# Who Needs Accountability?

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**Abstract.** During the twenty-some years since ethnographic field studies in the workplace first began to be taken seriously as having possible relevance for the design of information technology, *accountability* has been one of the recurring concepts in the literature exploring these areas. Like usability and actability, accountability sounds like an important issue, but proves a difficult feature to define. Of what exactly is it an attribute? Who defines it? For whom? Under what conditions?

In this paper, I explore and compare a few of the various uses of the concept of accountability that I have come across in ethnomethodological and CSCW literature. In the third section, I tentatively indicate what focusing on accountability, in one or several different interpretations of the concept, might imply for design of IT in some specific cases. These brief and sketchy examples, aiming to be thought-provoking rather than analytically thought-through and articulated, are selected from recent development projects and on-going research work with which I have been involved or come in contact.

## 1 Introduction

It's happened again. I've forgotten my pocket-sized, non-digital, personal calendar at home. Now I'm at work, without my calendar, and I'm temporarily at a loss, unable to account for myself and my near past and future. Without my calendar at hand, I can't decide with certainty on meetings or other obligations. As a result of my own negligence, I'll be on edge all day, making notes of appointments on slips of paper (so easily mislaid), giving guarded, conditional commitments; "*I'll get back to you about the*

*exact time of day/the specific date/if I can't make it/I'll confirm that by e-mail as soon as possible...*"

My calendar helps me keep track of my life. If I lose it, or forget it somewhere, my accountability, to myself and people having to do with me, is noticeably affected. Yet, in this very state of unaccountability, I can, on a different level, be held accountable for the temporary loss of my calendar. The concept of accountability, even in this commonplace example, proves multi-layered and ambiguous, begging further exploration.

It isn't, however, primarily because of a growing awareness of how dependant I am on various artefacts for the continuous up-keep of my personal accountability that I have chosen to elaborate on the concept of accountability in this paper. It's rather that, having repeatedly come across the concept of accountability, with widely shifting signification, in various ethnomethodological writings and CSCW literature, I have tried to understand more about it by reflecting on specific experiences from my research work and my own everyday activities. In so doing, I have begun to realize how closely interwoven people's on-going choices of action are with issues of accountability. This, in turn, has lead me to question whether the importance of considering and supporting accountability issues and needs is perhaps underestimated in the design and development of information and communication technologies.

Even when designers deliberately focus on use- and action-oriented concepts such as usability and actability, it doesn't necessarily follow that accountability surfaces as an explicit issue for design. When it does, it is often narrowed down to questions of human-computer interface design, and focused on system accountability versus the user (such as, for instance, the form and content of feedback information).

My own experience is that accountability issues are very closely linked to what we usually refer to as social and organizational issues. As more and more people use mobile phones, PDA:s, lap-tops etc from home, school and work as well as 'on the road', as constant accessibility to all kinds of information on-line becomes more or less taken-for-granted, and as more and more communication, interaction and transactions are carried out via Internet or various intranet solutions, old boundaries shift and crumble and new pathways evolve. With this on-going development in mind, accountability becomes, I would argue, an important issue for individuals as well as organizations to re-address.

Thanks to a workshop about usability and actability, arranged in connection with the VERKA research and development project[1], in March 2001, in Stockholm, I had the opportunity to deliberately focus on the concept of accountability and begin to explore the relationship between usability, actability and accountability as issues for design of IT. This paper is a further elaboration of the position paper (Eriksén, 2001) written for that workshop, an elaboration inspired by the discussions that followed during the

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[1] VERKA, 2000.

workshop itself, but focusing almost exclusively on the concept of accountability. It is an explorative paper, unfinished in the sense that it is only a sketchy beginning, presented in this form for IRIS 24 as the basis for further discussions, and, hopefully, as the embryo for a future, more worked-through research paper.

