CONVERSATION, ORGANISATION AND IDENTITY

Gunnar Ellingsen[a]
Bjørn Erik Mørk[b]
Margunn Aanestad[c]

[a]Department of Telemedicine, Medical faculty,
University of Tromsoe, Norway
gunnar.ellingsen@unn.no

[b]The Interventional Centre, The National hospital, Norway
bjorn.erik.mork@rikshospitalet.no

[c]Department for Informatics,
University of Oslo, Norway
margunn@ifi.uio.no

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Keywords: knowledge work, conversation, identity, uncertainty, reflexivity.

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Gunnar Ellingsen[a],
Bjørn Erik Mørk[b], and
Margunn Aanestad[c]

[a] Medical faculty / Department of Telemedicine
University of Tromsoe, Norway
gunnar.ellingsen@unn.no
[b] The Interventional Centre
The National hospital, Norway
bjorn.erik.mork@rikshospitalet.no
[c] Department for Informatics
University of Oslo, Norway
margunn@ifi.uio.no

Abstract

This paper focuses on knowledge work in a rehabilitation department at a hospital. We aim at examining the characteristics of this knowledge context and elaborate the conditions for knowledge creation and sharing. We argue that in spite of good intentions, participation in knowledge work is not freely given. New knowledge contexts must take into account how knowledge claims are made, by whom, and how the knowledge workers see themselves as professionals. We accordingly set out to discuss how knowledge work is organized, the conversational processes and the identity of the participants. We conclude that it is not enough to formally establish new ways of work. More efforts are called for that ensures conversation between the participants as well as taking into account and utilize the potential reshaped identity of the individuals.

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Suggested track: Knowledge work

1 Introduction

Large knowledge-intensive organisations increasingly face the pressure of complexity, competition and specialisation. Many of them consider it crucial that their knowledge workers are able to create and share knowledge throughout the organisation. Unfortunately, in many organisations, a legitimate interest in knowledge creation has been reduced to an overemphasis on information technology or other measurement tools (von Krogh, Ichijo & Nonaka, 2000:4) or knowledge as a “thing” (see for instance (Zack, 1999)). We argue that knowledge creation and sharing between different

professionals is rather a process where understanding is obtained, usefulness assessed, agreement reached. In such terms, we position ourselves in line with (Schön, 1983:49) who emphasizes that 'our knowing is in our action'. Brown and Duguid (1991) use the term *communities of practice* and underscore that being a knowledge worker means 'being involved in learning and the creation of new knowledge through becoming an 'insider' in the community' (ibid.:48). Von Krogh, Ichijo & Nonaka (2000:176) take up a similar point when they stress the importance of creating the right context – an *enabling context*, which is founded on established 'organisational structures that foster solid relationships and effective collaboration' (ibid.:171). However, they argue that an enabling context differs from a "community of practice", because 'a community of practice is a place in which members learn knowledge that is embedded there; an enabling context helps create new knowledge' (von Krogh, Ichijo & Nonaka, 2000:179) and:

> 'the many organisational members who interact in an enabling context come and go. Instead of being constrained by history, an enabling context has a here-and-now quality' (ibid: 180).

They also point to that conversations play an important part in processes of knowledge creation (ibid: 125). However, the quote presupposes a high degree of 'free action' uncoupled from history. Given these conditions, the participants can assumingly talk and act irrespective of constraints imposed by experience and professional identity.

However, there exists evidence on how existing organisational structures and expectations must be taken into account when creating a new knowledge context. Drawing on evidence from a consultancy firm, Orlikowski (1992) points to how difficult it is to change from individual competitiveness to collaboration and knowledge sharing by just implementing a groupware tool (ibid.:367). Knowledge work is also shaped by who the actual participants are. In discussions about truth and knowledge claims, Shapin (1994) emphasises the role each participant play and their identity as regards to experience and reputation and how these claims are promoted. Knorr-Cetina (1999:202) poses a similar argument when she outlines the content of *confidence pathways* as 'linking individuals who say they have learned through experience to appreciate each other's opinion, work, assistance, or style of thinking'.

With that our overall aim is to investigate: 1) What characterises a knowledge context? And 2), how should work be organised in order to enable the creation of new knowledge? In this, we take into account how knowledge claims are made, by whom, and how the knowledge workers see themselves as professionals.

We argue therefore that establishing a new knowledge context must take into account several key aspects - how knowledge claims are made, by whom, and how the knowledge workers see themselves as professionals. Accordingly our analysis is organised along the following lines:

Firstly, we focus on the actual ***organisation*** of knowledge work. We take a broad approach and analyse the ensemble of people and artefacts that constitute knowledge work. We examine what an enabling context exactly means and focus on how knowledge is created. Why is some information considered knowledge and not other? We also examine the mechanisms that are in play that makes exactly this context a foundation for knowledge creation.

Secondly, we analyse the role of ***conversations***. We agree with von Krogh, Ichijo & Nonaka (2000) that conversations are important. However, we want to pursue this theme a bit further by taking into account how Shapin (1994) not only outlines the importance of conversation, but also the rules and the specific participants. He analyses the conversation among 17th century gentlemen and scientists. He argues how notions of truth, certainty, rigor and precision – although considered suitable for scholarly inquiry is but out of place in civil conversation as these issues put constraints on the 'investigative' conversation (ibid.:351). This is of particular interest in an *enabling context* where the aim is to create new knowledge among highly educated professionals with extremely different apprehension of what truth is as 'truth' is closely linked to their professional training and identity.

