* or business processes and the use of *representations* in articulating and spreading the best practices. We focus in particular on the *development of 'us-and-them'* relations in the cases. These aspects (in italic above) will later be taken further in the discussion of the cases. The three concepts of reification, legitimation and translation will also be taken up again when we analyse the findings introduced in the cases.

3 Introduction to Cases and Methodology

Statoil, the state oil company of Norway, has over the last ten years conducted numerous 'best practice' development projects in which the Statoil organization has been involved in articulating the new practices. Several of these initiatives have been carried out under the flag of developing new business processes. We are presenting two examples of how Statoil conducted 'best practice' development projects around the turn of the millennium. Information technology has played an important role both in communicating and representing these new best practices. In this sense information technology has to a large extent been a medium for organizational development, and this organizational process must be understood with this technical mediation in mind. The medium of representations in the two cases are not that different since Intranets have been used to a large extent to discuss and implement the representations, what differs are the ways the actors developed and communicated the representations.

Our two cases from Statoil describe the relationships between a developer and a user through the representations that are developed. The developer is a system responsible, a group/organizational unit that is given the responsibility to improve a particular business process. To be able to manage these activities they have to involve the organization of users for several reasons. First, the 'developers' are not experts in the details of the work setting they are providing new business solutions. They need feedback on the applicability of the solutions and business processes they are developing. Second, they need to have an ongoing discussion and communication with the users, developing a shared language if they are to, first; envision or develop these new work practices, later; implement the concepts and business processes developed. To be able to do this they have to build various representations to communicate the essence of their intentions. In the two Statoil cases this is done very differently even though the same operative environment is the user organization.

Statoil's primary activities are exploration of new oil and gas fields, operation and maintenance of a number of offshore oil and gas production installations, operation and maintenance of refineries, transportation, marketing and distribution of intermediate and end products. The operational community in Statoil addressed in our cases is organized in Exploration and Production Norway (EPN). They consist of the people that work on the 15 oil and gas producing assets that Statoil operates on the Norwegian continental shelf (NCS), and the land organization that supports these offshore environments.

All names of people in the cases of this paper are constructed.

3.1 Introduction to the BRA-project

The first case is the development of new work processes and SAP-solutions in operation and maintenance (an integrated management information system) in Statoil. SAP is the market leader of ERP systems. These systems are modular, which make all modules communicate with each other. Information entered in the plant management module can easily become integrated with another like the accounting module. The design enables process oriented organizational models (i.e Lind 2006) because key performance indicators can be defined across functional borders.

The BRA-programme (or better, faster administration in English) was an ambitious Statoil change programme in the late 90-ties. The mandate was to develop and implement SAP-solutions and new business processes, namely 'best practices', as common standards for the entire company. The activities in the company were designed as six business processes; plant maintenance, economy/finance, human resources; integrated supply chain; sales and marketing and project management. The new business solutions should be developed during the first year. Then the business solutions should be implemented in Statoil Denmark as a pilot-project. After that there would be a sequential multi-sited implementation for rest of the company. The pilot-project lasted for six months, while each local implementation project lasted about three months. The ambition was to make all activities among the approximately 17000 employees be in accordance with these 6 standardized processes. The idea was to involve highly respected and experienced personnel from all parts of the company in the development process. However, the business assets operating in the North-sea (EPN) found it difficult to provide the resources BRA wanted to enlist into the change activities. BRA, as a consequence, had to go externally, using both consultancies and new recruits that had little company or offshore experience. With a large consultancy involvement, some newly recruited employees, and too few of the respected and experienced personnel, BRA found themselves in a difficult position to earn respect and develop trust in the operative environments. EPN prioritized their resources within two main areas, first; to keep the oil- and gas-operations up and running, and second; future oil- and gas business field development in order to increase the production and future income.

In Statoil, as in most other companies, employees are used to change programmes. Most change initiatives had been mainly structural, and the daily routines could continue as usual. 'Business as usual' was the attitude employed to withstand the change initiatives without too much disturbance in their area of responsibility. The EPN attitude towards top-down change initiatives remained the same when meeting BRA. We could see how EPN's perception of their identity influenced the translations taken. EPN had an organizational change project quite parallel in time with BRA. They regarded this project as their organizational development program for the late 90-ties. BRA was initiated by CEO management, and EPN management saw this programme would affect them. EPN wanted to be in charge of the organizational development themselves. They did not like the idea of shopping business processes externally, or let go of the control of these challenges the BRA-programme would bring along. Such an initiative could endanger the level of health, environment and safety (HES) in the offshore production system. HES is of vital importance when you are living and working in a dangerous environment like an oil- and gas-installation. In addition, 1% in reduced regularity on the production systems offshore would lead to lost income of substantial value. Change programmes can represent potential financial

and HES risks. EPN had much of their identity connected to an understanding of themselves as a dominant industrial contributor and 'money machine'. They expected to be given a leading role and would not let externals be in charge of future developments within their domain.

The *dominant actors* in the case were the project organization and EPN. In this paper we discuss how different conceptions of 'us' and 'them', as users and developers, influence the result of "best-practice"-projects. In the BRA-project EPN was the user organization and regarded as 'us', while the BRA-organization was seen as 'them' from the point of view of EPN. Both actors reported to the CEO-management. The BRA-organization consisted of both consultants and Statoil employees. The consultants filled different roles, interests and knowledge compared to the Statoil employees engaged by the BRA-organization. Several business assets comprise EPN. These business units might differ in many respects, but to simplify this story we present them as equal here. When it comes to the involvement of 'us and them' in the BRA-process, the business units in EPN were aligned through business objectives and other corporate initiatives. They were also aligned through established cooperative arenas as the meetings for the local implementation leaders scheduled every second week through the BRA-period and via the discipline network for operations and maintenance.

If we address the *methodology* of the SAP-implementation case, it is from the PhD work in sociology of one of authors (Hepsø, I 2005). She studied the change programme from the development of the 'best practices' during 1997, through discussions across the company until the final implementation in operative units three years later. Her approach is ethnographic (Geertz 1973) in the sense that the research design was inductive. Observations of the informants in their daily life and the observation of the core arenas of the discussions with relevance of the change programme were the main source of information. Interviews and internal information were important supplement, and some quantitative studies supported the interpretation of the material. Balancing of the different voices of interests and agendas have been emphasised in the research design. This means that both voices of developers and users were given reasonable attention in the study. The study has prioritized to balance the use of operative and administrative informants; staff in local and head office positions, the arenas specific for the change programme and programme independent arenas. All relevant arenas have been available to the researcher. This made it possible to get close to the phenomenon by spending much time within these arenas for over three years. To avoid getting too familiar with the research setting, and maintain the critical and outsiders view, the discussions at the research institute at the university became important.