# 2 Exploring the Concept of Accountability

First, let's go back, briefly, to the days before the existence of what we today generally think of as modern information and communication technologies. We find that artefacts were used to support and enhance accountability, even then. The most ancient inscriptions and written texts that researchers have been able to decipher have often proved to be concerned with rather mundane matters of accountancy (Melin, 2000). Thus, written languages, the media of so much poetry, drama and scientific endeavour during the past 5000 years or more, appear to have developed primarily out of the prosaic needs of everyday work practices, i.e. the need to keep track of business and financial transactions, taxes etc.

Yet accountability is not only a matter of accountancy. Accountability is, according to the dictionary[2], the quality or state of being accountable. Accountable, in turn, has two definitions. According to the first, accountable is *subject to giving an account*: answerable. The second definition is *capable of being accounted for*: explainable. In the first case, accountability would be the attribute of an acting subject, or at least an actant, with a voice of its own. In the second case, accountability would be a quality or state of an object, necessitating an outside voice to do the actual accounting. Both definitions, however, share the assumption of there being a basic, imperative question or statement: Answer! Explain! An interesting issue, then, is: Who, in each case, is the assumed imperator who is posing the question or making the imperative statement? Who needs accountability?

In the following, I will compare some of the uses of the concept of accountability, as I've come across it in my readings, to try to grasp what it might actually mean, and what implications 'taking accountability into account' might have for design, development and use of IT.

## 2.1 Garfinkel on accountability

Ethnomethodology, the study of common, everyday methods, of practical action and practical reason[3], has become more and more influential in research concerning the

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[2] Webster's Seventh New Collegiate Dictionary, 1971.

[3] This simple description of a profound sociological research approach comes from Livingston, 1987, p. 4.

design and development of IT. Especially within the areas of Human Computer Interaction (HCI), Computer Supported Cooperative Work (CSCW) and Participatory Design (PD), ethnomethodologically informed ethnographic methods for studying work practice and technology have, in recent years, come to shape the topography of the research areas[4].

The American sociologist Harold Garfinkel's *Studies in Ethnomethodology*, first published in 1967, is a classic for anyone interested in ethnomethodology. For Garfinkel, accountability is a central concept. He writes:

> In doing sociology [...] every reference to the "real world", even where the reference is to physical or biological events, is a reference to the organized activities of everyday life.[...] Ethnomethodological studies analyze everyday activities as members' methods for making those same activities visibly-rational-and-reportable-for-all-practical-purposes, i.e. "accountable", as organizations of commonplace everyday activities." (Garfinkel, 1984 [1967], p.vii)

When Garfinkel speaks of accountable, he means observable-and-reportable, i.e. available to members as situated practices of looking-and-telling. These practices he sees as "an endless, on-going, contingent accomplishment" (Garfinkel, 1984 [1967], p.1). In this sense, the answer to my opening question, stated in the title *Who needs accountability?*, would be: *Everyone*.

Garfinkel's "account-ability"[5] is identical to, and depends on the skill with, knowledge of and entitlement to the detailed work of accomplishing, the activites by which people produce and manage settings of organized everyday affairs. Central to these accounting practices and accounts is their reflexive character, i.e. that in the constantly on-going accomplishment of them we embody our lives and constitute ourselves as subjects[6].

Garfinkel's use of accountability transcends the divide between the two definitions of the word given by Webster's Dictionary, *subject to giving an account*, versus *capable of being accounted for*, linking the subject and the object through the embodiment of on-going activities[7]. Garfinkel accomplishes this elegant bridging of the subject-

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4 By 'the topography of the research areas' I mean, here, roughly, research practices; how and where research is carried out, by whom, what it focuses on, where it is published, in what forms, who reads it, who quotes it, and where, what scientific publications show up in the reference lists, how journals, conferences and workshops are planned, choreographed and carried through, what people attend them etc.

5 Garfinkel hyphenates the adjective, "account-able" (Garfinkel, 1984 [1967], p. 1).

6 Webster's unsophisticated definition of reflexive helped me see this: *1: directed or turning back upon itself 2: of, relating to, or constituting an action (as in "he perjured himself") directed back upon the agent or the grammatical subject*, (Webster's).