Thirdly, we focus on the role of ***identity***. We examine the identity of the individuals who pose knowledge claims and examine how this identity fluctuates with different configuration of knowledge work as we consider identity to not only belong to an individual, but also to the collectives of which that individual is part (Shapin, 1994:127). This implies that knowledge workers' "self-esteem cannot be taken for granted and must be secured in an ambiguous and fluid world" (Alvesson, 2001:877). Accordingly we pursue how a shared identity may ensure durability in a knowledge context.

Empirically, the paper draws on a study of knowledge work at the Department of Rehabilitation at the University Hospital of Northern Norway. Here we are in line with Boland and Tenkasi (1995) that argue that 'all organisations are becoming more knowledge intensive'. Clinical work, and especially as practiced at large university hospitals, is highly specialised. It is characterised by state-of-the-art knowledge, high levels of education and organisational complexity.

The remainder of this paper is organised as follows: section 2 elaborates more thoroughly on the theoretical foundation; section 3 reflects on the research design; section 4 is the empirical part. Section 5 contains the analysis before the conclusion is given in section 6.

2 Conceptualising knowledge work

The notion 'communities of practices' captures an important way in which knowledge is formed, created and circulated in organisations. Knowledge sharing and learning do not take place isolated from or 'above' social interaction; it is an intrinsic part of the constitution of communities (Lave & Wenger, 1991; Nonaka & Takeuchi, 1995). In this sense the acquisition of new knowledge and learning is inseparable from working. Also individual learning is inseparable from collective learning (Brown and Duguid, 1991:46). Being a knowledge worker thus means being involved in learning and the creation of new knowledge through becoming an 'insider' in the community (ibid: 48), that is, they are acquiring not explicit, formal expert knowledge, but the embodied ability to behave as community members.

Looking beyond the notion of communities of practice, the systematic knowledge base of a profession is thought to be specialised, firmly bounded, scientific, and standardised (Schön, 1983:23). Shapin (1994:351) also describes how, in the context of [the 17th century] mathematical practice, 'absolute certainty and precision were the goals of inquiry'. No wonder then, that the prevailing view of knowledge as precise, certain, formal and easy to make explicit (Nonaka and Takeuchi, 1998) is erroneously considered a basis for best-practice (Timmermans and Berg, 2003), and as being at the core of IT-based knowledge-systems (Zack, 1999).

However this view has some major flaws. For instance, 'such systems cannot cope with vagueness' (Bruner, 1993) and uncertainty. Alvesson (2001:866) for instance, points to that there is a 'discrepancy between the rational model of knowledge and the uncertainty, complexity, instability and uniqueness that characterise [daily work]'. This implies that there is a discrepancy in beliefs of how work should be conducted and the actual work itself (Ciborra, 1987).

The dilemma of "rigor or relevance" arises more acutely in some areas of practice than in others (Schön, 1983:42). Medical practice is one such area. A factor that influences the complexity of medical work is its richness and messy character (Atkinson, 1995; Berg, 1998) and its continuous uncertainty (Atkinson, 1995:111; Hunter, 1991:28). An

illustration is problem-solving related to determining the diagnosis of patients. In simple cases a disease will be easily recognizable when its major symptom is readily apparent, but in many other cases the diagnosis is far more complex (Hunter, 1991:70). Complexity and uncertainty of medical work spawn an increased level of specialisation which ultimately may have negative effects. A high degree of specialisation can lead to a parochial narrowness of vision for the professional. When a profession divides into subspecialties, it can break apart an earlier wholeness of experience and understanding (Schön, 1983: 61; Giddens, 1991:30)

Thus conversation and negotiations are necessary to establish agreement on what to do with complicated patient cases. Conversation contributes in making sense of complicated cases as 'knowledge (…) figure[s] in the practice of conversation' (Shapin, 1994:351). Von Krogh, Ichijo & Nonaka (2000) argues that conversation should be conducted disregarding of whom you are (identity), which profession you are trained in and your experience. This is perhaps a bit too optimistic. It reminds of the "ideal-speech situation" (Habermas, 1975), which is a situation in which everyone would have an equal chance to argue and question, without an unequal say to those who are more powerful, confident or prestigious. The argument is that people can, in principle; agree on correct ways of proceeding and arguing. If they do accept and follow such norms, they will reach substantive agreement, because the position of reason will win. However, it is not obvious that people will change their position because of "communicative action", and most social scientists believe that value differences are ultimately irreconcilable (Wallace and Wolf, 1991:131-132). We choose to look upon participation in conversation – which also separates it from a negotiation process – as something which not everybody can participate in. To participate requires a legitimate membership. Lave and Wenger (1991:29) uses the term 'legitimate peripheral participation' and underscores that:

> "the mastery of knowledge and skills require newcomers to move toward full participation in the socio-cultural practices of a community."

