Corporate intranet failures: interpreting a case study through the lens of formative context

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Abstract: Although intranets are well-established information environments, companies complain that their intranets are left under-utilised. Consulting the standard management literature, it seems the medicine typically prescribed is tighter management control. In this study, we examine the use of and the attitudes towards an international company's intranet. Although the respondents' testimonies seem to be in line with existing literature, advocating centrality and control, we argue that this is only a superficial pattern. When the informants' statements are not accepted as facts but instead critically questioned to reveal the underlying attitudes, an alternative view emerges. Applying the notion of formative context to the intranet, we uncover the institutionalised cognitive frames governing the actors' reasoning and explain the clashes between the espoused theory of intranet usage and the theory-in-use. In compliance with previous studies of information infrastructure, we conclude that intranet management, too, is centred on control as the supreme management objective.

Keywords: empowerment; formative context; infrastructure; intranet management.

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1 Introduction

The pace with which the amount of available information increases in today's society is matched only by the growth of the need for that information by business organisations. Organisational members have to respond more quickly to new challenges in an

increasingly complex and dynamic environment and base their decisions on a global organisational view rather than on individually based perspectives (Ba et al., 1997). As a cross-organisational technology, corporate intranets were expected to address these needs and thereby become an important tool in every employee's toolbox. However, although intranet technology is implemented in most of today's organisations, not many seem to be taking full advantage of its potential. Studies have shown that even multinational companies that regard themselves as technologically forward have been using their intranets only sparingly (Waddington, 1997). A Gartner Group survey showed that half of the participants indicated that their intranets were deployed, but by no means pervasive (Garnter Group, 1997), and reports concerning actual business value have been largely anecdotal and in addition complemented with negative reports on hidden costs and performance limitations (Scott, 1998). A recent analysis shows that even the trade press, which initially promoted the intranet as the solution to just about any organisational problem, now has a much lower profile (Knight et al., 2003).

Though a great deal of research has been put into diffusion and adoption of intranets (cf. Damsguard and Scheepers, 2000; Duane and Finnegan, 2000; Wachter and Gupta, 1997), the literature does not explain convincingly why organisational members do not use their intranets. Lacking substantiated evidence, it is often assumed this is due to the intranets being poorly structured, which in turn is blamed on weak management control. However, lack of structure and control has not stopped the world wide web (hereafter the web) from thriving. The absence of control and formal hierarchies is one of the design principles underpinning the internet, and a fact that has contributed significantly to the popularity of the media. How can a design feature that has promoted use of the internet be a cause of failure for intranets? Based on an empirical study of why the intranet in an international organisation was not used to the extent management had anticipated, we contribute to the literature of intranet management by presenting a critique of the prevailing normative information management strategy. We are also concerned with the implications of such a traditional or 'taken for granted' management view on intranet design.

The paper is organised as follows. In the next section, we shall introduce Ciborra's notion of information infrastructure as formative context as the theoretical foundation from which to discuss intranet management and use (Ciborra, 2000a, b; Ciborra and Hanseth, 2000). Thereafter we specifically review and criticise the streamlined information management strategy advocated by practitioner and business consultants, and show that this approach is also echoed by academic commentators. Section four then describes the research site and the research method used before, in section five we account for our empirical data, which is based on interviews with members of an international organisation. In the discussion in section six, we elaborate on the collected data in the light of formative context and draw out the implications. Section seven concludes the paper.

2 Views on information infrastructure

Infrastructure as a concept in corporate contexts surfaced in the 1980s in relation to the emerging large corporate information systems. According to Ciborra and Hanseth, the concept of infrastructure was used to emphasise the standardisation of systems and data throughout the organisation as a way to ensure at the same time centralisation of IS

resources and distribution of applications (Ciborra and Hanseth, 1998). In compliance with Ciborra and Hanseth's view, in this article we shall understand infrastructure as an installed base that more often than not is out of control, i.e. it does not readily lend itself to management but lives a life of its own leading to fragmentation and chaos.