3.2 Introduction to the Crane Case

The scope and goals of the second 'best practice' development example is related to improved health, environment and safety (HES), competence development, or improved quality of working life in crane and lifting operations. At the turn of the century Statoil operates around 50 offshore cranes and a community of 400 crane operators and banks men are directly involved in crane and lifting operations, indirectly over 1000 with the personnel working on the supply vessels owned by the shipping companies that operate on the Norwegian Continental Shelf. Crane and lifting operations are high-risk activities and Statoil had a number of serious and fatal accidents

related to these types of operations. From the mid 1990's Statoil started to address the sources of the many unwanted incidents in the crane and lifting environment through a number of campaigns and improvement projects (Hepsø, V 2002). The case addresses the development of shared practices within crane and lifting operations across the offshore installations and took part from 1999 to 2001. This case is actually related to the *development of common practices*, but the notion of 'best practices' was used by the project because this was a 'buzz word' or tag that was widely used in the company to describe similar initiatives. From here on we will continue to call these representations in this case 'best practices'. This project was run concurrently with the development of crane simulation collaboration training and the development of certification of apprenticeship within this domain, of which this work provided important input.

If we look at the *dominating actors* in this case; 'them' is the onshore technical engineering environment (OMT). OMT has since the mid 1990's run several improvement projects within crane and lifting operations to analyse the root causes of the poor safety performance in the domain. They perform expert quality assessments on all of Statoil's cranes to ensure that the crane comply with government regulations in standard and quality. The engineering personnel in OMT have over time earned trust and confidence in the operating assets. They consist of internal Statoil personnel that have a high credibility and a large network on the offshore installations. By mobilizing a number of opinion leaders in the offshore community they are able to find support and legitimation for their projects. Offshore personnel are working in the OMT organization for shorter periods of time; this enables them to have close contact with the communities offshore. OMT uses a bottom-up enrolment strategy to align the offshore crane community. Management support is provided and looked upon as important, but the day to day change activities are conducted in the language (representations) and via communication channels and efforts that the offshore communities understand. Banks men and crane operators have in the past been regarded as low status positions on an oil installation. However, crane operators in particular have a strong community identity that crosses offshore installations.



Figure 2: The Gullfaks installation. On the right a supply ship is loading cargo at night. Pictures courtesy of Statoil.

Let us address the *methodology* used in this case. The author of the case is an anthropologist with some basic IT systems development skills. Since he is employed by Statoil and has worked with key OMT people in the past he was easily given access to the research setting. The overall methodology employed in the crane and lifting case was action research (Greenwood & Levin 1998) and participant observation. The anthropologist was a 'friendly outsider' in the community that conducted on site and participant observation of crane and lifting operations. He facilitated around 15 workshops with the crane and lifting personnel (often 10-20 people) from the latter part of 1999 and through out 2000. See the detailed case to approach the reflection in action character of this methodology. The anthropologist was therefore a considerable actor in the case and a helper of the major actor OMT.

These workshops addressed developing the content of best practices within crane and lifting operations, informing and communicating representations of best practices to crane and lifting personnel with more peripheral involvement in the process. In these sessions the anthropologist helped the staff to reflect upon, to articulate and represent their work practices in texts. As a part of this process the anthropologist developed a 'best practice' groupware application, or a LOTUS DOMINO bulletin board, see Figure 4. This work was inspired by participatory design (Hepsø, V 2002). The anthropologist also helped to create training scenarios/courses for crane and lifting operations and participated in four crane simulation courses to analyse how the crane operators handled the best practice representations through simulator training. To validate the effects of the work interviews and workshops have been conducted with 20 crane and lifting personnel to track changes in the crane and lifting domain from 2001 to 2003. 15 workshops with the crane and lifting personnel (often 10-20 people) were conducted from the latter part of 1999 and through out 2000. See the detailed case to approach the reflection in action character of this methodology. The anthropologist was therefore a considerable actor in the case and a helper of the major actor OMT.

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4 Case 1: Us vs. them: BRA- Better-faster-administration

Standardisation was one of the crucial ideas to the BRA-programme. One of the main slogans for the programme was:

" Similar activities should be organized similarly"

The IT and work flow solutions developed the first year should be implemented without any local adjustments in the entire organization during the next three years by local implementation projects. To develop solutions appropriate for all business assets BRA-management wanted most of the business assets to take part in the development process with their best competence. BRA-management argued late in the development phase:

“If the operative units expect us to listen to their voices they must approach us now, the battle is going on in this very minute. It is now that it is possible to take their needs and expectations into consideration. When the solutions are developed and we start the implementation process it will be too late. We cannot change the practices at this stage. Deviations to our standard practices will not be easily tolerated. If someone gets their change requirements through not only their own solutions will be changed, even the standard solution has to be changed. The solutions shall be identical all over.”

Thus, the business assets had several other activities they had to prioritize. The competence profile of the development team in BRA became rather different than the BRA-management had planned. Operative and local knowledge from the business units were poorly represented. The development team were better characterized as generalists. This made the business units sceptical to the BRA-solutions and their appropriateness for Statoil operations. Just before their BRA-implementation one of the assets established a committee to recommend the best way to organize the operative work in this asset. This committee consisted of offshore personnel only, and 50% of them represented the unions. From a meeting in this change committee one of them said:

“Our asset asks EPN-management to come up with a document that states clearly how stringent each asset must follow the ‘best practices’. It is difficult to have new organizational solutions dumped on our heads by people that do not know our organization.”

The worries about the solutions being too general, and not made to fit the needs of local operations, might be founded on realistic evaluations as far as one of the consultants that represented the development team in BRA told us:

“I’m not in this house everyday, I work with different companies at the same time. There are many companies working with the same solutions now. Working on several projects concurrently is OK. In the end it is the same solutions we deliver to all companies”

The “best practices” existed in the SAP work flow software library. The development process was to choose between these alternatives, build work processes to fit the chosen IT-standard, and adjust the IT-solution and the work processes. SAP competence turned out to be a critical factor that made it necessary to engage more consultants than planned.

BRA was a typical BPR (Business Process Reengineering) project. The representations articulating and spreading the best practices were heavily influenced by the BPR-literature. Even examples and jokes (!) presented by the BRA-members came from the BPR-literature. The large amount of consultants, combined with the location

of the programme organization outside the rest of the company, made them develop their special language and way of speaking. Statoil employees elsewhere noticed this, and a key Statoil member of the BRA-organization said:

"We have developed our special language in the office settings where we work here in Stavanger. It is a mix of Statoil, Gemini London and BPR-literature."

