Local Interpretations of Information Technology

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Abstract: In this paper I will focus on local interpretations of information technology (IT) through qualitative material. It is my aim to explore how information technology intervenes with local situations and what kind of meanings IT is given in people's everyday life. Do the interviewees see information technology as a masculine culture or is IT and information society seen as equal as it aims at being. I will approach IT through in particular women's experiences in rural space that is the context of the experiences and interpretations. To pursue this aim, I will present in this paper two North-Karelian women and discuss their experiences and interpretations of IT and information society.

1.   INTRODUCTION

In this paper I will explore the meanings and interpretations given to IT in qualitative interviews. It is my aim to construct computing ethnographies: two North Karelian women's descriptions of IT, located in their life spheres and contexts. Here the locality is situated in the rural Upper North Karelia, Eastern Finland. The Upper North Karelia information society development project '*Learning Upper North Karelia Towards Information Society*' gives the background to the subjects' experiences and interpretations of IT. How do people live in the middle of these development projects? How do they interpret IT and information society? How does gender factor in concrete local practices? What ways are there to approach IT? Are we able to trace definitions of IT in subjects' interpretations of it?

1.1   Technology - Information Technology

Technology consists of artifacts as well as socially shaped human activities, practices and knowledge [2]. Technologies are inventions that are organized expressions of a particular culture's productive structures that do not tell us by themselves what they are or what they are capable of. Instead, it is humans that attribute capabilities to the machine. In this sense our knowledge of technology is essentially social: it is a construction rather than a reflection of the machine's abilities [3].

Grint and Woolgar approach technology as text, which makes it possible to examine the processes of constructing (writing the text) and using (reading the text) the machine. The relationship between readers and writers is understood as a contact between the machine and the subjects(s) interpreting it: what is it for and what can it do? This metaphor challenges some of our own intuitive beliefs about technology: the effects of technology are usually easily seen and often incontrovertible [4]. IT (computers, computer programs, e-mail messages, databases, manuals, information technology journals) can be seen as texts produced and interpreted by people. Here I focus on the relationship between the readers and the machines, and what ways the users interpret information technology. As previous research has shown, people have their own perspectives on IT that are dependent on their concrete practices and activities [4]

According to Vehviläinen [5], the users of IT and networks are subjects who are living in their bodies in local, historical, and socially constructed practices. Computers and nets are used in concrete spaces and situations. The self is an acting subject who defines oneself and her activity in society. Here I explore users of a regional community network in Upper Karelia and define them as local interpreters of IT and information society.

1.2   Gender and Information Technology

Many feminist theories concerning women and technologies construct a dichotomy between masculine - technology / feminine - nature. It is argued that technology, and computer technology in particular, is rooted in values which most societies consider to be the preserve of men: objectivity, progress, rationality and competition [6]. Webster [7] sees technology as masculine in both the institutions and processes that generate and perpetuate it and in the values underlying it. Grint and Gill, too, define technology as a masculine culture, and argue that women's alienation from technology is a product of the latter's historical and cultural construction as masculine. Since masculinity and technology are conceived of as being symbolically

intertwined, technical competence has come to constitute an integral part of masculine gender identity [8].

1.3   Information society

Finnish society aims for equal access to IT through the activities of governmental agencies. The information society appears to be coming - at least if one believes in public discussions and the information society strategies of various state agencies. Schools and libraries are equipped with computers and networks, IT companies are supported, and citizens are taught information technology skills [9].

This challenge also affects North Karelia, the easternmost region of Finland located on the Russian border. One of the many projects focussing on IT in North Karelia is 'Learning Upper North Karelia: The Upper North Karelia towards Information Society.' Its official aim is to "improve the information society capabilities of the people living in scarcely populated and declining areas, and thus [to] fight...social marginalisation" (http:// unk.pkky.fi/englanti.htm). The project is a part of the revision process of the national information society strategy by *The Finnish National Fund for Research and Development*. The project creates new possibilities for communication, marketing and trade between municipalities, associations, companies and individuals, and the possibilities for distance learning and remote working should increase. The central part of the project is the regional community network, which operates in the area of three municipalities. In the area there are approximately 20 000 inhabitants and the regional community network has 4500 registered users. The project is based on the idea of learning by doing: it is the local people working and studying in the project who are responsible for the technical construction and maintenance of the network and also of the instruction of its use. All residents of the area have the opportunity to use the networks at the cost of a local phone call. The more than 30 computer kiosks all over the area permit free access to the regional community network and the Internet.