Monteiro and Hepsø (2002) argue convincingly that organisations have a deep-seated fear of the alleged danger of such untidiness. Order and categories are fundamental aspects of social life and without them our world would be less understandable. In fact, many of our categories have become so familiar and taken for granted that we can no longer see them, and hence they are never contested. However, as Bowker and Star illustrate, classification is anything but neutral and social order does not occur by itself but is the result of deliberate human actions (Bowker and Star, 1999). As a result of our desire not to upset the order, our classification of new objects confirms the schemas already in place, since, in the words of Monteiro and Hepsø, 'the prevailing order needs to be kept alive' (Monteiro and Hepsø, 2002 p.157).

The way infrastructures are implemented and used seldom corresponds to the originators' plans and visions, and the design process often develops beyond the intention of the actors (Ciborra and Hanseth, 1998). The ways in which information systems are implemented and used never fully correspond to the original plan. However, these changes or deviations from the plan are largely unnoticed in the organisational setting. Building on ethnomethodologists and ethnographers such as Garfinkel and Bateson, Ciborra (with various co-authors) uses the notion of formative context to denote the set of institutional arrangements and cognitive imageries that we bring and routinely enact in work. The idea of formative context is useful when trying to answer questions such as why do systems and routines designed according to a specific logic get implemented and used according to an entirely different logic (Ciborra and Lanzara, 1994).

The formative context is a pervasive and deep-seated texture of relations that influences our execution of routines and constitutes a background for all our actions, although we typically remain unaware of its presence (Ciborra and Lanzara, 1994). Nevertheless, our actions and beliefs are contingent, and since this contingency is not obvious, it needs to be 'unpacked' (Monteiro and Hepsø, 2002, p.160). The formative context can help people see and do things in new ways but it may also (perhaps more often) have a conservative effect and cement existing patterns (Ciborra and Lanzara, 1994). Whereas Monteiro and Hepsø studied a Lotus Notes installation at Statoil in order to detect and question the prevailing order and to show that this was not the only nor necessarily the best order, our objective is to critically examine an intranet implementation at Volvo Car International.

3 Management and the web

Following a thorough review of the academic literature on infrastructure management, Ciborra concludes that one of the basic tenets is the centrality of control. The literature unanimously and unreflectively argues in favour of aligned, rigid, and highly standardised information infrastructures tightly administered by top management (Ciborra, 2000a). Applied to intranets, the reigning management paradigm amongst practitioners indeed appears to follow the path set out by the infrastructure management discourse. For instance, Hinrichs, an intranet consultant and book author, maintains that the ability

to effectively manage the intranet is one of the most significant factors to successful development (Hinrichs, 1997). More recently, Duffy, senior editor at CIO magazine, lets a number of intranet managers speak their mind in an article and concludes that a strong, centralised ownership guaranteeing consistent management is what will save the intranet from becoming 'a gigantic intra-mess' (Duffy, 2001). Judging from the comments on the magazine web page accompanying the article, many practitioners concur with Duffy's analysis.

However, it is not only practitioners and the trade press who pinpoint the ability to effectively manage the intranet as one of the most significant factors to successful development – academic commentators take a similar stance. Wachter and Gupta (1997) note that the increasing use of intranets makes the need to actively manage the development process even more urgent, and although they acknowledge the many tradeoffs involved in intranet management, they advocate a centralised management system that can exercise control and ensure that consistency is maintained. In a similar vein, Curry and Stancich argue that intranets 'must be well managed and planned, not allowed to evolve merely in an ad hoc manner, which can too often be the case' (Curry and Stancich, 2000, p.250). The authors do point out that a coordinated intranet development does not necessarily imply a centralised control mechanism but they still argue in favour of central planning and control to maximise the contribution, and their conclusion is that intranets must be planned and managed.

A third paper discussing balancing empowerment and control is Duane and Finnegan (2000), where it is argued that a certain amount of management control can be an empowerment factor, particularly so in the early stages of an intranet implementation. They note that excessive bureaucracy can stifle intranet development and stress the intranet's ability to shift control of the information flow from producers to consumers. Yet the authors feel that the increase in sophistication and complexity seen in intranets calls for more control and they end up suggesting 23 intranet related management control activities to be implemented during different stages in the development. The perhaps most obvious example of the control approach is seen in Damsgaard and Scheepers (2000), where the authors claim that intranet content and use must be controlled via standardisation and formalisation. Unless procedures and routines are established and enforced, the intranet will collapse, Damsgaard and Scheepers argue, and, therefore, rationalisation and management control must be the super-ordinate goals.