The process-perspective combined with IT and BPR representation made arrows and boxes as *the* way to illustrate organizations and organizational activities. BRA-members became familiar with these signs, but EPN-members did not feel the same. These arrows were not their signs. As a key member of the EPN-management group clearly expressed on a meeting between the management groups of BRA and EPN after pilot project and before the implementation projects started in EPN:

"I'm fed up with these arrows, I see arrows everywhere. They don't mean anything to me! Please give me some other signs."

As presented in the introduction of this case, the EPN looked upon themselves as the dominant contributor and 'money machine' both to the company and to the Norwegian state. To illustrate their priority of HES the offshore personnel talked about their situation as *"working and living on a bomb"*. Both these perspectives explain why EPN did not accept others to develop their work practices. The BRA-members told they acted on a CEO-management mandate. They should ideally from their point of view be in position to define work practices for the EPN assets. The BRA-programme and EPN did not establish common arenas. EPN did not involve themselves in the arenas BRA invited them into, and BRA avoided at least some of the EPN arenas in which they were invited. A vague understanding of each other roles and hardly any common arenas made them develop their different understandings of the implementation in EPN of the 'best practices' developed in BRA. These two quotes from one business asset in their preparation for implementation illustrate the atmosphere:

The first is a report from the change committee (offshore personnel) to the management:

"Technicians feel that they have succeeded in running operations efficiently according to the organizational concepts in place and that this concept can be further developed to give even more improvements. They believe that they can develop world class standards through this concept, and this is what they believe in. –The main problem is that nobody is able to explain how the new practices will be more efficient. We have talked with the best BRA-people, but they cannot tell us. The only thing we knew was that management had decided to go for this solution, and now it shows that they have not."

The second quote is from offshore personnel involved in the asset implementation of the BRA-project. Andrew, Bill and Charles stated after having a meeting on the new practices:

"Andrew: I have had information meetings with 3-4 assets, nobody understands the logic behind the reorganization. Are we not running our facilities good enough today? "

Bill: "I have met people offshore and sent mail to everybody. The feedback was crystal-clear. Everybody wanted to further develop our existing concept. They don't see

how they can make more money by changing their work practices. The work environment in general, HES and keeping up the production is what matters. The last McKinsey benchmarking shows that we are 'world class'. Do not understand why we should implement practices that will reduce the pay-off of our facilities."

Charles: "We have no advantages to present, and I can see the potential in developing our own concept further. This is the first step, what will be the next? Is this honesty? Why do they want us to participate in this? Why don't they just implement it and take the beating afterwards? The strategic agenda is set no matter how?"

These EPN-employees found it difficult to understand the logic of the BPR-programme and the implementation of the 'best practices' developed by BRA.

4.1 Discussion of the Better-faster-administration case

We now discuss the case in light of the *scope of work or goals* and the role the *dominating actors and their roles play*, where we focus on *the process of developing best practices* or and the use of *representations* in articulating and spreading the best practices. We focus in particular on the *development of 'us-and-them'*.

The BRA-programme and EPN identities were based on quite different ideas and conceptions (Hepsø, I 2005). If the original design of involving experienced EPN-personnel in the development of the solutions had succeeded, these discrepancies might have been reduced. In accordance to the theory of Wenger (Wenger 1998), the programs and agendas of BRA and of EPN could then have been aligned through the reification while developing and making sense to the 'best practices' during the interaction between users and developers in the early phase, and through further translations. If experienced and respected skilled personnel from EPN could influence the development to make the 'best practices' appropriate to the requirements of the EPN, they could have made their colleagues understand the improvements that would result from these 'best practices'. However, too few seniors from EPN joined the BRA-organization. The reification processes went on without the understanding of EPN, and EPN perspectives and agendas were not properly handled by the BRA-organization. Since the sense-making process in the BRA-organization throughout the development hardly involved EPN personnel, the understanding of the concept and ideas of the 'best practices' came out of reach. In the light of our earlier presentation of legitimation, reification and translation, the result should not be unexpected when BRA failed to enrol EPN-seniors to the development of the 'best practices'. EPN business assets interpreted the 'best practices' based on their interests, programs, agendas and existing practices. When they tried to align the 'best practices' developed by BRA with their existing practises they found out that some of the 'best practices' matched satisfactory and became enrolled. Other 'best practices' could be accepted through small modifications, while other 'best practices' did not fit the EPN-identity and were not accepted. BRA had envisioned and developed a complete system of 'best practices' and IT-applications. This holistic system of BRA business processes should provide the added value through its unity. However, EPN split the various elements up into different standards, enabling the EPN business assets to pick those elements they found most appropriate based on their programme and their agendas. The holistic ideas and their effects were not realised.

The identity, role and situation of EPN made them choose to consider BRA as an IT-project solely, and not a developer of 'best practice'. To let externals develop and

implement IT-systems was generally accepted, it was only the organizational aspects they needed to be in charge of themselves. Seeing BRA as an IT-project, they were not eager to participate during development. For most of EPN, there was considerable time from the development of the solutions to implementation in their business assets. They had more important tasks to focus on, and waited until the implementation was close in time until they started acquiring into the consequences of BRA. By then the 'best practice' ideas of which BRA were based were already reified by the developers. The ideas had become translated by the developers into concrete IT-applications and business processes defined as 'best practices' designed to be new standards for the entire enterprise. The developers and those that participated in the BRA-organization had made up their minds and translated meaning to the standards developed. In this way the ideas were reified into IT applications and 'best practices'. But this understanding was not shared by the operative units in EPN that had let themselves out of this reification process.

Those presenting the concepts, the solutions and the consequences of BRA did not know the EPN business assets well enough to convince them of the appropriateness of their new business solutions. There were too few recruited from EPN in the BRA-organization to make the personnel in EPN confident of the 'best practices' developed. Holding on to their identity and existing translations the new BRA business processes were not legitimated. Different language, different symbols, and even different humour made it even more difficult for BRA to "sell" their solutions to the business assets. More people from the business units in the development phase would not only given different solutions, but influenced the language and use of symbols to be more equal in both BRA and EPN, as they would have acted as brokers between BRA and EPN business units.