Accordingly, the conversation is far from a rational process – it is more like a process of give and take where different professionals negotiate in promoting their viewpoint of the case (Bucciarelli, 1994) as 'what [is] *necessarily* true in one practice might be deemed not true at all in another (Shapin, 1994:339). Accordingly it is many competing rationalities which challenge each professional's conversational abilities. This makes it imperative to participate in what Boland and Tenkasi (1995:351) denotes a 'perspective-taking' process, with the ability or capability to take the knowledge of other

communities of knowing into account. Striving for true and certain knowledge is a problem for the conversation itself, and thus the continuous knowledge creation process (Shapin, 1994). Shapin (1994:351) explains how the 17th century gentleman's disengaged and pragmatic attitude towards the truth and certainty of knowledge contributed to an ongoing conversation process. Hence conversation is valuable per se.

Shapin (1994) illustrated that being a gentleman was a condition for participating in the civil conversation. This clearly underscores how negotiations and conversations between professionals are shaped by the identity of professionals participating - or even hampered as the profession itself defines the content and the organisation of work (Freidson, 1970; Gieryn, 1999) or by having a 'model monopoly' at their disposal (Bråten, 1973). In addition, the participants possess different negotiation powers as they represent different professions carrying with them various degrees of credibility (Fujimura, 1996:145).

A part of the identity associated with professionals is that each profession possess some autonomy, which is considered their domains (Gieryn, 1999) or "what is essential is control over the determination and evaluation of the technical knowledge used in the work" (Freidson, 1970, 185-186). In other words, the professions are involved with the patient at different stages and doing their work in accordance with the norms and values of their profession.

We recognise the existence of two main positions of what self-identity is. Czarniawska (2000: 272) describes this as 'an inherited view [the modernist view] and an emerging view on individual identity. Firstly, the inherited view is described as an expression of a 'true' self that is authentic, coherent and deep (…) distanced from any given community (ibid.:273). This view is transparent in the work of Leidner (1993) when she describes the mechanisms that service-workers employed in McDonalds franchising companies in resisting the consequences of the highly routinised work imposed by the management. She 'counterposes the prescribed self, dictated by routine service encounters, with a real self that lies underneath' (Halford, 2003:290). The second position of identity is that individual identity is continuously constructed in action and interaction within the society (Shapin, 1994:127; Bruner, 1993), in the practice of conversation (Czarniawska, 2000:275) or by rhetoric (Alvesson, 2001:883). We are mostly comfortable with this second position. Alvesson (2001:878) even takes the emergent position further by suggesting that 'Management (…) is partly about regulating people's identities – establishing standards for how employees should define

themselves'. Orlikowski (1991:18) illustrates this notion empirically in a consultancy firm where it is essential to hire people that are inexperienced in order to be able to 'mould the raw material'. However, we would not go as far as Alvesson as we believe that he over-emphasises the role of the managers in establishing individual identities. Managers and 'organisations do not simply transform individual identities at work by some form of brainwashing' (Thompson and McHugh, 1990:339).

'Awareness of uncertainty, complexity, instability, uniqueness, and value conflict has led to the emergence of professional pluralism. Competing views of professional practice – competing images of the professional role, the central values of the profession, the relevant knowledge and skills- have come into good currency' (Schön, 1983:17). Even '[p]rofessionals themselves have shown sign recently of a loss of confidence in their claims to extraordinary knowledge (Schön, 1983: 5) as they often disagree and offers different recommendations concerning problems (Giddens, 1991)

Schön (1983) has suggested that 'the dilemma of rigor or relevance may be dissolved if we can develop an epistemology of practice which places technical problem solving within a broader context of reflective inquiry' (Schön, 1983: 69). The point is that professionals should be able to reflect and learn in the local context they are a part of. Giddens (1991) argues along similar lines, but his argument is less normative. He links the local knowledge and identity with key trends in society (Walsham, 1998: 1082) and considers knowledge and identity as a dialectic process between global and local where also the individual's identity is shaped. "Transformation in self-identity and globalisation (…) are the two poles of the dialectic of the local and the global in conditions of high modernity". Walsham (1998) and Alvesson (2001) also emphasise that social conditions shape identity.

However "anyone who successfully 'decouples' from his or her previous [way of work] faces the task of establishing a 'new sense of self', a 'new sense of identity'" (Giddens, 1991:11). This opens up for situations where individuals actively can shape their role on the basis of how central this role is for their identity. Some people choose to 'embrace their role', whereas other find the role less attractive or central and then distance themselves from it (Goffman, 1961). However, ultimately the consequence of the dilemma of having several options may lead to frustration and anxiety (Alvesson, 2001; Giddens, 1991).

3 Method

We have used an interpretative approach (Klein and Myers 1999; Walsham 1993) in this study relying on four types of data: participant observations; interviews; field talks; and document analysis. The observations took place from January-March, 2002 at the Department of Rehabilitation at the University Hospital of Northern Norway.

The Department of Rehabilitation at the University hospital of Northern Norway was established in 1995. At the moment, they are about 40 employees. Most of the employees are women, including the three physicians. However, the relative number of physicians is small compared to other departments. The department aims at rehabilitation of complex patients in the following categories: stroke, long-run damages as a result of polio, chronic pains, complicated amputations, multi-traumatic damage, brain damage as the result of accidents and some other diseases. The patients stay from two weeks to several months. The department presupposes a broader approach to problems and treatment strategy compared to more traditional departments as they "focus on the whole human" (informant). This means that body functions, daily activities and environmental factors are important factors in work and evaluations related to the patient.