In this paper, we want to follow Monteiro and Hepsø (2002) and critically examine the hidden assumptions underpinning the control paradigm. Whilst most of the previous IS environments were designed by and for the hierarchical organisations of the industrial society, the web signals the advent of a new paradigm as it was deliberately designed to break with bureaucracy. What propelled the creation of the web was the observation that work and information flows at CERN were nominally organised into hierarchical management structures whilst the actual interactions needed to get the job done showed more resemblance with a web of evolving interconnections (Berners-Lee, 1989). According to Berner-Lee's observations, the traditional information systems in use did not model what went on in the real world, and he, therefore, deliberately designed an environment which would be less authoritative and more open-ended.

We shall argue that due to the formative context of the modern organisation, organisational members fail to see the conflicts that exist between what the organisation claims it wants to achieve with its intranet and the measures and activities it initiates and

promotes. To achieve a more pluralistic view of intranet management, a useful first step would be to uncover and more closely analyse the causes of the clash between the principles underpinning the web and the information governance strategy advocated in the industrial organisation. This paper is an attempt to do so by asking whether it is useful to uncritically apply the same set of managerial principles to the web as were previously used to manage hierarchical information systems.

4 Research site and method

To illustrate how web technology inscriptions conflict with industrial management principles, we will present a few accounts from Volvo Car International (VCI) – a fully owned subsidiary of Volvo Car Corporation and a multinational company who has been struggling with their intranet. At the time of our inquiry, VCI had approximately 1100 employees worldwide, 51 of whom worked at the head office in Göteborg, Sweden. VCI begun its operation in the early 1990s with the objective of discovering and establishing emerging markets outside Sweden, primarily in the Eastern (the Middle East, the Baltic States and North Africa), Southern (Australia and the Pacific region, South Africa, and Latin America), and Asian (China, Korea, and Malaysia) markets.

VCI is part of an industrial organisation that, for almost 20 years, used email to distribute information through chains of command. This push-based model made the organisational members used to being fed the information needed for their job. A shift towards a pull-based model was initiated in the mid 1990s when VCI started building their own intranet. The first few years of work was characterised by enthusiasm and the intranet was populated without much control. In the last four years, however, VCI has pursued a more systematic strategy to its intranet development, but despite applying tight management control, including rigid review and approval mechanisms, the intranet has not become an integrated part of everyday work. On the contrary, in-house surveys indicate that very few employees use the intranet on a regular basis.

This research was initiated by VCI to investigate why the intranet was not used to the extent management had hoped for. Two master level students and the author were engaged by VCI and given access to the VCI office in Göteborg and the intranet. The company initially provided us with a list of people to interview but since this list contained mostly upper level managers we felt that in order to get a more nuanced picture, we also had to include people from other organisational levels. This was approved by VCI, but they wanted us to email all participants in advance, giving a brief background to and the general objectives for the study, which we did. We ended up conducting 21 open-ended interviews with respondents from three categories: Upper level management based in Göteborg (six interviewees); other personnel in Göteborg (six), and; personnel located outside Sweden (nine). The last category contained both managers and non-managers, and these interviews were, for practical reasons, conducted over telephone. The face-to-face interviews lasted between 30 and 70 minutes, whereas the telephone interviews were much shorter, typically around 15 minutes (see Table 1 for a summary). All interviews were recorded and transcribed and thereafter analysed by the students and the author independently. Whilst the students adopted a traditional approach based on standard management literature, the author of this paper took a more critical approach as described above. This was enabled by the fact that the author (as opposed to the students) had three

years of action-orientated research project experience from focusing on other aspects of Volvo's intranet and had, therefore, engaged in the self-observation and self-evaluation that are necessary to uncover the formative context (Ciborra and Lanzara, 1994).

Table 1 Summary of site information and data sources

Organisation	Volvo Cars International (VCI)
Founded	1991
Number of employees	1100 (approx.)
Headquarters	Göteborg, Sweden
Locations	130 emerging markets world-wide
Type of business	Establishing new markets for Volvo
No. of interviews	12 face-to-face interviews
	9 telephone interviews
Length of interviews	30–70 minutes (face-to-face)
	10–16 minutes (telephone)
Access to additional company data	Yes, on the intranet

5 Intranet use at Volvo Car International

The establishment of an intranet at VCI initiated a shift in information policy from push to pull. Instead of having the information sent to them, the employees were now supposed to find information themselves on the intranet. The upside of this was that it put the user in control. One secretary explained:

> "[A] It's more and more so that we have to search for information ourselves. I think that's good. Then you have no one to blame but yourself if you, at the end of the day, are not in the know."