When the people from the business assets of EPN put BRA on their agenda, the BRA-organization had finished the process of both developing and translating meaning to the standards that should be implemented. EPN business assets felt little ownership to these standards. They knew that there was a top-management initiated programme called BRA. EPN also knew this programme was about SAP implementation, and some of them understood that this initiative was based on the 'Business Process Reengineering'-concepts. They had heard some early presentations that did not provide the necessary oil industry details on how the BRA-programme would affect them. Many of the key EPN-personnel were not familiar with those involved in BRA, and they knew there were many external consultants participating. In other words those in EPN business assets did not identify themselves with BRA. As far as EPN-people looked upon themselves as 'us' BRA was regarded as 'them', and certainly not some of 'us'.

EPN-employees resisted the implementation of several of the 'best practices' developed by BRA. As argued before, BRA and EPN did not put equal meaning to the representations used. Reification, the process where representations were given meaning, was separated between BRA and EPN. Lack of identification with BRA-members increased the distance. The BRA-organization was not legitimated as developers of EPN-work practices by EPN-employees, and the 'best practices' developed by BRA was not legitimated as the best practices for every asset.

Seen retrospectively SAP in Statoil and EPN is working well. Much of the ideas of which BRA built their understanding and concepts are today institutionalized in the same communities that opposed them. Our main point is that it didn't matter at the

time if the business processes and ‘best practices’ were ‘smart’ or ‘best in class’, since they were not understood by EPN. Further, EPN was not willing to invest resources in the development of the initial BRA-‘best practices’. The consequence was that BRA and EPN identities became worlds apart, and notions of ‘us-and-them’ developed. After the closing of the BRA-program, various EPN-communities have become supporters of the same business processes and ‘best practices’ that originated in BRA. The major difference is that they are now coloured by and built upon the EPN-identity as a consequence of obligatory use, where existing concepts, frameworks and practices gradually have moulded to live with the installed SAP base. Even though the success of BRA and SAP has been within rather narrow routines as administration of salaries and travels, there is an increasing tendency that SAP can present added value also within more complicated business processes like human resources, maintenance and procurement. Activities that in the past had a tendency to be vertical are increasingly becoming process oriented and more holistic in character. BRA and SAP must be given much credit for this. However, our main point is that these positive consequences of BRA and SAP-implementation could have arisen earlier if the BRA project had been more conscious about the social constructionist processes of legitimation, reification and translation, and the users of EPN had engaged themselves differently.

5 Case 2: Us enabled by them: crane and lifting operation

Let us start with the *process of developing best practices* or business processes. A project group/field group with offshore crane operators and the onshore crane and lifting technical support (OMT) was set up in December 1999 to work with ‘best practice’ development and HES business processes within the domain. In a number of workshops the crane operators of the field group defined core elements of this ‘best practice’ based on their long offshore experience. These people are insiders compared to the outsiders of case 1. The field group had 10-15 people depending on the issues to be discussed in that particular session.

Underneath is an excerpt from discussions at the second field group meeting. The topic initiated and run by OMT-people was related to discussing the borders of safe crane and lifting operations; when was it safe to operate the crane and how far one should go before crane and lifting operations had to come to an end due to weather and operational conditions. OMT and the field group were particularly interested in discussing the ‘go-no go’ operational borderline and what mechanisms were in place that would make the crane operator run the crane in no-go situations. These issues would be vital input to the co-training sessions in the crane simulation training and simulator under development. The extreme ‘no go’s that were to abort or prevent crane and lifting operations from taking place were not difficult to define like wind speed above 40 knots, thick fog, rain or snow and 6 meters sea waves. The extreme poles of safe operations and ‘no go’ did not represent the challenge and the field group started to discuss the more ambiguous aspects of these factors. The setting is a peer workshop with 10 crane operators and OMT-staff where the mental and physical wellbeing of the crane operator was the starting point for the discussion:

Henrik the crane operator: “Some time ago I operated the crane when I was worn out physically and mentally. I had just arrived offshore again, going on the night

shift directly. I had not slept properly because of family problems back home that took up most of my last onshore period. When I came back I was not only physically worn-out but also mentally absent minded because of the problems in my family. Here I physically went over a barrier that could have had disastrous consequences for those on the supply vessel deck”.

Another crane operator Paul argues: “You should have asked for a sick leave!”

Henrik continues: “They were already lacking a crane operator at platform C. If I stayed home, it would take them several days to get a new person, and the two remaining colleagues had to take even more of the work load. So I pulled myself together and went into my crane”

Paul from OMT answers:” You were lucky this time. Your story raises an important question that we have to address in our best practice work: how are we to handle expectations that come along from various people on the installation that need our services? It is interesting to see from our discussion that expectations from various people on the installation, whether real or imagined can make us operate the crane too close to ‘no go’. We must discuss and agree on some basic principles on when to say “no crane and lifting operations until conditions have improved”.

Henrik continued: ”We have written down the most important factors that we mentioned, I think that we should discuss these factors in detail and agree on some formulations to integrate in the ‘best practice’. I think the remaining factors are not as complex as the first psychological factor. Shall we start with the wind? Personally, I refuse to operate the crane when the wind gauge is above 40 knots and the sea is above 6 meters.”

Thomas a crane operator from a production ship said: “On a production ship it is impossible to operate the crane during such wind speed, and we have to stop crane and lifting operations at 3 meters”.

The participants found it difficult to agree on formulations since they came from environments with very different operational requirements. What developed was a compromise that tried to cover aspects that would not make it impossible for some installations to follow it. In between workshops most of the members of the field group were offshore in 14 days periods and had to address the many expectations and challenging situations that developed in their daily work as crane operators. The embodied offshore experience was matched with the dialogue and discussions at the Statoil onshore office location where most of the workshops took place.

Through the winter of 1999-2000 the group of crane operators from the various installations met in full day workshops to address safety issues in crane and lifting operations. From there the job was to describe key steps to be taken in order to avoid the most dangerous situations and sketch recommendations for a ‘best practice’. An involvement of major stakeholders was undertaken throughout the process. Through the field group the crane initiative had access to important nodes in the informal network of crane operators and banks men. The unions supported the activities, and the project had a steering committee of people with high credibility. The representatives of the field group above kept much of the communication and coordination vis-à-vis their own platforms and assets alive and thereby involved in the process. A number of meetings and workshops were set up with Statoil senior management to report on the

development of the ‘best practice’. In addition, to keep the work alive, core members of the field group visited all Statoil installations in the autumn of 2000 to present the new ‘best practice’ in crane and lifting and meet middle management and those working in crane and lifting in face-to-face dialogue. Here the content of the ‘best practice’ in crane and lifting operations were presented and discussed.