7 Compare Hegel's "Schluss des Handelns"; "*Der Zweck schliesst sich durch ein Mittel mit der Objektivität und in dieser mit sich selbst zusammen; es ist ein Äusserliches gegen das Extrem des subjektiven so wie daher auch gegen das Extrem des objektiven Zweckes*" (Hegel 1812/1816, Wissenschaft der logik, BkII, Sect.iii, Ch.2B), see von Wright 1971, p.180.

object gap by focusing the endeavours of ethnomethodology squarely on the inescapable indexicality of language and action, the *ad hocing* practices of the socially competent member of the arrangement which is being accounted for by these very practices. *Ad hocing* is a constituent part of accountability, according to Garfinkel.

It is worth noting how central the word "member" is in Garfinkel's work. Taking *ad hocing* into account, you can begin to understand the need for being as explicit as possible about the position of the observer, the membership[8], or various memberships, of the person or persons, who are authoring and/or editing the official account in scientific studies.

In design and development of IT, researchers working in the areas of User Centered Design and Participatory Design have developed alternative approaches to traditional design procedures and processes where *ad hocing* and the importance of recognizing how membership affects representations are taken seriously. Concepts such as "situated use", "cooperative design", "co-construction" etc are usually grounded in an ethnomethodologically informed approach to IT design, with roots going back to Garfinkel and his understanding of accountability.

More profoundly, perhaps, ethnomethodology is influencing understandings of the close interrelationship between scientific practices and scientific facts. Although Garfinkel himself underscores that ethnomethodological studies are not directed to formulating correctives, and that they are useless when done as ironies, the growing domain of ethnomethodologically informed studies focusing on how scientific facts are a practical organizational accomplishment of everyday activities is changing the way researchers understand and account for their work. Through and beyond this development, new and more creative ways of dealing with differences of scientific opinion, and gaining insight into their origins in everyday practical organizing activities, may be accomplished. As Garfinkel puts it, concerning ethnomethodology versus other forms of practical sociological reasoning;

> "[...] there can be nothing to quarrel with or to correct about practical sociological reasoning, and so, because professional sociological inquiries are practical through and through, except that quarrels between those doing professional inquiries and ethnomethodology may be of interest as phenomena for ethnomethodological studies, these quarrels need not be taken seriously." (Garfinkel, 1984 [1967], p.viii)

In some sense, then, Garfinkel takes an outsider's stance, almost irritatingly a-political and a-moral, in relation to the object of study, i.e. the endless, on-going practices of members' organizations of commonplace everyday activities[9]. Yet this very choice of focus, in which membership and *ad hocing* are seen as a constituent part of accountability, is, to my mind, inherently revolutionary compared to most traditional scientific

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[8] Membership is used here in a 'Garfinkelian' sense, as 'being a member of a community or group'.

[9] I thank my colleague Berthel Sutter for pointing this out to me.

reasoning and scientific methodology, in that it brings people, everyday life, subjectivity and politics back squarely into the picture - but in a new light.

## 2.2 Suchman on the concept of located accountability in relation to technology production and use

In the article *Working Relations of Technology Production and Use* (Suchman, 1994), Lucy Suchman[10] takes a more deliberately political stance in her use of the concept of accountability than Garfinkel does. Here, she explores the relevance of feminist reconstructions of objectivity for the development of alternative visions of technology production and use. Focusing on the working relations of people in the production and use of technical systems, she discusses three contrasting premises for design – the view from nowhere, detached engagement, and *located accountability* – which she sees as representing incommensurable alternatives for a politics of professional design.