In the autumn 1998 I interviewed the workers and participants of the project. In the next section, I will look more closely at two interviews, chosen because they represent the ideal developer and user of the network. One of them, Oili, works on the project and the other, Kaija, is an active user of the regional community network. Both Oili and Kaija participate actively in rural development projects. They look at IT through the lenses of a marginalised area and different development projects; these projects also contribute to the context of the study.

2.   OILI: A PROPHET OF THE VILLAGES

42-year-old Oili was born in Nurmes and now lives in a village in Upper Karelia. She has studied in southern Finland and gained degrees in marketing and secretarial work. Though she is also a part-time farmer, she has also worked outside the farm in several professions, e.g., as an employment officer of her home area. Oili did not plan to stay in North Karelia and in the Nurmes region. Nevertheless, she got married and stayed in the area. She has not regretted her decision to stay in a rural setting because she has found her calling in developing the villages.

In the early 1990s Oili studied for a marketing degree by distance education offered by the school in her village. At the same time many village development projects were started and cooperation with neighbouring villages was boosted. These villages have been very active and participated in a number of development projects. Now, they are interested in development projects related to IT. Oili for her part has lived in the middle of these activities all the time.

> Well I have been the chairman of this co-operative, but now when I'm working and these projects take all my time. I'm the representative of our village in this 'Maakuntien pilottikylät'-project and then I'm also the chairman of our project [Learning Upper North Karelia] and I'm also a representative in the council of villages... and then I also have my work and work at the farm too. (Oili, 3 Nov. 1998.)

2.1   Oili and Information Technology

Oili was acquainted with computers in the early 1990s during the previously mentioned marketing course where each student had a portable computer. She also studied IT on her own. She describes her relationship with IT as follows:

> In IT I have orientated myself towards programs, and when it comes to this so-called technology, I know approximately what a computer contains, but I don't want to get into it, that belongs to computer nerds.(Oili, 3 Nov. 1998).

In her own use Oili takes advantage of all the possibilities that IT can offer. She can really break down the limits of time and place through computer networks. As time is valuable to Oili, who always has dozens of tasks to be completed, she finds IT empowering:

> In certain ways it has given me more freedom, so I could do so much more because I don't have to use my time by writing letters. Now I can

deal with things by e-mails and I can have video conferencing. I hope that someday we will have more video meeting connections to Joensuu, because I have quite a few meetings in Joensuu. So I could use the time I spend driving car for something else and I could just sit in the front of my computer and discuss with them. (Oili, 3 Nov. 1998).

Oili works for the *Learning Upper North Karelia* project. She took a course organized by the local job centre that was meant for people who were unemployed and had a basic knowledge of IT. The course began the project. After the course, Oili was employed by the project. Her tasks include developing projects of IT for the villages and information technology skills instruction.

For Oili IT means primarily artifacts and knowledge, which leads to a broad knowledge of information technology and its usage. This means competence and expertise to use computer programs, and an ability to conduct and instruct others in the use of IT. The usage is mainly a way of spreading information, which expands the whole life.

Oili divides knowledge of IT into knowledge of technology and knowledge of computer programs. This distinction is gender-based: men can deal with the technology and women have competence in using software. To Oili, IT appears to be a masculine culture.

Oili has a deep faith in information technology and its possibilities to improve the quality of life in rural areas. She is optimistic that the villagers would adopt new IT and use it, if there were opportunities for it. She sees lots of opportunities in IT, especially in keeping the rural areas alive. Information technology may help us to solve the problem of long distances in their "so-called marginalized area."

3.   KAIJA -A MOVER AND SHAKER OF HER SOCIETY

Kaija is 38 years old. She was born in Tampere and has a degree in agronomy. She studied animal husbandry at the University of Helsinki and now runs a farm in Upper Karelia with her husband where they raise cattle and fur animals. To Kaija life in a village consists mainly of all kinds of organisations. Kaija is a very politically active person with many positions of responsibility. As she describes herself:

I am a representative in the county and village councils and then I'm in involved in the Central Union of Agricultural Producers and Forest Owners (MTK) at the provincial level and I also have responsible positions in the central organisations. And I just heard that the European

Commission had nominated me to this kind of Committee of regions and agriculture, it was put forwarded by the MTK, one of those things. Right now it feels that it will be challenging. (Kaija, 2 Nov. 1998.)

Kaija participates in the village development projects and feels inter-village co-operation is important. Keeping villages alive is a significant task. Kaija wants villages co-operating with each other so that they could share their knowledge and experiences. She sees the future of rural areas as a quite depressing one:

Sometimes I am afraid ... that this rural area policy is driving us to a kind of a hundred hectares loneliness. And in every village there could be two or three big farms. This means that people give up small farms and move away. And then it would be impossible to have liveliness in the village...and when I think about my own future, there are sometimes days when I feel that it doesn't work. Why should I try so hard and why do I try to participate. Does it have any impact? But then, well, maybe that is just that I don't have any visions and I haven't thought properly what else I could do. (Kaija, 2 Nov. 1998).