In 2006 the community of practice still uses the ‘best practice’ and is conducting yearly reviews of it via the community of crane and lifting personnel. OMT is important in maintaining these arenas and facilitating these processes. The community is still using the ‘best practice’ groupware application as a communication backbone infrastructure. The simulation course training with its “best practices” has been adopted by the other oil companies operating on the Norwegian continental shelf. A nationwide education that results in a certificate of apprenticeship in crane and lifting has grown out of this initiative. Finally, the safety figures in this domain continue to show a low level of unwanted occurrences and Statoil continues to focus on HES practices in relation to crane and lifting operations.

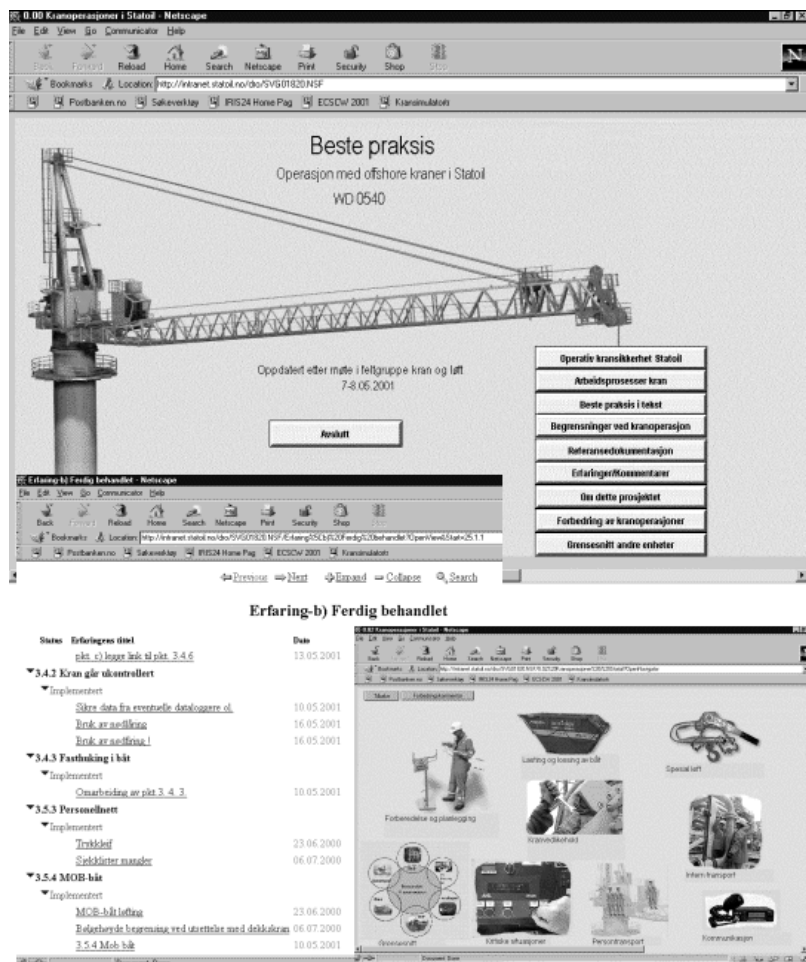


Figure 4: The functionality of the “best practice” intranet application for crane operators

If we address the use of *representations in articulating and spreading the best practices* a groupware application based on LOTUS DOMINO was prototyped to support this process, and it enabled the project to have a working information infrastructure on remote offshore locations, from the start up of the 'best practice' development process. The application contains a fully text indexed searchable description of main aspects of a 'best practice' in text and rich pictures, see Figure 4. It is decomposed from overall issues like HSE, via values of a safety culture to larger details like crane maintenance and winks on the change of a crane wire. All descriptions are LOTUS DOMINO documents. Improvement comments can be written to any of the documents. There is a specific view for tracking and handling improvement comments sorted according to status: under processing, rejected or implemented in the 'best practice.' Additional sorting mechanisms are installation name or organization unit. Links to overall Statoil and government regulations of crane and lifting operations are also included. Both a LOTUS NOTES representation and a browser could be used because of the LOTUS DOMINO implementation of the best practice bulletin board. Statoil and the community had used LOTUS NOTES/DOMINO (for mail and database information exchange) for several years so the interface was familiar. Most users therefore used the NOTES interface of the best practice applications and not the browser version of Figure 4.

During the workshops the best practice representations were written into the database/bulletin board directly. Let me present some examples of these formulations:

- "Everybody involved in the loading/unloading operation must be equipped with UHF communication equipment that have a headset and an integrated microphone"
- "A safe zone must be defined before the operations start"
- "Personnel on the supply boat must not leave the safe area before being given a 'go' signal by the crane operator"

These texts or representations defined as best practices of crane and lifting operations are instructional in nature but the instructional content of the texts is limited. In the excerpt above we saw that the operating environments varied considerably. A crane operator in the field group says:

"These instructions rely upon detailed knowledge of the crane and lifting disciplines, since we do not describe in detail how crane and lifting should be conducted. The operating environment of cranes; on our seabed, tension leg platforms and production ships would have made such detailed formulations inconsistent. We include 'winks' on important issues, how to maintain the crane, prepare and execute crane operations, how to handle critical situations, how to load cargo with what straps, how to communicate during crane and lifting operations, provide guidelines for special lifts, the transport of persons and internal transport on the installation."

If we address the *development of 'us-and-them' relations* in the case, the crane operator put their identity into the texts. It is their way of telling who they are and which roles they fill vis-à-vis the others. A crane operator taking part in the field group argued on this categorization and the role of OMT as 'them';

“The best practice is made by us, our community. Most of the company documentation is not accessible to us because it is high level and abstract. These texts and this tool are made by my friends and people that I trust. It is true that OMT has been running much of the process, but they are people that have worked as crane operators, been out doing maintenance work and know our cranes pretty well... We have both strengthened our identity and pride in being crane operators, thanks to this work. We have made ourselves visible vis-à-vis others and OMT has been important helpers here. It is us crane operators and airline pilots that have simulators, not bad uh?”

Another crane operator that did not participate in the field group argued:

“I do not participate in the process myself but I know the people. They are good men; our guys. The best practice that they develop I have no problems to follow”.

The texts representations were just one way of articulating and sustaining the representation of best practices. Sustaining and inscribing the best practices in simulator training was other representation. All Statoil crane and lifting personnel must go through crane simulation courses at regular intervals where the best practice developed in the case is the major input in the scenarios used. One of the crane training instructors argues on the importance of these ‘best practices’:

“We spent some time addressing critical situations when we developed the ‘best practice’. Sessions with various critical situations seem to be very useful and are of considerable interest to our crane operators. In fact, many admit that operation of the emergency stop function is something that they have never done. We see that a large number of operators make erroneous actions in the first scenarios, but improve their performance significantly during the course. In 2001 Statoil has had two unwanted occurrences where the crane came out of control due to a technical malfunction. The accident reports conclude that simulation training was instrumental in minimizing the consequences of the accidents, because of crane operators improved skills in handling emergency stops and critical situations. These are examples of key features that we put into the best practice”.