Although the department deals with a patient group that presupposes tight collaboration among the different professionals, the current organisation of the different professionals in one hospital department is quite unusual. Seven different professions are organised together in the department. This includes nurses, occupational therapists, physicians, physiotherapists, one speech therapist, one psychologist and one social worker. Most of the employees are women, including the three physicians. However, the relative number of physicians is small compared to other departments.

In total, 40 hours were spent observing work. Six of those hours were based on video observations of meetings and teamwork. Patients also participated in these meetings. In general, people did not seem bothered by being observed.

In addition, the first author conducted 10 semi-structured interviews with physicians, physiotherapists and occupational therapists during the period mentioned above. Each interview lasted from one to two hours and a tape-recorder was used. Shortly after, the interviews were transcribed. As background material he has also conducted 60 hours of observation at several other departments at the hospitals.

4 Case study Department of Rehabilitation

In the first three sections we present the motivation for why the department chose to organise work in this particular way. We also illuminate how the employees in the department faced challenges, conflicts and solutions in the formative stages of the department.

In the three last sections, we illustrate how work currently is conducted in the department. We illustrate the means for collaboration and conversation both in meetings and in the work with the common reports. We also present how a physician and a physiotherapist examine a patient together.

4.1 In the formative stages of the Department of Rehabilitation

A key question prior to the establishment of the department in 1995 was how the work should be organised. A typical organisation of similar departments consists of physicians and nurses and when other professional are needed their services are requested on a per case basis. However, this kind of organisation was rejected as it enforced increased specialisation and failed to exploit the knowledge each and one could contribute with. Especially the therapists felt that their knowledge-base was badly exploited by not being part of the department. They wanted influence in defining problems and treatment strategies for patients. As a part of ordinary disciplinary departments this was not a natural thing to do. Their services were then requested on a per case basis:

> "Previously I worked in the home service (…) There I experienced that my boss (a head nurse) and the other nurses defined what I could contribute with as an occupational therapist. I felt that this was completely wrong as they did not possess the knowledge about what I really could do".

This problem was also seen by the physicians who participated in the planning of the department. Due to their illness, rehabilitation patients often were in contact with numerous narrow-specialised departments and professionals. Consequently, it was difficult to see work-processes as a whole:

> "Unfortunately, today no hospital department really wants patients; it is something to reflect on. I don't exactly look forward to be admitted to the hospital as a patient" (Physician).

The need for tight collaboration resulted in organising the different professionals together in the Department of Rehabilitation.

4.2 "We had to decide from ground zero how we should conduct our work"

A lot of time was spent in establishing "a good environment for rehabilitation". This was considered a comprehensive collective effort where all the employees participated. This was also supported by the head of the department who at the time was the only physician. The endeavour included work-oriented tasks such as how to conduct cross-disciplinary work, the work procedures and how to organise their documentation. It also included furnishing of their premises, curtains, and bedside tables - in short create the proper environment for rehabilitation work. The general feeling was that they started completely from scratch:

> "We had to decide from ground zero how we should conduct our work, how we should work with the stroke-patient and how we should organise the meetings and in which forum should we decide things" (Occupational therapist).

This presupposed that they constantly had to reflect on what they where doing. They emphasise that this has been (and still is) a part how to conduct work at the department:

> "The worst thing I hear is statements such as 'this is the way we do it here or 'we have already tried that in 1997 so you cannot try it again' (…) We have no fixed way of work, we still regularly try new things."

Defining the patient as 'sick' is considered as a problem because rehabilitation is closely dependent on taking into account the patients' private life, the workplace and personal networks. Accordingly they wanted premises that avoided the distinct character of a hospital, and wanted colours and materials that resembled what people had in their homes. They wanted patients to be the persons they had been prior to the admission because they needed the patients' active participation. In this regard, the physicians' white coat was considered a problem.

> "If it is anything that stops patients from talking then it is those coats. They signal a top-down physician attitude from the old days. We did not want the physicians to wear them" (Occupational therapist)

As a result, it was designed clothes distinctive for the department. The therapists and the nurses and the chief physician replaced their ordinary white coats with blue and red suits.

In order to promote collaboration, the employees also decided that they should share offices across the disciplines. According to one of the informants this has provided a lot

of informal arenas where they can discuss things. If they can't talk during the working day, they just call each other in the evenings. As one of the occupational therapists put it:

> "We educate each other across the disciplines, and especially so with the new ones"

4.3 "Can you do this better than us?"

In an initial phase, the tight commitment to cross-disciplinary work revealed discussions of who should participate in the patient's morning care. Morning care is in general regarded as the nurses' domain or something nurses do. When the occupational therapists wanted to participate in this the nurses felt that their domain was intervened. An occupational therapist explained that her patient (that suffered from a stroke) had problems putting on his clothes in the morning. She had noticed that the patient had a lot of nurses at his bedside and the messages from them were ambiguous. The occupational therapist wanted to – and it was agreed she also could go into the patient every morning for a period of two weeks in order to do things completely structured because as the therapist said:

> "We are trained in splitting up the activity in lesser pieces than the nurses are without offering to much help to the patient".

After the two weeks then, the idea was to evaluate whether the patient's situation improved. Just after a couple of times the occupational therapist felt that the nurses on duty questioned her role in the patient's morning care and she did not feel particularly welcome:

> "The nurses became uncertain and they questioned why should I participate in this (…) and can you do this better than us (…) this is our job".