Prior to the web, the VCI information staff pushed information onto every employee, and although this caused a lot of frustration in the form of information overload, it was convenient and the users did not risk missing anything. The downside is that the web – unlike email – is quiet; it does not signal that new information is available. This unanticipated consequence placed higher demands on the VCI employees, who had to be more active. The shift from push to pull is thus a shift from passive reception to active searching, which means that the users must start to reflect upon their information needs in ways not needed previously. Many employees have not yet adopted this new way of gaining information, as the following quote illustrates:

> "[B] It's so difficult to know exactly what your information needs are, because you haven't really thought about it. . . I think you probably have to start thinking along those lines once you start to search yourself."

Following the tightening of policies implemented at the turn of the millennium, VCI's intranet is now characterised by a standard management strategy of control and centralisation. This is illustrated by the fact that VCI's homepage or starting page – a page intended for an international company's international audience – contains a picture of

the VCI headquarters in Göteborg; a building only a fraction of the employees has ever set foot in and a place that most probably cannot relate to. The homepage also contains organisational charts and other semi-static items, further reinforcing the connotation of stability, hierarchy and central authority. Containing mostly images and graphs, the content of the homepage was seldom updated and although the intranet consisted of much more than this particular page, the homepage came to represent the VCI intranet and its values. Old information about past events dominated the web and was one reason why a majority of the interviewees actually saw little reason for visiting the intranet. The respondents frequently commented on this during the interviews and called for more information about future events:

> "[C] They need to put something out to make users come back and check what's new. Now, the intranet only shows what happened last week or last month. There's nothing on it that says what's going to happen tomorrow. What's the point of knowing what has already happened?"

Responsible for updating and maintaining the information were a small number of web editors, centrally located at the Göteborg office. This arrangement ensured that intranet pages complied with the established design guidelines and helped keep the intranet uniform and consistent. Whilst the information staff provided the content, a group of technical consultants made it appear on the intended pages. In addition, employees in cities other than Göteborg and countries other than Sweden could send in material from their local offices to these web editors for editing and approval. When interviewing some of these editors, it became evident that they were truly concerned about keeping the remotely situated employees up-to-date. The information staff members saw it as their mission to deliver meaningful and relevant information to every part of the organisation, but knowing what information was required in other parts of the organisation remained a non-trivial task. One member of the information staff explained:

> "[D] We need to give our users a meaningful picture of the whole pie, using the intranet. But how shall we be able to provide a picture that is relevant to each individual employee? This puts much higher demands on interactivity – we need to know what is happening in different parts of the organisation."

The central information staff members realised that they needed the cooperation of the remote users to be able to deliver relevant information but the thought that the remote users might be able to add this information themselves never seems to have occurred. Information had to be sent in to the VCI headquarters before it could be redistributed again. This routine made web publishing a lengthy process. Most people did not even know whom to contact, so instead of sharing their information with the entire organisation via the intranet, they relapsed to informing a small group of presumably interested people by email.

When it comes to sharing information, exchanging knowledge, communicating corporate visions, and fostering a sense of organisational cohesiveness and a common spirit, face-to-face interaction is the most important communication medium and a channel frequently used within the Göteborg head office. However, in global organisations it is not always feasible or possible to meet physically. Many respondents pointed to the intranet's ability to reach across borders and time zones and thus incorporate organisational members who would otherwise be marginalised. Nonetheless, the VCI intranet contained

mostly formal information, edited and approved by the Göteborg staff. People in close proximity to one another were also able to share informal information, which never showed up on the web. This created a problem for the remote users, as one Göteborg manager observed:

> "[E] At our information meetings here [in Göteborg], we can provide our co-workers with the bigger picture. In that way, you get a sense of belonging… But the further out in the world you go, the harder it is to feel that you're part of the whole picture. If you're in Göteborg, you get so much by informal means [. . .]. But it's not like that if you're sitting in Sydney or Kuala Lumpur."