5.1 Discussion of the crane case

We now discuss the case in light of the *scope of work or goals* and the role the *dominating actors and their roles play*, where we focus on *the process of developing best practices* and the use of *representations* in articulating and spreading the best practices. We focus in particular on the *development of ‘us-and-them’*. The development of best practice became a collective reflection process among the crane operators and banks men in Statoil, a process that incorporated both reification and legitimation because of the high involvement of the community. A prerequisite for a good discussion is a basic understanding of the same practices and values, going back to our presentation of Berger and Luckman’s arguments concerning legitimating processes. If we look at communication and coordination of the business processes in crane and lifting operation in the light of a translation approach we see the following. The scope of work, goals and cause of the project was easy to legitimate: sustain HSE, decrease accidents and even deaths. The goals and roles of the major actors like OMT, union leaders and strong individuals with crane and lifting background made

them push improved competence development. They all shared the notion of 'us' in the role they played and the interests they pursued. It is OMT and their collaborators in the crane and lifting community that go the long path of aligning and enrolling all the heterogeneous forces into a new working order, a process that has taken five-six years. OMT plays a leading role in the containment of safety in crane and lifting operations in Statoil. They are able to be seen as part of 'us' even though they are not a part of the offshore community.

The alignment of activities within crane and lifting operations is linked to the translation of interests. The representations of the case whether texts, LOTUS DOMINO applications or crane simulation scenarios must be seen as translation of interests. We now address crane operators and OMT's role in this process. Crane operators and banks men translate their interests into competence development and improved quality of working life, i.e. sustained identity construction. Translation here is a strategy to secure the interests of crane operators. The 'best practice' application and the crane simulator gave them both improved self-confidence and increased the strength of a dispersed community of practice. Crane operators and banks men translated their work routines in the 'best practice', adding additional power to the translation of their interests via role descriptions and checklists. The crane simulator and its scenarios is a strong representation not only of a 'best' or common practice but also of an identity of a group. It is improved safety in crane and lifting operations that is the overall program of all the major stakeholders taking part in the case, and of which this overall alignment, or working order, is based. OMT manages become identified as 'us' or as an important facilitator for 'us'. The way they acted out their developer role both in HSE-campaigns, 'best practice' development, in the design of a groupware application and in the development of a crane simulator they were never perceived as 'them'. The solutions that were developed were as a consequence mainly developed by 'us' and therefore easily reified and legitimated.

6 Discussion of the Cases and Implications for Practice

The two cases share a number of traits but in what follows we will discuss them more as analogues than cases of the same scale and content. By using the term analogue we assert that the cases have sufficient similarities to be used to address our research question; how different enrolment strategies and role playing in 'best practice' development projects lead to different results because of different conceptions of 'us-and-them' between users and developers.

If we look at the *scope of work and goals* of the two projects, they both try to integrate IT and work processes. Both initiatives were more or less contemporary in time, and the users in case 2 were among the users in case 1. However, their mandate differed considerably both in scope and technology. It is important to ask if it would have been possible to accomplish a change process within the scope and technology of BRA that could achieve the same smooth communication and coordination that was possible in the crane and lifting operation project. See Figure 5 to look at the properties, goals and scope of the two cases.

Properties	BRA	Crane & lifting
Number of users	About 17 000	About 1000
Number of communities of practice	Many and heterogeneous	Few and homogeneous
Extent of the work processes redesigned	Plant maintenance, integrated supply chain, economy, human resources	Crane and lifting operations
Nature of work	Abstract	Concrete
IT infrastructure/Technology	New (to be built) with many complex interfaces	Existing in use and simulator with stand alone features

Figure 5: The properties of the two cases compared

The BRA-programme was bigger in scope and the involvement in the process could not possibly have been the same. While the crane and lifting case involved people from more or less the same community, the other case had to handle communities that were radically different in character. This heterogeneity caused bigger communication and coordination challenges. The homogeneity of the crane and lifting case made communication and coordination much easier. Further, the nature of work in the two cases differed substantially, from the concrete practice oriented discussions in the crane and lifting community to the abstract features of the new SAP work processes and work-flows. Finally, while the full scale implementation of SAP should lead to removal of numerous existing IT systems and create a new company wide information infrastructure, the crane and lifting case built to a large extent on the existing LOTUS DOMINO infrastructure and was smaller and simpler in scope.

Let us address *the role of the dominating actors and their roles play*. Focusing on communication and coordination in developing new business processes we wanted to address how different enrolment strategies and role playing in ‘best practice’ development projects led to different results because of different conceptions of ‘us-and-them’. The users and developers notion of identities, but also particular circumstances lead to different legitimation, reification and translation practices in the two cases. The first project we presented were the development of new work processes in operation and maintenance that preceded the subsequent design and implementation of SAP (an integrated management information system) in Statoil. This best practice’ development project was consultancy, and top management driven, with extended use of staff personnel that had little operational experience and credibility. The circumstances were that EPN did not want to provide experienced personnel resources based on their own agenda and understanding of identity. The consequence was that the ‘best practice’ was developed by personnel outside the operational community (them) experienced reduced acceptance by users and was never reified by the latter, see Figure 7.

The other ‘best practice’ development project we presented was related to improved health, environment and safety, or improved quality of working life in crane and lifting operations. The crane project was a grassroots movement and the ‘best practices’, groupware application and crane simulator were perceived to be developed by the crane operators themselves (us) facilitated by OMT and external collaborators. The ‘best practices’ were perceived as a part of ongoing improvement work. These ‘best practices’ developed ownership and legitimation in the communities of crane and lifting operations through a reification process where developers and users inter-

acted. Implication for practice here is that developers who run similar projects must make sure that the necessary involvement of user organization is in place. If not the project should approach organizational stakeholders and demand the halting of the project until the users are committed and empowered to participate.

When we analyse the *process of developing best practices* we see that the way reification of the new business processes and systems to be implemented is designed is vital, see Figure 6. Further, that participation in this reification and the interaction between users and developers are decisive to what extent the users legitimate the new business processes. In other words, participation that enables both developers and users to acquire the same understanding and meanings of the business and the change process is the key. Such participation will increase the user legitimation of both the new business processes and the change process that follows this development. The implication for practice is that participation is an investment in implementation of business processes and the change process that will follow.