Although the disagreements were gradually settled, it illustrates how difficult it is to establish a new common knowledge base involving different professionals. The participants possess different negotiation powers as they represent different professions carrying with them various degree of credibility (Fujimura, 1996:145). In this particular case, the nurses were anxious about their new roles, as one of the therapists explained, because "their role in rehabilitation is a bit unclear".

4.4 "The ICF makes the work with the report a bit hard since it cuts across disciplines"

The way work is specialised in hospitals is reflected in how clinical information is produced and stored in the EPR, that is, in accordance with the existing disciplines. See the figure below:

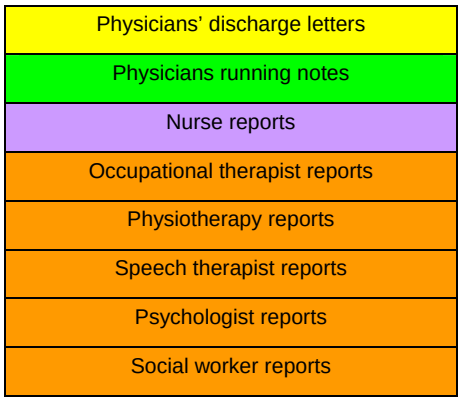

Fig 1. The traditional way of organising information in Norwegian hospitals

The Department of Rehabilitation felt that this hampered the creation of a common knowledge-base. Accordingly, the workers decided to write their reports together in their IT-system.

In order to further smoothen up the professional boundaries, they decided to organise the reports through the ICF (International Classification of Functioning, Disability and Health). The ICF is a classification system developed by the World Health Organisation (WHO) especially aimed at rehabilitation. The ICF is also used as a real-time coordinating mechanism in the cross-disciplinary meetings (a paper form). See the figure on the next page:

ICF	Detailed classification of each dimension
Environmental factors	Family, social network, residence, neighbourhood, remedies, workplace, economy, transport
Participation	Self-care and family, residence and home, Work/education Spare time, friends, neighbourhood and society
Body Functions and structure **(personal factors)**	Medical conditions, various results of examinations Sensation functions (sight, hearing, taste, smell, touch, proprioceptors, temperature, pain) Voice, speech, swallow-function - Language and communication Cognitive functions; orientations, concentration/attention, practice, memory, learning, space comprehension, problem solution, ability of appreciation, others General motor, joint and muscle function, balance, stability, breath and ability of relaxation
Activity	Movement and mobility inside and outdoors Hygiene, clothe, toilet visits, eating, housework and other daily activities

Fig 2. The ICF template used to organise the reports and the meetings

The vignette below illustrates how the report is produced and the role of the ICF:

Sissi, the physiotherapist logs into the IT system where she creates a new report. She has the patient's letter of referral at hand, her own physiotherapy notes and the paper based patient record. Sissi writes the reason for the referral as she reads it from the patient record. In addition, she writes the medical history and translates parts of the information from the patient record into the categories defined by the ICF. She says that the ICF-classification makes the work with the report a bit hard since it cuts across disciplines along the presented dimensions and they have to adhere to these dimensions at every step of their writing (see Fig. 2). The others in the team will fill in information in each of these ICF-categories. At a later stage, Sissi may decide to also produce a specialised physiotherapist appendix. Then it will point to the physiotherapist examination and explain what has happened and what has functioned properly. The appendix is thus aimed at other physiotherapists and not to other professions.

Some days later, Audhild, the occupational therapist in the team, is now ready for adding information to the report which Sissi initiated. One of her tasks is to write about the patient's reduced control of his right side and in particular his right arm. She logs on to the IT system, finds the report and scrolls down to get an overview of it. She

observes that also the social worker and the nurse have added information to the report. The report is now over four pages long and reflects that it is a complicated case. At one place she corrects the content and says: “Somebody has not been precise enough. It says that the patient has been on sick leave for two years, but it should rather be one year sick leave and one year rehabilitation”.

During the writing process, Audhild considers what the others have written in order to make it fit in a linguistic sense. This means that she not only adds text, she also makes changes to and replaces existing sentences. She decides to move a section related to home-related activities from the category “participation” to the category “Environmental factors” in order to make it fit with her own contribution. While reading the category, “measures related to work and spare time”, she stops for a minute and reads more thoroughly what the social worker has written. She obviously misses something in the text as she adds a question in italics to the social worker: “Shouldn’t there be more here …who is responsible for following up the economic situation of the patient?”

The use of the ICF enables the different professionals to evaluate each others contributions. The general comprehension is that this way of producing the reports is better than before:

> “Our usual psychologist is on a leave of absence and therefore we have a psychologist in a part time position. However, it is not possible to work in a cross-disciplinary way with him. Rather it becomes in accordance with the traditional way of doing things in hospitals, that is, we refer the patients to him by using a referral form [where after he examines the patient and writes a report]. This is a culture that we are not used to. We don’t do this with our regular psychologist. He knows the department and participates from the moment the patient is admitted to the department.” (Occupational therapist)

4.5 “I broke completely with the traditional physicians’ role”

When a patient is admitted to the hospital, she/he is examined by a physician. The other professions will in turn make their own examination. The Department of Rehabilitation has tried a new approach, which is examining the patients in pairs. The physician and the physiotherapist examine together one day, the social worker and the occupational therapist the next etc. The vignette below is an illustration of one such examination:

The physician (Therese) and the physiotherapist (Sissi) are sitting together (chairs side by side) reading background information and preparing examination of a patient – a 55 years old woman which suffers from several years' serious chronic pain in her back. She will stay in the department for one month. They discuss while they read and combine this what the patient told the cross-disciplinary team when she came to the department the previous day.