Suchman is not herself a feminist scholar, but has been inspired by on-going epistemological discussions concerned with ensuring the presence of multiple voices in knowledge production. Suchman writes:

> For technology designers and developers, the basic change implied by rethinking objectivity is from a view of design as the creation of discrete devices, or even networks of devices, to a view of systems development as entry into the networks of working relations – including both contests and alliances – that make technological systems possible. (Suchman, 1994, p.22)

Using examples from her own experience of working across a multitude of boundaries – functional, organizational, professional, geographical, between technology production and use – in a large multinational corporation, she points to how feminism offers a way to begin to replace the oversimplified dichotomy of the designer/user opposition with a rich landscape of identities and working relations within which we might begin to move with some awareness of our own positions. The agenda for design becomes working for the presence of multiple voices, not only in knowledge production, but in the production of technologies as knowledges objectified in a particular way.

> Integration, local configuration, customization, maintenance and redesign on this view represent not discrete phases in some 'system life cycle', but complex, densely structured courses of articulation work without clearly distinguishable boundaries between. (Suchman, 1994, p.24)

Although grounded in an ethnomethodological approach very close to Garfinkel's, and strongly influenced by feminist theory, Suchman's argument, here, runs along lines very similar to those common in the area of Participatory Design (PD). Where PD, or the Scandinavian approach, as it is often called outside of Scandinavia, is historically

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10 American social anthropologist, for many years Principle Scientist and head of the Work Practice and Technology research group at Xerox, Palo Alto Research Center (PARC).

founded on strong political visions of achieving workplace democracy, however, Suchman bases her argument on contemporary ethnomethodological and feminist theorizing. *Articulation work*, as I understand Suchman's use of it here, is part of the constantly on-going organizing, sense-making work of everyday activities which Garfinkel's concept of accountability covers. Susan Leigh Star and Anselm Strauss write, concerning similar types of boundary areas between technology production and use as those Suchman is exploring in her article:

> As computer use moves from single to group task and communication, the jobs of tuning, adjusting, and monitoring use and users grows in complexity. One type of work is especially important, dubbed "articulation work" by Strauss, et al (1985). Articulation work is "work that gets things back 'on track' in the face of the unexpected, and modifies action to accommodate unanticipated contingencies. *The important thing about articulation work is that it is invisible to rationalized models of work.* [...] (Star & Strauss, 1998, p.2)

I find this definition of articulation work problematic, in that it appears to rely on a circularly defining, static relationship (*invisible to/making invisible*) between the concept of articulation work and an unchanging and unchangeable concept of rationality in models of work. Yet it points to one of the central reasons for my choosing to explore the concept of accountability. What happens if we look, very closely, at work practice, and at technologies in use, and ask ourselves; *Accountability for whom?* Might we not even, gradually, accomplish a shift in the understanding of rationality in models of work? And might this not profoundly influence how we design, develop, understand and cultivate – and use – information and communication technologies? This is what I understand Suchman to be arguing for in her article about located accountability in relation to technology production and use.

Suchman presents three contrasting premises for design; the view from nowhere, detached engagement, and located accountability.

Within professional design there is, according to Suchman, still a prevalence of the view from nowhere. As a consequence, designers are encouraged to be ignorant of their own positions within the working relations that comprise technical systems, to view technologies as objects and themselves as their creators. By losing track of the social mediations of technological production, this objectivist stance supports the impossibility of specifically locating responsibility for technical production.

Suchman argues that system developers must become responsible for locating themselves within the extended networks of social relations and forms of work that constitute technical systems. This means replacing the traditional striving for objectivity, i.e. 'the view from nowhere', 'the god trick', with 'views from somewhere'. It means asking '*Who is doing what to whom here?*' in the design situation (Suchman, 1994, pp. 25-27).

Yet while professional designers are encouraged to maintain their distance from the specific sites of technologies-in-use, they are, at the same time, invited into progress-

sively more intimate relations with their own professionals and with the companies for which they work. For many scientific and technical professionals, this leads to a kind of detached engagement with the work of technology production. On the one hand, there is this joint creation of an elaborate social world within which one can be deeply engaged. On the other hand, designers do not have full control of this cut-off world. They work under constraints from the market, the tools, the application environment, an employer, a professional discipline, the dynamics of a workgroup or project, style guide-lines etc.