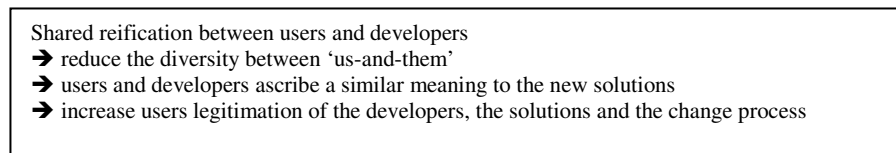


Figure 6: Shared reification for increased legitimation

The empirical implication of this translation perspective is to take legitimation and reification seriously. It is of great importance to arrange ways to secure legitimation among the users. This means legitimation of the developers, of the 'best practices', the IT-solutions, and to nurture the mandate of the change initiative among the users. Regarding this perspective, such legitimation practices will best be achieved through interaction between users and developers within the development process, and via extensive use of 'brokers' between the arenas of the developers and the users (Wenger 1998). This way of working will improve the possibility for a shared construction of meaning and understanding across different communities of practices. Construction of meaning is taking place on several arenas. This implication of the role of the broker is one of Wenger's arguments. Empirically we found that there were few brokers and missing overlap between the arenas of the users and the developers in the BRA-programme. Though, in the crane and lift-project the field group acted as brokers between developers and users. Implication for practice here is that brokering is important and is a key feature in the process of developing 'best practices'.

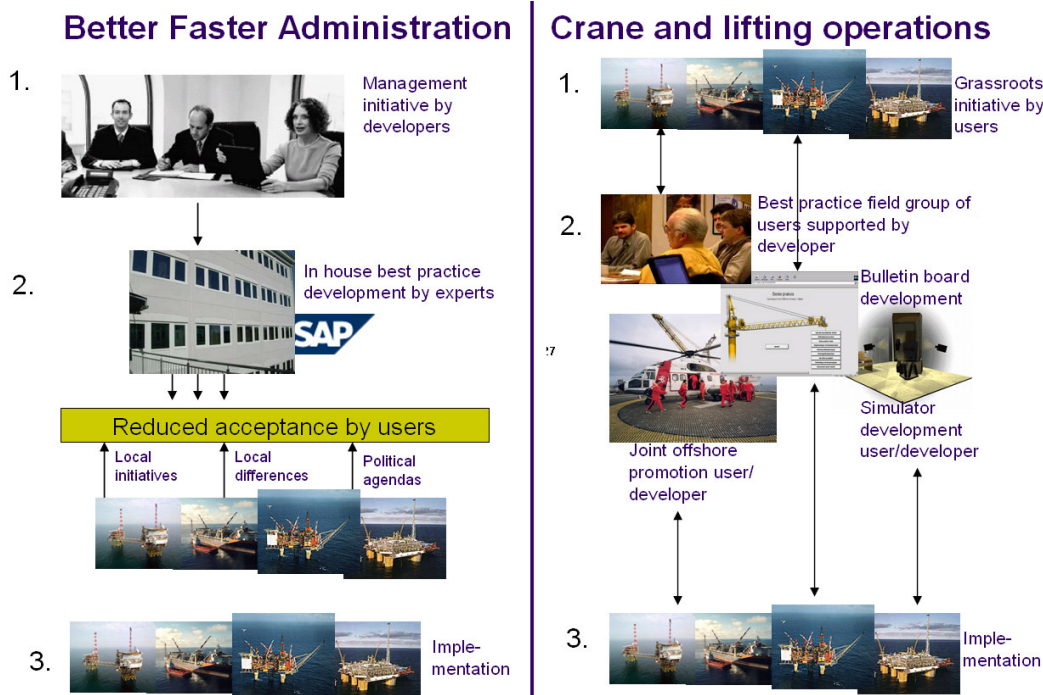


Figure 7: Developer - user enrolment in the two cases.

In a change project there will be several arenas where meaning is ascribed to the change initiative and to the solutions developed. Some of these are dominated by the developers, while others are developed by the users. Some are project specific, while others are independent of the change project. All these arenas are of great importance for the result. The implication for practice here is that overlap and brokers between these arenas increase the possibility of shared understanding among the involved actors, which again will improve the communication and coordination between the developers and the users.

To ensure an integrated reification where the developers and the users put similar meaning into the solutions and the change process, the construction of meaning on all these arenas have to be connected. It is not always possible to integrate all the involved groups. Via the use of brokers and through an understanding of boundary objects (Wenger 1998), as the crane and lifting ‘best practice’, there is a possibility to connect the construction of meaning in these different arenas. As our observations, analysis and this theoretic perspective indicate such a design of the development process will increase the legitimation and the acceptance of the solutions among the users. A smoother implementation is an expected consequence of this improved communication and coordination between users and developers.

If we look at the *representations used in the two cases articulating and spreading the ‘best practices’*, the medium in which they were presented were not that different. Even though the representations in the BRA-case were more abstract, the use of flowcharts and textual descriptions of best practices were not that different in the crane case. ‘Hardwired’ practices were also incorporated in SAP-work flows or in the crane simulator/training. No representations in the cases had an inherent quality that could

bridge the communication between groups and decrease the potential for notions of 'us-and-them' to develop. We therefore argue that the difference is not in the representations themselves but how they are translated, reified and legitimated in the setting by the actors that have to use them in their practice, to support their interests and sense making processes. These representations are therefore part of a complex heterogeneous web of resources that Bruno Latour (1987;1999) will call a actor-network. The groups involved in building business processes in these two cases will draw on a number of these resources. They might use some of these representations for instance in building their identity as the crane operators did or to enrol the crane community as OMT managed. The implication for practice here is that the strength and the career of the representation will always be connected to the relational position it will have in this actor-network. This is also the major reason why it will be difficult to take 'best practices developed in one setting and move it to a new setting. You can only move the representation of 'best practices' but not the context, the heterogeneous elements or network in which the representations were a part.