The patient comes in, says "hello" and sits down in front of Sissi and Therese. Therese starts to tell about their new approach where they examine the patient together. Therese continues to inform the patient about her pain in the back and about possible causes. Sissi supplies by saying "the body regulates and adapt itself". Both have their own notebook in which they take small notes. They pay attention to the patient when she talks, nods, and throw in supporting questions. The patient tells about how it can be hard in situation involving grandchildren, when she walks and about straining of a tendon, causing Sissi and Therese to look impulsive at each other as they get a bit exited about symptoms that they both are able to recognise.

They start questioning the patient. The questions are interleaved. Sissi asks detailed questions about whether the pains are related to activity and in which situations the pain appears, whereas Therese asks about what kind of medications she uses. Sissi asks about how she sleeps and after a while Therese asks whether she wakes up when she turn her body in bed. The body language between them is positive as they sit tight together right in front of the patient. They alternate by talking to each other and to the patient.

They examine her back together. "Do we have a spine [artificial] here", Therese asks. Sissi gets one and keeps it in her lap in front of the patient. Therese explains for the patient while Sissi illustrates this by pointing at the area in question of the spine. They continue to examine the patient's movement. Here Sissi is in the lead while Therese pay attention and she pulls her chair closer to look better.

The traditional doctor role and the expectations within the medical system are directed at examinations and treatment and the physicians' self-esteem is closely connected to this as 'this is something physicians' do'. In retrospect the physician, quite surprised on herself, reflects on how and to which extent she departed from her regular routine:

> "I broke completely with the traditional physicians' role in admitting the patient. My intention was to do other things than I actually did. I believed that I had to do the traditional screening examinations: blood pressure, pulse, heart, lung and

all those things. Instead I focused directly on the actual problem [functions, home, mastering] without intensifying the experience of illness for the patient" (Physician).

4.6 The cross-disciplinary surveyor meeting

Today it is Friday and the end of the first week of a four week stay for the group of patients with chronic pains. During this week the different professions have conducted observations, examinations and evaluations. The pain-team meets to agree on treatment- and rehabilitation objectives for the patients. Six persons are present, a physiotherapist, two occupational therapists, a physician, a nurse and a social worker. Everybody is female except for the nurse who is a short-notice stand-in for the team's regular nurse. They all seem to be in their late thirties or early forties underscoring their experience in medical work:

> "In the beginning we recruited experienced nurses from the municipality health service, nursing homes, home nursing care and psychiatric institutions. Everybody was in their thirties and had worked for 10-15 years and had broad practice. It was very favourable to get people that were so confident in their roles and identity because this was a completely new arena and new roles needed to be constructed" (Occupational therapist).

The context appears rather informal and relaxed. They make jokes and laugh. It is not the typical "reporting" context where each professional worker in turn informs what she has performed as regards the patient. It appears rather like an informal conversation. Somebody drinks coffee and between each case that is discussed there is a couple of minutes of informal talk that circles around the patients.

The informality in this meeting may be a reflection of their daily lunch breaks together (in which I have joined). Lunch breaks at this hospital are normally between 11:30 and 12:00. It is very common to find groups of physicians sitting together, groups of nurses, groups of therapists etc. However at the Department of Rehabilitation, they take their lunch break at 12:00 o'clock in order to get their usual table in the hospital cantina.

First of all they discuss how they shall organise the rest of the meeting because recently they have tried some new work approaches. The discussion circles around how ICF should be used as a means to organise the current meeting. An extract of the discussions is presented below:

PHYSICIAN: Now, we have two systems we can adhere to …we have our usual meeting system (she points to the standardised ICF template which she holds in her hand) or this one (pointing to a sheet on the table). For instance …I suggest that I inform you about the reason for referral and then Sissi (while turning to physiotherapist Sissi) and I can tell what we found.

OCCUPATIONAL THERAPIST-1: But then we start completely wrong (she picks the ICF-template from the wall), we should start with "Environmental factors".

PHYSICIAN: Yes, if we shall follow that one then we start in the wrong end (pointing at the template the occupational therapist is holding), but we can start here ...or …but we can as far as it goes follow it, but we must narrow in the problem …

SOCIAL WORKER: I feel that it is important to include what you (all) have talked about with the patient and what we have talked about with the patient

PHYSICIAN: Yes, everything must be on the table.

PHYSIOTHERAPIST: (while turning to the physician). I suggest that you tell about the problem then gradually we can tell about Environmental factors and Body Functions and structure (some of the others nods) …I feel that this is the most correct thing to do.

PHYSICIAN: That is by the way the method we …

OCCUPATIONAL THERAPIST-1: Yes …it is in a way how we have agreed to do things (the others are nodding)

This conversation illustrates how the different professionals have tried a new work approach. Prior to this meeting, they have discussed and reflected on how they organise their work and the meetings. This discussion appears to continue in this meeting as well where the physician suggests rearranging how to conduct the meeting. However occupational therapist-1 picks the ICF-template from the wall, strongly arguing that their meetings still must be organised in accordance with ICF. In this way, they avoid a specific order of speakers in the conversation.