During the interviews, the respondents repeatedly pointed out that, in order to encourage and promote intranet use, the information and material made available must be useful in their daily work tasks. Although the VCI intranet contains organisational charts and company visions, these items are not useful on an operative level. When carrying out the everyday tasks, completely different sort of information is needed. This may include seemingly trivial things such as updated office addresses and telephone numbers, correct company logos in different formats, and online forms for ordering business cards and other stationary items. At VCI, this information was not available on-line, and, accordingly, most respondents did not regard the intranet as their primary information-seeking source. One manager in Göteborg explained:

> "[F] If I was looking for information about something, I would talk to my colleagues and find out where to obtain it. Or I would ask my secretary, or have her set up a meeting, or a phone conference. . . that sort of things. But I wouldn't use the intranet."

Had this manager's colleagues published their information on the intranet, he would have been able to find it there, but they did not – and he knew that. They were not members of the information staff in Göteborg and hence making their information available electronically was not in their job descriptions.

Although the need for a variety of information providers was acknowledged by some of the respondents, the general understanding was yet that not everyone should be allowed to update the intranet directly. Instead, the respondents suggested that information should be organised and collected on different organisational layers, and by canalising all material through a small set of gatekeepers with sufficient training in corporate information policies, the quality of the information would be guaranteed. When not being able to find what they were looking for they concluded this was due to the intranet being poorly structured. Consequently, the respondents – managers and employees alike – advocated a centralised and standardised strategy for web publishing, which would guarantee strict adherence to guidelines and policies:

> "[G] I've recently asked permission to publish things on the intranet myself. It is such a bottleneck having to contact someone else about my work. I think every department should have one person responsible for putting things together. But there still needs to be someone who has overriding control and responsibility for the site and makes sure we stick to the general guidelines and adhere to Volvo standards."

However, many respondents testified that the usefulness of the web did not depend solely on information. For the web to be a truly useful everyday tool, it has to include

applications and services that assist the users in accomplishing their tasks. Traditionally, information systems are designed for one sole purpose and although drifting occurs, such side-effects are unintentional and possibly unwanted. The main idea is that the system is in control. Whatever the sole purpose of the VCI intranet was, many employees did not find it useful. One of our interviewees confessed that he never started his browser while at work because he did not consider the intranet being value-adding. However, when he got home he used his internet connection to carry out tasks that otherwise would have taken him much longer. Suddenly, the technology is adding value.

> "[H] I have the same equipment at home and I use it to pay my bills. It's almost fun to get bills nowadays. It [the web] is such a fantastic instrument. It's like I have overcome some threshold in using it – now the tool is serving me [. . .]. Before, I never had control over the system – it had control over me."

The above statement was but one of many indicating that the respondents perceived the intranet differently from the internet. They had other expectations when on the intranet than when on the internet and they assumed the structure and the standards of the intranet to differentiate themselves from those of the internet. These differences in attitude were seldom explicitly discussed. The manager quoted below, however, does reflect upon the mental models governing work and the changes in attitude that he thinks are required for the intranet to become a daily tool:

> "[I] I think it's a cultural thing [. . .] If you talk about the day-to-day routines, the intranet is not something you think of, you know? And that's what I mean by culture, it's something that has to come over time. You start your computer in the morning, check your email, and continue with your day's work. You don't first go check the intranet to see what has happened. . .. I don't know how you're going to get to that. Maybe it's the mindset that has to be changed – the corporate mindset. If you get people working with projects using the intranet, if you encourage people to read the newspaper on the intranet, then it'll become part of the mindset – part of the daily routine. Then you can start to make it work."

When collecting and compiling the respondents' testimonies, the emerging picture reveals conflicting goals, incompatible requirements, and contradictory statements – sometimes even from the same respondent. In the next section we shall discuss the causes and implications of these tensions.

6 Discussion

As said earlier, Monteiro and Hepsø (2003) suggest that we must unpack our hidden assumptions. Using the terminology of Ciborra and Lanzara, we should tap the 'knowledge embedded in formative contexts' (1994, p.79) by intervening in situations where the formative context surfaces, i.e. when conflicts arise, when routines break down, when inconsistencies become obvious or when deviations from the expected occur.