While the discourse of design from nowhere obscures any sense of responsibility for the relations of technology production and use, detached engagement instead yields up responsibility to the relations of employment.

In contrast, Suchman suggests a third alternative, built on the acceptance that our vision of the world is a vision from somewhere, based on an embodied and partial perspective. This very circumstance, that our view is a partial, located one, makes us personally responsible for it. This is what located accountability is about.

Based on her own experience, Suchman argues for the need of boundary-crossing, for cultivating what she refers to as 'webs of connection', for mutual learning and partial translations. Powerful technical systems are, from the standpoint of located accountability, not hegemonies but *artful integrations*, hybrid systems composed of heterogeneous devices. New ways of working and new technologies grow out of old ones. Change is from this standpoint not the prerogative of professional design but an aspect of everyday practice. Suchman writes:

> Design success rests on the extent and efficacy of our analysis of specific ecologies of devices and working practices, finding a place for our own technology within them. Design awards, by this reasoning, should be given not for discrete, decontextualized artefacts but for the collective achievement of new, more productive interactions among devices, and more powerful integrations across devices and between devices and the settings of their use. (Suchman, 1994, p.34)

Accountability, as Suchman uses the concept in this article, is about taking personal responsibility for one's own actions in a larger context, beyond one's own immediate memberships (to use Garfinkel's terminology in an unorthodox way on Suchman's version of the concept accountability). This implies being aware of, and reflective about, one's own memberships in various communities, and about the possible benefits of boundary-crossing networking. Suchman's answer, here, to the question *Who needs accountability?* is a political one, imperative in a way that Garfinkel's is not; each and every one of us needs to take on the challenge of personal accountability, in a broad, communal sense, for our actions. Design and use of technologies, in this view, are a collective achievement, for which we are all, in some sense, and in a located way, responsible. It is by locating ourselves that we take on accountability.

## 2.3 Dourish on system accountability as constructed consistency in 'the story a system tells about itself'

In the article *Accounting for System Behaviour: Representation, Reflection and Resourceful Action*, the British computer scientist Paul Dourish[11] explores the notion of computational accountability (Dourish, 1995). This is further elaborated on in the article *Technomethodology: Paradoxes and Possibilities*, written together with Graham Button (Button & Dourish, 1996). In the following, I draw on both these articles, as I find the second helps to explain and clarify the first.

Ethnomethodology, it is argued here, can do more, and better, than to merely inform design concerning the details of work practices in specific cases. Learning from ethnomethodology, the rationality of the entire design process should be reconsidered. The traditional role of abstraction in systems design is contrasted with a very different, but *equally theoretical*, way of generalizing, i.e. the ethnomethodological perspective of the practical aspects of representations of activity. From this reorientation of abstraction, emphasizing where the abstraction came from, how and why it was produced, by whom and for whom, a notion of 'accounts' is developed; '*computational representations which systems continuously offer of their own behaviour and activity, as a resource for improvised and contextualised action.*' (Button & Dourish, 1996, p.23)

System accountability, according to Dourish, is constructed consistency in 'the story a system tells about itself'. An account, in this sense, may be understood as a view of the implementation, which reveals certain aspects and hides others, emphasising particular relationships for some specific purpose. An account must at all times be accurate, i.e. the system should be able to offer an account that is not incompatible with previously offered accounts. Dourish makes a distinction, here, between *accuracy*, which refers to the user's view and purposeful action, and *precision*, which refers to the system's 'view'. With this interpretation, there is no paradox in his stating that accuracy in an account may be achieved by relaxing precision. What he is doing is simply subsuming the system's view under the user's view, insisting that a system, a representation, exists only by being maintained and supported, and being made acceptable to the parties on either side for some set of purposes and actions.