5 Discussion

In this part we illustrate some key aspects of what must be taken into account when establishing new knowledge contexts, that is, organisation, conversation and identity. We believe that the flexibility in managing these issues is crucial for success. Firstly,

organisation has to do with a lot more than establishing a formal structure of the organisation. Artefacts, informal collaboration and arenas come into play. Secondly, we discuss how continuously conversations (written and orally) in the Department of Rehabilitation may overcome the uncertainties of medical work as well as making the employees reflect on what they are doing. Thirdly, establishing new ways of work potentially shape the identities of the participants. We consider how, and discuss who is most fit to participate in such changes.

5.1 Organisation (the mechanisms that make things work)

A common artefact – such as the ICF - supports cooperative work by enlarging and enriching the area of shared information. This is the case for both the discussion in the meetings as well as the process of producing reports. This means that the ICF provides actors with an overview of information, which is distributed over space and time, including the work of other professionals (Schneider and Wagner, 1993:234).

An enormous challenge, however, is how to construct representations that are meaningful to all health professionals who work with a patient. The Department of Rehabilitation has solved this by deciding to de-emphasise the role of distinct disciplinary documents. Personal notes are exempt from their official documentation and disciplinary reports appear only as appendixes to their ICF-based reports. Such a decision is not easy because ‘the necessity to construct shared documents questions the specialist’s unique ways of labelling and solving problems’ (Schneider and Wagner, 1993:233).

Another mechanism that promotes knowledge creation and circulation is the actual organisation within the department. The different professionals are located together in the department, the different professionals share offices and the formal organisation is also reflected in informal common lunch breaks as the teams wait to go to the hospital cantina until their table is free. Knorr-Cetina (1999:97) use the notion of ‘acting body’ as a way to increase understanding and illustrate this as ‘a person insisting on meeting a phenomenon face-to-face in order to understand its properties and procedural implications’.

5.2 Conversation

Uncertainty and messiness in the Department of Rehabilitation is expressed through the highly oral aspect of work about complex patients. Conversations and discussions

are strategies for coping with this. There is no final conclusion and the processes seem to illuminate the different perspectives and thus make sense of the case.

As we have emphasised earlier, legitimate participation in conversations is not given (Shapin, 1994; Lave and Wenger, 1991). This is typically the case when physicians or chief nurses request therapist services on a per case basis. Accordingly, they exercise the power of deciding when therapists should participate or not. The therapists and the social workers in this case were aware of this. When they got the chance to be organised directly in the Department of Rehabilitation they took it, and thereby became legitimate participants.

However, given legitimate access to the arenas where cases are discussed does not immediately promote conversational practice or more collaboration. The different professionals have different ways to pose knowledge claims. They are trained in different professions and accordingly put weight to different levels of precision, for instance in the regular reports. Depending on the receiver, a fluctuating level of precision is chosen. Peer to peer reports (discharge letters, disciplinary reports etc.) are accurate, precise and are often aiming at other professionals of the same kind. Consider how the occupational therapist complained about the traditional psychology report. These reports are self-contained; they carry weight as they are framed in the authority of their respective professions. Their self-contained nature closes the case for further conversation – a source of frustration – according to one of the therapists:

> "In traditional departments, the reports are based on a previous referral, a case, and a produced report, done!"

Signalling case-closed across professional boundaries does not invite to further conversation. It is exactly in line with Shapin (1994:351) who warns that 'great rigor, precision, and certainty may (…) put too great strain upon conversation'. The common production of cross-disciplinary reports aim at curbing this as these reports is put on a level which is understandable across professional boundaries. This is illustrated by the physiotherapist initiating the cross-disciplinary report. In her writing she aims at avoiding the disciplinary preciseness that is usually practiced in peer-to-peer conversations with other physiotherapists.

Conversation in the cross-disciplinary meetings was promoted by employing the ICF. This avoided a distinct ordering of speakers. It also avoided that the nurses always were the last to speak and thus had nothing to say because the physician had closed the case through being the first to speak as well as by his authority (Fujimura, 1996).

The ICF accordingly represents a reasonable successful effort to change the ‘rules for conversation’ (Shapin, 1994).

We consider conversational practice in the Department of Rehabilitation to be linked up to dialectical processes between global and local knowledge (Giddens, 1991). By global we mean two things: firstly, we consider it to be the knowledge base within a specific discipline which each professional draws on - or what Knorr-Cetina (1999) denotes as epistemic culture - and secondly, we regard the common knowledge base in the Department of Rehabilitation through similar lenses.

We would like to point to three factors that take the conversation in the department a step further. Firstly, the department undertake patients who have failed to pass through the ordinary medical system. The certainty of traditional medicine, its approaches and techniques has failed for this particular patient group. They signal a failure or a challenge for the knowledge base the traditional professionals draw on. Secondly, the tight collaboration between the different professionals challenges the contributions from each of them. Thirdly, the recruiting of health personnel who were experienced enabled a mode of reflection of what they where doing.