When it comes to the *development of 'us-and-them'* we want to address the four levels of legitimation (Berger & Luckman 1966). We argued from a theoretical perspective that formal procedures like 'best practices' and business processes, since they involve legitimation on level 3, have to be aligned with what is legitimated by the actual group on level 1 and 2. Legitimation is the last process in the social construction of meaning, where the established practices or institutions are made explicit and accepted as shared. How do our cases fit this theory? The SAP implementation showed the difficulty of gaining acceptance in EPN for the 'best practices'. The ideas behind 'best practices' were developed carefully by first class consultants and competent Statoil internal resources. Still, the 'best practices' as presented by the BRA-programme diverged too much from the way the EPN business assets used to talk about their practice (legitimation on level 1). They talked to each other, with people in different companies, in other parts of Statoil, read about other organizations, but did not find sufficient success-stories from similar change processes to be convinced and adapt to the suggested 'best practices'. Such success-stories could have acted as sources for a growing legitimation of the 'best practices' both on level 1 and 2. Within the period of the BRA-programme the personnel in EPN did not get sufficient time to learn to know the suggested business processes. They did not have the possibility to learn to know the espoused 'best practices' via their learning process. The poor acceptance of BRA by the users made them keep the information about BRA out of their agendas as long as possible. This strategy reduced the possibility of making the users understand the opportunities in BRA. This is where we find the main differences between the communication and coordination processes of the two cases. In the crane and lifting case the users and the developer had learned to know each other through working together for some time. The developers knew both how the crane operators were thinking, their identities, they got to know their practices, and they learned how they talked about their activities. This knowledge made the developers able to both develop 'best practices' and represent their ideas to the users in a way that fitted the users' way of thinking. The new 'best practice' was a natural continuation of ongoing improvement work. Since the users took part in and controlled the development, they were able to influence the result and they developed a shared meaning of the 'best practices'. The legitimation of 'best practices' in crane and lifting operations was never a big issue. However, in both cases the understanding of

‘us-and-them’ between users and developers will challenge existing boundaries and identities.

The implication for practice here is that the actual enrolment strategy of the developers seems to be significant for the further career of the business processes. It is too simple to say that a top down process will not work while a bottom up process will. In the BRA-case the intentions to involve the EPN organization were in place, but due to different political agendas, other competing change programs and local differences in the business assets EPN had difficulties reallocating resources to BRA. The developer organization lacked a proper understanding of the settings in which they were to implement new business processes and their enrolment strategy suffered from this weakness. The OMT-organization had both the detailed understanding of the offshore business processes and the proper understanding of involvement as this comparative discussion emphasise as decisive to succeed in developing business processes and best practices.

7 Conclusion

In this paper we have tried to show how different enrolment strategies and role playing in ‘best practice’ development projects lead to different results because of different conceptions of ‘us-and-them’ between users and developers. In the cases we presented the scope of work or goals of the project, the dominating actors and their roles, the process of developing best practices, the role of representations in articulating and the spreading the best practices. These elements contributed to developing a particular configuration of ‘us-and-them’ relations in the cases. The three concepts reification, translation and legitimation have been used to analyse the career of the representations in the case and how these representations are linked to notions of ‘us-and-them’. Successful realisation of ‘best practice’ is dependent upon the projects ability to align the agenda of heterogeneous stakeholders and resources. Real users need to be engaged in the project to make the project know the users agendas, and align them with the agenda of the project. The relation between ‘us-and-them’ should be characterized by trust and common understanding through sharing of necessary knowledge and identity. The history of the developers, common arenas and brokers between developers and users arenas influence both trust and common understanding. A large, complex and heterogeneous scope makes such alignments more difficult. In such situations representations will act as boundary objects that integrate ‘us-and-them’. The representations themselves are not of vital importance, but what matters is how they are interpreted, translated and negotiated between those involved.

References

- Andersen P B and Goldkuhl G. (2005) Editorial: Systems, Signs and Actions: Launching a New Journal *Systems, Signs & Actions An International Journal on Communication, Information Technology and Work* Vol. 1 No. 1, pp. 1–5 <http://www.sysiac.org/>
- Hepsø I (2004) Diffusion of Technology and Texts. *Paper presented at 4S & EASST Conference*, Centre de Sociologie de l’Innovation, Paris.
- Berger P and Luckman T (1966) *The Social Construction of Reality*, London: Pelican Books.
- Bowker G C and Star S L (1999) *Sorting Things Out. Classification and its Consequences*, London: MIT Press.

- Czarniawska B and Sevón G (1996) (eds.) *Translating Organizational Change*, Berlin: Walther de Gruyter.
- Davenport P (1993) *Process Innovation*, Harvard Business School Press, Boston, Ma.
- Douglas M (1986) *How Institutions Think*, London: Routledge and Kegan Paul.
- Gasser L (1986) The Integration of Computing and Routine Work, *ACM Transactions on Office Information Systems*, Vol.4, No 3, July, 205-225.
- Geertz C (1973) *The Interpretation of Cultures*, NewYork: Basic Books.
- Gjersvik R and Hepsø V (1998) Using Models of Work Practice as Reflective and Communicative Devices, *Proceedings of the Participatory Design Conference 98*, New York: ACM-Press.
- Greenwood D & Levin M (1998) *Introduction to Action Research*, Sage Publ.
- Hammer M and Champy T (1993) *Reengineering the Corporation: a manifesto for business revolutions*. New York: Nicolas Brealey.
- Hammer M (1996) *Beyond Reengineering*, Harper Collins Business, London.
- Hepsø V (1997) The Social Construction and Visualization of a New Norwegian Oil installation, in J.Hughes, W.Prinz and T.Rodden (eds.) *Proceedings of the Fifth European Conference on Computer Supported Cooperative Work*, Dordrecht: Kluwer Academic Publishers.
- Hepsø V (2002) Competence Development in a Community of Practice, *Proceedings of the Participatory Design Conference 2002*, New York: ACM-Press.
- Hepsø I.L (2005) Fra ide til praksis. En studie av endringsprosessen BRA i Statoil (From idea to practice. A study of the BRA-change process in Statoil) PhD-Thesis Norwegian University of Science and Technology, Trondheim, NTNU.
- Huczynski A (1996) *Management Gurus. What makes them and how to become one*, London: Routledge.
- Latour B (1987) *Science in Action*, Cambridge: Harvard University Press.
- Latour B (1999) *Pandora's Hope: Essays on the Reality of Science Studies*, Cambridge: Harvard University Press.
- Lind M (2006) Determination of Business Process Types Founded in Transformation and Coordination *Systems, Signs & Actions An International Journal on Communication, Information Technology and Work* Vol. 2 No. 1, pp. 60–81 <http://www.sysiac.org/>
- Monteiro E and Hepsø V (2000) Infrastructure Strategy Formation: Seize the Day at Statoil, in C. Ciborra, (ed) *From Control to Drift*, Oxford: Oxford University Press.
- Nonaka I (1994) A Dynamic Theory of Organizational Knowledge Creation, *Organization Science* vol. 5, no.1, February.
- Silverman D (1971) *The Theory of Organizations*. London: Heinemann Educational.
- Wenger E (1998) *Communities of Practice: Learning, meaning and identity*. Cambridge: University Press.

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