The above account from VCI is filled with contradictory statements and we see the tension between the espoused theory and the theory-in-use (Argryis and Schön, 1974). To understand these conflicting views, we suggest the intranet to be understood as a formative context where attention is paid to the institutional arrangements and cognitive imageries that are routinely enacted in work. VCI, being an industrial organisation,

is shaped by the 20th century mindset where centrality of authority, established hierarchies and well-defined standards were central concepts. Bringing web technology into this environment, the emerging VCI intranet came to reflect these attitudes and norms, resulting in an environment that in many and fundamental ways differed from the (external) web. It has been observed that whilst the web is populated in a rather democratic and bottom-up fashion, intranet content is typically the result of a centralised process whereby a small group of specialists are assigned the responsibility of updating pages (Fagin et al., 2003). We also see this to be the case at VCI.

What Berners-Lee envisioned in the late 1980s for the web to be was, as discussed earlier, not another highly consistent and well-aligned information infrastructure but a loosely coupled pool of information that would be allowed to develop and evolve together with the organisation and its projects (Slevin, 2000) and an environment that would easily allow collaborators in remote sites to share knowledge and ideas (Berners-Lee et al., 1994). The web should therefore be understood as an open-ended and malleable technology, where control is distributed and shared amongst all actors. However, when used inside the VCI organisation, this trait was undeliberately and unreflectingly repressed. The implementation of the new technology brought about a process of re-establishing a common understanding of the situation, and as a consequence process, the intranet drifted from a multi-purpose, democratic, and bottom-up web to a hierarchical, managerial communication tool. Table 2 summarises a few of the tensions that emerged during this study.

Web technology is silent technology and by only providing access to information the intranet inscribes its own passiveness. Whilst the email inbox alerts that there are so-and-so many unread messages, the intranet does not demand the users' attention, and consequently, the users leave it unattended. The shift to pull-based information management pre-supposes active users, as quote A indicates, but the technology used to implement the transformation instead makes the users more passive. The problem VCI was facing was that their employees were not active; in fact they were hardly using the intranet at all. At VCI, the formative context made them stick to the old ways. Not being aware of the formative context prevented VCI from reflecting upon and questioning the appropriateness of their actions.

In an environment where information is being fed to you, there is little need for making your information needs explicit – you immediately recognise a piece of information as either important or trivial the moment you see it, so you just filter out the nuggets as they pass by. In quote B, the respondent claims that on an intranet you must actively search and this demands that you express your need, which typically is not the case. The new technology asks for a new thinking that most users had not observed – instead they waited passively and the intranet remained under-utilised.

The irony is that whilst web technology can make the users passive, they expect the media to be kept up to date. As we learn from quote C, the users demand a frequently updated intranet, but who is suppose to add the information? The distributed nature that is inscribed in the technology is partly put out of play. Even when the central information staff discuss the necessity of involving the periphery, as in quote D, their talk of interactivity implies another media – telephone or email – but not the web itself: to keep the intranet updated, people must first make a phone call or send an email. This further deactivates the intranet as a communication device, quite contrary to the organisation's espoused intention.

Table 2 Conflicting views on intranet usage

Espoused image of intranet usage	*Observations of intranet in-use*
The central information staff can provide. the organisation with relevant information.	The information staff cannot possibly know what every single individual finds relevant. Not even the individuals themselves are of their information needs.
Once that information is published, the employees can search for the information themselves.	The web is making passive users who still expect to be fed information. Searching is a cognitive load many users find unrewarding.
The remote sites must tell the central information staff about their activities.	There are no remote sites on a web. Channelling all information through a central staff only creates bottlenecks and employees should instead be allowed to publish themselves.
The central information staff must update the site more frequently.	More contributors – from different organisational units and with different perspectives and interests – are needed. Then the site would be more accurate and up-to-date.
If people need specific information, they should talk to someone rather than search the intranet.	Specific information is what people require to do their job and such specific information typically comes from peers who may be geographically separated and unknown to one another.

The vertical information sharing policy implemented at VCI shows itself in the central information department owning the intranet. They are expected to provide not only guidelines and policies but also the actual content. Being at the centre, they seem to believe that they are better equipped to cater for the employees' information needs, since they also have access to so many informal sources. However, quote E illustrates that 'the whole picture' equals the central picture. One would imagine that people at remote sites also receive much informal information – local informal information – but that does not seem to count; it is tacitly assumed to be unimportant. When the Göteborg office exaggerates their own importance and marginalises that of the remote sites, it again suppresses the decentralising forces the web was designed to unleash. The web was meant to invite everybody to contribute by adding their own links and content. However, most actors do not utilise this possibility due to the institutionalised arrangement the formative context enforces. Organisational members routinely and without reflecting, assume that

information has to come via official channels and not from their peers or from themselves, and consequently they do not expect to find the sort of information they or their peers possess. Quote F testifies that rather than using the intranet, they would go and talk to someone.