As a result, there are conditions that enable professionals to reflect on their own field’s knowledge base. The same conditions also enable that the certainty by which knowledge claims is made becomes increasingly questioned and negotiable. Expert knowledge is in its nature revisable in addition to internal dissensions between experts (Giddens, 1991:7). After conducting the examination together with the physiotherapist, the physician explained that she surprisingly did other things than what she used to do. This is aligned with the occupational therapists who underscored that:

> “In our department we must continuously evaluate our contributions up against what the others got. And really, it is demanding if you come from a place where you are used to working more limited with your own things” (Occupational therapist)

This was certainly the case when the nurses finally accepted the occupational therapists as having a role in the patients’ morning care.

Giddens (1990:38) argues that ”the reflexivity of modern social life consists in the fact that social practices are constantly examined and reformed in the light of incoming information about those very practices, thus constitutively altering their character”. Consequently, “the reflexivity of modernity actually undermines the certainty of

knowledge" even in the core domains of natural science [such as medicine]" (Giddens, 1991:21).

Moreover there is a reflection and a conversation among the employees of why they do work in the department in a particular way. Being open-minded for changed ways of work requires that the common practice in the department is put on the line. It appears that the health personnel in the department manage to 'reflect upon the nature of reflection itself' (Giddens, 1990:39) as they regularly question their way of work as is the case when one of the informants underscore that they "regularly try new things" and when the occupational therapist points to that they have to organise work (through the ICF) the way they have recently agreed on.

5.3 Identity

Alvesson (2001:877) argues that "given the high level of ambiguity and the fluidity of organization life (…) many knowledge-intensive workers must struggle more for the accomplishment, maintenance and gradual change of self-identity". In practice, this is echoed in the department when one occupational therapist argued that 'new roles needed to be constructed' and when the physician argued that she completely broke with her traditional role as a physician.

In addition to regarding individual-based identity, the department has established and still nourishes mechanisms aiming at giving the employees a collective identity. For the people in the department, this means being involved in considerable changes such as being organised together, sharing of offices, the dressing practice, the common reports with the ICF, morning care disputes between professionals, jointly examining patients, putting their discipline on the line and so forth). Their identity is not solely connected to a professional belonging where others 'are not equipped to evaluate or regulate it" (Freidson, 1970:137). In this sense we follow Shapin (1994:127) who underscores that 'identity at once belongs to an individual and to the collectives of which that individual is part'. However a consequence of the potential for changed identities, both individual and collective-based is that:

> "Increasingly, everyone has to choose between different options, including as to which group or subculture one wants to be identified with. In fact, one has to choose and change one's social identity as well and take the risks in doing so" (Beck, 1992:88).

Then options also have to do with allowing your colleagues “invading” your professional sphere. It is not evident that this is easy. Consider how newcomers to the department face difficulties with the work practice.

> “Without prior experience, it is hard to be a newcomer in our department. You are strongly in need for role models. You have to learn how to behave like an occupational therapist, and you need to achieve identity as an occupational therapist. And you need somebody to go to when you have attended a meeting that has turned out bad for you or if you disagree in everything that has happened” (Occupational therapist).

A consequence is that recruiting has been aimed at experienced people with a well-developed self-identity. This is particularly interesting as this opposes the way management in general want to recruit knowledge workers in organisation. They aim at hiring inexperienced people in order to be able to mould the raw material themselves (Orlikowski, 1991:18). Many of the participants in the department were well-trained with a lot of experience when they were recruited to the department. Experienced health care workers were considered better “equipped” – they are ‘more confident in their identity’, as one informant expressed it: “promote their opinion vis-à-vis other professionals”. In addition, experienced nurses and therapists were able to reflect on the shortcomings of their own discipline and then be able to act accordingly.

However, the options or this possibility of freedom regarding identity may lead to anxiety (Giddens, 1991:47). The way nurses were reluctant in admitting the occupational therapists into the morning care with the patients may be interpreted along these lines. Interestingly enough, a similar conflict did not emerge between the physiotherapist and the physician examining the patient together. The physician was willing to change her routines based on the actual context in which she reflected on afterwards. A possible explanation is that their identity is strongly linked to their role as physicians through education and socialisation. This may imply (as with the experienced therapists above) that confidence in their role promote the exploration of potential new identities.

6 Conclusion and implications

We consider the Department of Rehabilitation as an expression of a knowledge context. The employees have managed to create a setting where different professions collaborate more closely and where conversations and discussions are facilitated. This

is not to say that there have not been turf battles between whose knowledge claims are the most valid. However we believe the department through the established mechanisms for collaboration, their reflexivity and their willingness to change work, as well as the legitimate participation of the therapists in the department have contributed positively to a knowledge context. Based on this, we draw the following implications:

Firstly, communities of practice oriented knowledge contexts have been criticised for their limited ways of creating new knowledge (von Krogh, Ichijo and Nonaka, 2000). We believe that the continuous conversations and high reflexivity among the participants in these contexts promote the creation of new knowledge. It is legitimate to question the knowledge claims from the different professions and their knowledge base and the common way of work.

Secondly, changing the conditions for knowledge work offers the opportunity for the choice between several identities. As we have illustrated, such processes must be managed with care as they may lead to anxiety. Successful implementation of knowledge contexts presupposes the existence of mechanisms that take into account and exploit new or alternative identities.

Thirdly, creation of knowledge and reshaping of identities is of interests both for the individual, the management or one's co-workers. In contrast to many of the conclusions from the management literature, we would like to emphasise that to explore alternative identities and changes in the individuals' knowledge bases require confidence in the old identity as well as a safe foothold (through experience) in the old practice.

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