Dourish's notion of system accountability resembles the notion of *system transparency* (Agnér Sigbo, 1993). However, Dourish sees accounts as explicit technological artifacts, i.e. computational representations which stand in special semantic relationships to the systems they describe. Thus, he makes a clear distinction between an account of system behaviour as offered by a system, and the understanding of system

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[11] Dourish has been doing research work in cooperation with sociologists within HCI and CSCW areas for a number of years, mainly at Rank Xerox Research Centre, Cambridge Lab (EuroPARC).

behaviour formed by a user in response to that account. In fact, it is the unproblematic way in which he makes this clear distinction, and choses to stay 'within the computational system', so to speak, which, to my mind, is both a strength and a weakness in his article. His notion of system accountability, in this way, becomes an in-depth, but narrow, human-computer interface issue. *Who needs accountability?* The system, versus the user, is how I read Dourish's answer. Which means, in the last instance, that accuracy (the user's view and purposeful action) is subsumed under precision (the system's view), despite the stated intention of accomplishing the reverse.

What at the outset looks like a revolution for design theory–a shifting understanding of abstraction in the design process–somehow doesn't manage to get beyond the glass surface of the computer screen. Garfinkel's account-ability is revolutionary. Suchman's located accountability is political. Dourish's system accountability remains, as far as I can see, a traditional usability issue for human-computer interface design.

# 3 Some Sketchy Examples

In the following, I give a number of different examples from recent development projects and on-going research work, where I believe further discussions around the concept of accountability might cause new and relevant questions to surface. These examples are brief and sketchy, but may at best inspire future in-depth explorations of how accountability issues might be of interest for the design and use of information and communication technologies.

## 3.1 A regional competence data base initiated by the Labour union

Recently, a regional unit of the largest labour union in Sweden initiated and paid for the design and development of a regional workers' 'competence data base'. The data base contains information about the individual members' education, working life experience, competence, and current and previous employers – in short, a curriculum vitae for each member. In exploring issues of accountability here, you might want to ask '*Who owns and has access to the data base?*' The answer, in this case, is: the employers.

Using something along the lines of Suchman's concept of 'located accountability' in this example might encourage alternative, more flexible and distributed, design solutions.

## 3.2 Different alarm systems in use in dialysis departments

In an ethnographic fieldstudy of different alarm systems in use in three dialysis departments (Sànchez Svensson, Tap & Selling Sjöberg, 2000), it was found that one of the systems, because of the distribution and localisation of the alarm signals throughout the corridor and the way they operated, provided richer information about what was going on on the ward than the other systems did. For instance, because of the localised alarm signal, this specific system insured that if any one, or several, of the nurses on duty were having a hectic day, caused by repeated alarm situations among the group of patients they were in charge of that day, then all the nurses on duty would be aware of it, and could offer to help out in order to redistribute the work load. The other alarm systems did not support this type of shared awareness and mutual helping each other out on the wards.

In this case, it might be interesting to explore the possible overlap and differences between the concepts of *affordance* and *accountability*[12], as well as testing different constellations of people and technologies in collaboration for which these concepts might be seen as attributes. Here, I would go for Garfinkel's concept of account-ability.

On the other hand, it could be interesting to explore what this type of distributed, multi-mode interface and computer supported cooperative work would mean for Dourish's concept of system accountability.

## 3.3 IT in a Home Assistance Service

In a rural town in southern Sweden, the municipal Council, some years ago, set up a vision of achieving the goal of becoming an 'IT Community'. As part of the process of working towards this goal–a process which is being planned and carried through ambitiously on many different levels and in most areas in the municipal organization–a study was made of IT use in home assistance service (Beck, 1997).

Accountability issues are actually focused and brought to the fore in Beck's report from this study, although they are mainly referred to as technically bounded rationality and rationalities of responsibility, and the differences and tensions between these.