3.1 Kaija and Information Technology

Kaija became familiar with information technology during her studies at the University of Helsinki. Though her studies included automated data processing and word processing etc., Kaija felt unsure with computers. After graduation, she already lived in Upper Karelia where

...there were quite long period of time when I didn't go back to the university ... when I went there they had updated programs and it was a real catastrophe...and when I completed my studies I decided that I would never touch computers anymore, that was enough. (Kaija, 2 Nov. 1998).

But then a few years later Kaija bought a personal computer to her home.

Kaija emphasizes the usefulness of IT. She knows precisely how she wants to use IT: she knows what it is possible to do with computers and what she wants to do with IT herself. When Kaija speaks about IT, she uses concrete examples. Her examples refer not to computers or software but to what she does with computers: she writes newspaper articles, letters to the editor, private letters and invitations to meetings.

Kaija underrates her knowledge of information technology and says she has a negative attitude towards technology:

I'm not at all interested in what the computer contains or what kind of programs there are. The only thing that I want to know is that when I press that button one thing happens and when I press another something else happens. (Kaija, 2 Nov. 1998).

Kaija wants that information technology to develop and become more user-friendly:

So I think that this technology should be such that you learn more by doing it yourself, that these programs should advise their users...When development goes on things become more complicated, but it should go to the other direction too, so that it would be easier for users. (Kaija, 2 Nov. 1998).

Kaija is an active user of the *Learning Upper North Karelia* project and she registered on the regional community network in the spring 1998. Kaija uses the community network, follows event calendars and uses the personal mailbox. She has sometimes used the on-line conferences to obtain instructions.

Kaija's believes that IT is an opportunity that works for some people, not for everyone. But in the context of rural regions, Kaija sees IT as a factor that can keep up spirit:

For example, [it shows] the youngsters that we are not in a hopeless place. That we have here the same opportunities and possibilities, or even better ones, than in some of the big cities. I see that good spirit as an important issue (Kaija, 2 Nov. 1998).

4.   CONCLUSION

For Oili, information technology is her work and life, and for Kaija it is a working tool. Both see the IT as a part of their everyday life. Oili, as a prophet of the villages, believes that IT is a saviour. Kaija sees the future of rural regions as depressing and feels what IT can do is mainly enliven the spirits.

MacKenzie and Wajcman [1] have defined IT as consisting of artifacts, socially shaped human activities, practices and knowledge which have guided my analysis of the interviews. Oili and Kaija feel that IT is all of these, but define their relationship with IT differently. Oili emphasizes a knowledge of artifacts and programs. This makes the use of IT possible; for her this use is mainly a way of transferring and spreading information. In contrast, Kaija emphasizes the use of information technology as a tool. She

wishes that computers and programs were simpler and that programs trained their user as much as possible.

In Kaija's view IT is significant in society in general and thus also in the rural areas. Consequently, Kaija feels that the project 'Learning Upper North Karelia' is a successful one. The skills required to be operational in information technology today have become increasingly important. Oili feels that IT can bring all kinds of good: knowledge, skills and means, as well as personal and national competence. This view resembles the points uttered and emphasised in public discussions of information society in Finland [10]. Because of her status as a worker in the project, it is no surprise that her views are similar to the aims of the project.

In my interviews, Kaija and Oili did not talk about gender and information technology. Both of them are familiar with computers and feel that it does not have anything to do with gender. In their own families they are the ones who are interested in IT and who insist on using it in everyday practices. Yet their relationship with IT emphasizes the role of socially organized actions, practices and knowledge. Oili and Kaija divide IT into two segments: technology that can be used and technology that belongs to computer nerds. What computers contain inside the box is not interesting; what matters is the way in which it can be used. In the project, men are in charge of technology and women are the ones who know about the programs and who instruct new users.

The ideal of equality makes gender invisible. The generally known fact of inequality in working life does not prevent women from feeling equal: the differences are explained through personal choices, individuality and free will [11]. Oili and Kaija feel that they are equal. Thus, the experience of being equal in information society and with IT does not provide them with reason to consider technology as a masculine culture in this context. Oili and Kaija see their position as good or even idealistic. They are able to recognize the masculinity of IT, but it does not take anything away from them.

Oili and Kaiji may not be the most typical middle-aged women in the countryside or the most typical users of IT, yet, they carry out the ideal of information society development projects, the ideal of being an active, negotiative and participating user.

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