Even when people do take initiatives for change due to the shortcomings of existing routines, as illustrated by quote G, they continue to look upon things through their old glasses. The respondent whose voice is heard in quote G realises that the limited number of contributors constitutes a bottleneck but continues to stress the need for control mechanisms. Her statement is an excellent illustration of how the introduction of new technology, such as an intranet, is not in itself sufficient to alter established routines. Instead, the existing formative context causes the intranet to drift towards a structured and hierarchical implementation not intentionally designed.

Only when leaving the intranet and the mental restrictions the corporate environment erects can people start to understand how multifaceted the technology is and what opportunities await them. Quote H shows that when allowed to experiment freely with web technology in a completely different formative context (e.g. the household), users can start to make things happen rather than have things happening to them. Being empowered in this way, i.e. to be put in control, is appreciated although it conflicts with the statement in quote G that there has to be management and control. However, these conflicts are often between what the users claim to do and what they actually do. The control mechanisms called for are in fact what causes the bottleneck they complain about. Rather than being a prerequisite for a useful intranet, which both the respondents and the literature assume, the pre-occupation with control is part of an organisational culture and a formative context that causes the intranet to drift from a creative (albeit somewhat chaotic) bazaar, such as the internet, to a marginalised electronic bulletin board.

Ciborra and Lanzara posit that the inability to question the obviousness of context generates cognitive inertia in the organisation exactly when a high capacity for change is required (Ciborra and Lanzara, 1994). When people start to realise the potential benefits of the technology – possibly by using internet services – they begin to expect – and look for – the same things on the intranet. Only in actions does the formative context surface to reveal itself and only by intervening in situations of action can we change the formative context; slowly and little by little (Ciborra and Lanzara, 1994). Not only is a change of mindset is needed – as the manager in quote I suggests – but also a change of organisational routines.

7 Conclusions

Our contribution to the literature on intranet management is a critique of the prevailing normative information management strategy. Having applied the notion of formative context, we have illustrated how the mental frameworks and institutionalised arrangements at VCI formed the intranet to align to prevailing order. Although this order seemed ‘natural’ to all respondents, it was indeed a socially constructed normality. We have argued that the common assumption that corporate intranets need to be tightly and centrally managed in order to be useful should be questioned. However, the control paradigm is firmly grounded in today’s industry and the attitudes surfacing in this study are not unique to the VCI but typical for most modern organisations. As in the accounts

of Ciborra and Lanzara's (1994) and Monteiro and Hepsø's (2002), what is needed at VCI – more than a formalised, standardised, and well-structured method as normally prescribed in the management literature – is the actors' willingness to explore, experiment, and tinker with their routines, practices and activities during ordinary work. One can change the formative context only by interventions in actions.

The power of the formative context makes breaking free of what Ciborra and Hanseth refer to as the 'vicious circle' a non-trivial task (Ciborra and Hanseth, 2000). This is particularly so when management is not motivated, interested in, or culturally ready for the implications of a more relaxed attitude towards intranet management. Nevertheless, if the organisation indeed wants a vivid intranet, returning the initiative to the users is what most likely would propel usage. Instead of requiring a handful of content providers to understand and anticipate the information needs of the employees, the individuals should be empowered to decide for themselves what they need in order to fulfil their tasks. The organisation's job should instead be to provide powerful applications permitting individualised searching, filtering and tailoring of the information and the interfaces towards it. A future where the intranet would be a natural part of the daily work would therefore, need to put the end-user in charge.

The tensions between the central and the remote, between static and vivid, between control and liberation that we have seen in the above text, suggest that intranet management is more complex than the literature has led us to believe. For us to better understand how to evolve the intranet from being merely a dissemination device for management messages to a strategic interaction environment for knowledge exchange, future research should show a healthy scepticism towards the standard management literature and critically seek alternative interpretations.

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