The study showed that the computer support in use in home assistance service had been developed to satisfy accounting requirements and their billing extensions, which had resulted in an increased workload for most employees, without any actual benefits or supportive effects for the work they were actually doing. Meanwhile, computer support for arguably more vital functions, such as the work of coordinating between hospitals and the home assistance service, had *not* been developed. E-mail, which

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12 I thank Iordanis Kavathatzopoulos, participant of the VERKA project and the workshop on 'Usability and Actability', for pointing out the possible overlap between *affordance* and *accountability*.

might have supported cross-functional communication and coordination at an operational level in the organization, had not been introduced here, and in fact there was no technical infrastructure for cross-functions service. It had not been considered a priority. Beck writes:

> It is worth noting, then, what does exist; what has been developed and is well established is infrastructure for the managerial functions of accounts and budget management, including some taking place across geographical distances. The former [*computer support for coordination across functions*] is arguably more essential to the home assistance service, and from a technical point of view there is no reason not to have developed this. (Beck, 1997, p. 10)

These are definitely accountability issues. Who needs accountability here? I would answer: everyone. Why is economic accountability over-emphasized, while the need for accountability of care-taking practices remains nearly invisible?

In this case, it would be interesting to try to initiate a discussion around the concept of accountability, especially along the lines of Suchman's 'located accountability', in the planning process, as well as in the design, development and use processes, to broaden and deepen the organizational and individual conceptualizations of what it is to take part in the process of becoming an 'IT Community'.

## 3.4 Status categories in a municipal document management system

A new Internet/intranet-based document management system is being introduced in a municipal organization where I am at present doing a research and development project. The new system is being provided, and tailored to fit the local needs, by a consultancy firm, in close cooperation with a number of municipal employees. During one session of distance design of document templates, status categories for documents-in-progress were discussed. The consultant suggested, over the phone, the labels 'work in progress' and 'established', in Swedish 'arbetsmaterial' and 'upprättad'. The municipal employee didn't feel at home with this terminology, and spent some time trying to think of better alternatives.

The consultant explained that 'upprättad' was a legal term, and that it was what was usually used in the system. However, he didn't go into any further detail about what this might actually mean for the specific type of document they were discussing.

Because the process I was observing was a kind of developing of standardizations for future document management in public services, I decided to explore the implications of the document category 'upprättad'. Most people I asked had no answer. Finally, I called the municipality's legal expert, and he explained. A document, once it is labelled 'upprättad', becomes public and falls under the Swedish Freedom of the Press Act (*Tryckfrihetsförordningen*) and the Secrecy Law (*Sekretesslagen*). Both of these are considered important issues for sustaining democracy in Sweden.

Who needs accountability here? Do we realize it? Like myself, most of the people I asked about 'upprättad' had very vague ideas of what it might mean in a legal sense.

As public service document management goes on-line, and is decentralized and distributed throughout the municipal organization, what do we need to know about the formalizations and operationalizations of democracy we're working with? It brings to mind Zuboff's concepts of automated and informated in her book *In the Age of the Smart Machine* (Zuboff, 1988). We need to know and grasp more about what we are doing, as we go on-line, or we may find ourselves contributing, unknowingly, to becoming an automated rather than an informated society.

# 4 Conclusion

In this paper, I have explored the concept of accountability as an issue for design and use of information and communication technologies. It seems too early in this explorative process for any serious conclusions. However, putting questions like "*Accountability – for whom?*" on the agenda during the design process may at least help to bring a number of implicit assumptions dating back to antiquated models of strictly hierarchical work organization into focus for possible revision. Acknowledging and exploring in depth some the many different interpretations of 'accountability' currently in use might also help in understanding and managing issues of multi-perspectivity in design.

What I plan to do in the near future is to continue to keep accountability in mind, and to test the concept whenever it seems as though it might be of use for gaining a better understanding of 'what's going on' – and what isn't, and perhaps should be.

# 5 Acknowledgements

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# References


Eriksén, S. (2001), 'What about Accountability?', position paper for the workshop 'Usability and Actability', Stockholm, March 20th, 2001.

Agnér Sigbo, G. (1993), Att genomskåda datasystem - modellers betydelse för användning och utveckling av datasystem. [Seeing through computer systems - the importance of models for use and development of computer systems] *in* L. Lennerlöf, ed., 'Människor, Datateknik, Arbetsliv', [People, Computer Technology, Working Life]. Publica, Stockholm.

Beck, E. (1997), Managing Diffracted Rationalities: IT in a Home Assistance Service, *in* I. Moser & G.H. Aas, eds., 'Technology and Democracy: Gender, Technology and Politics in Transition? Proceedings from Workshop 4 (of the January 1997 conference "Technology and Democracy - Comparative Perspectives")'. TMV report no. 29, 1997, the Centre for Technology and Culture, University of Oslo, Norway, pp.109-132.

Button, G. & P. Dourish (1996), Technomethodology: Paradoxes and Possibilities. *in* 'Proceedings of ACM Conference on Human-Computer Interaction CHI 96', Vancouver, BC Canada, April 13-18, 1996, pp. 19-26.

Dourish, P. (1995), Accounting for System Behaviour: Representation, Reflection and Resourceful Action, *in* 'Proceedings of the third decennial conference *Computers in Context: Joining Forces in Design*', CIC'95, Aarhus, Denmark ;August 14-18, 1995,Aarhus: Department of Computer Science, Aarhus University, pp.147-156.

Garfinkel, H. (1984), *Studies in Ethnomethodology*. Polity Press/Blackwell Publishers, Oxford, UK. [First published in America, 1967.]

Levén, P. (1995), *Från användning till handling. Om kvalitet i ett marknadsorienterat informationssystem*. [From use to action. Concerning quality in a market-oriented information system]. Licentiate thesis. Department of Informatics, Umeå University, Umeå, Sweden.

Livingston, E. (1987), *Making Sense of Ethnomethodology*. Routledge & Kegan, London, UK.

Melin, L. (2000), *Människan och skriften: Tecken, Historia, Psykologi*. [Man and the written language: signs, history, psychology]. Norstedts, Stockholm, Sweden.

Sánchez Svensson, M., H. Tap & A. Selling Sjöberg (2000), Localisation, Orientation and Recognition of Alarms. A comparison between three alarm systems in use, *in* 'Proceedings of NordiCHI2000, *Design Versus design*, the first Nordic conference on Computer-Human Interaction, Stockholm, Sweden, October 23-25, 2000. Available in CD format only, Intresseföreningen STIMDI.

Smith, D. (1987), *The Everyday World As Problematic. A Feminist Sociology*. Northeastern University Press, Boston, USA.

Star, S. L. (1991), Distributions of Power. Power, technologies and the phenomenology of conventions: on being allergic to onions, *in* J. Law, ed., 'A Sociology of Monsters: Essays on Power, Technology and Domination'. Routledge, London.

Star, S. L. & A. Strauss(1998), 'Layers of Silence, Arenas of Voice: The Ecology of Visible and Invisible Work', *Computer Supported Cooperative Work: The Journal of Collaborative Computing* **00**: 1-22, 1998. Kluwer Academic publishers, the Netherlands.

Suchman, L. (1994), 'Working Relations of Technology Production and Use', *Computer Supported Cooperative Work (CSCW)* **2**: p.21-39, 1994. Kluwer Academic publishers, the Netherlands.

Zuboff, S. (1988), *In the Age of the Smart Machine. The Future of Work and Power*. Basic Books, USA.

*Webster's Seventh New Collegiate Dictionary* (1971), Merriam-Webster, Chicago, USA.

*VERKA - Verksamhetsutveckling och arbetsmiljö.Att förebygga arbetsmiljöproblem vid datorstödd ärendehantering* (2000), [Development of organization/business and work environment. Preventing work environment problems in computer supported clerical work] Overview presentation of a project in cooperation between the Swedish government agencies Riksskatteverket, de allmänna För- säkringskassorna, Riksskatteverket, the unit for Human-Computer Interaction at the department of Information Technology, Uppsala University, and Futura, Previa's Research and Development department.

Wright, G. von (1971), *Explanation and Understanding*. Cornell University Press, Ithaca, New York.