Minna-Kristiina Paakki

Consumer Trust in E-Commerce
A Feminist Ethnographic Study

ACADEMIC DISSERTATION

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Abstract

E-Commerce has become an important part of everyday life for consumers during the 21st century. The variety of services in e-commerce has widened in recent years and since the early years consumers have adopted those services as part of their everyday lives. Consumer trust in e-commerce is an individual, local and social matter combined with the technological side of e-commerce. The consumer's own personal views and expectations have an influence on trust. These influences and aspects vary from consumer to consumer, but they can be recognized from their talk and the elements of their everyday lives: the social aspect, the communal aspect, the infrastructure aspect and the personal aspect.

Consumer trust in e-commerce is a topic that needs in-depth interviews and analysis, and ethnography allows that kind of work. To formulate trust is a process and feminist ethnography also about process: it is about understanding process, over time and space. Feminist ethnography is also about underlining the power that the consumer has in her/his life in terms of e-commerce and other aspect of their everyday lives. The shaping of feminist ethnography in information system studies is a novel entry point to research e-commerce and trust.

The consumer viewpoint in the framework of consumer related trust issues consists of society, community, consumer, e-vendor, e-services, e-product and communication channels. This framework takes into account the consumer's viewpoint and the social influence of the consumer's community into e-commerce services adoption and use. The consumer's interpretations of trust and e-commerce are in the focal point of this research.

New ways of using e-commerce can and have been found and sometimes old habits follow into the world of e-commerce. Trust in e-commerce is a personal matter that includes many aspects of the consumer's life: the personal and interpersonal, the public and private. Surrounding communities are present in consumers' everyday lives and also in their use of e-commerce. Consumers make the decision (based on a feeling or rational thinking) to trust (or not to trust) in e-commerce in general or in e-services, e-products or e-vendors. Consumers are willing to take the risk to be vulnerable in their e-commerce consumption.

Keywords: trust, e-commerce, feminist ethnography, information systems, consumer

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Attachments

The doctoral dissertation includes following published papers:

1.
Paakki, Minna-Kristiina (2005), Framework For Trust Issues In E-Commerce, In Seppä, M., Hannula, M., Järvelin, A.-M., Kujala, J., Ruohonen, M., and Tiainen, T. (Eds.), FeBR 2004 Frontiers of e-Business Research 2004 (eBRF Conference Proceedings, 20-23.9.2004) Tampere, Finland, pp. 332-339.

2.
Ojavainio, Minna-Kristiina and Pennanen Kyösti (2004), Consumers' Explanations on E-Commerce Use and Disuse, in Mika Hannula, Anne-Mari Järvelin and Marko Seppä (ed.), Frontiers of e-Business Research 2003, University of Tampere, e-Business Research Center.

3.
Ojavainio, Minna-Kristiina, Koivunen Emma-Reetta, and Tiainen Tarja (2004), Gendered Rhetoric of ICT Use, Proceedings of the 27th Information Systems Research Seminar in Scandinavia, Falkenberg, Sweden, 14-17.8.2004.

4.
Hynes, D., Tiainen, T., Koivunen, E.-R., and Paakki, M.-K. (2006), Articulating ICT Use Narratives in Everyday Life, In EM. Trauth (Ed.), Encyclopedia of Gender and Information Technology. Idea Group Reference, London, UK. pp. 37-43.

5.
Tiainen, Tarja, Paakki, Minna-Kristiina, and Koivunen, Emma-Reetta (2005), Triangulation in Ethnography – The Case of Collaborative Research, In J. Beekhuyzen, L. von Hellens, K. Guest, and M. Morley (Eds.), Qualitative Research in IT and IT in Qualitative Research : Challenges for Qualitative Research (QualIT), Brisbane, Australia, 24-25.11.2005. ISBN 1 920952 48 9.

1 Introduction

Trust in everyday life is a mix of feeling and rational thinking" (Lewis and Weigert, 1985)

*The **willingness** of a party to be **vulnerable** to the actions of another party based* on the expectation *that the other will perform a particular action important to the trustor, irrespective of the ability to* monitor or control *that other party.* . (Mayer et al., 1995)

Consumers trust in electronic commerce (e-commerce) in many personal and context-bound ways. To trust is to believe that the other person will not betray oneself (Mayer et al. 1995; McKnight et al., 2002; Gefen, 2002). E-commerce became a part of consumers' everyday life during the late 1990s and it has gained wider room in consumers' everyday life during the beginning of the 21st century. Trust is a belief and therefore a human act. Consumer trust is a human viewpoint toward e-commerce and part of the human aspect of information systems. This dissertation focuses on consumer trust in e-commerce and it belongs to the humanizing side (Mumford and Henshall, 1979; Ehn, 1988; Bjerknes and Bratteteig, 1995; Isomäki, 2002) of the information systems (IS) discipline.

This dissertation continues also the gender and IS discussion, started in 1980s (Kwan et al., 1985; Adam and Bruce, 1989; Adam, 2000; Adam et al., 2004). In Finland my predecessors are Marja Vehviläinen (1994), Helena Karasti (1994), Hannakaisa Isomäki (1999) and Tarja Tiainen, ex-Kuosa (e.g. Kuosa, 2000, Tiainen, 2002). These researchers have given the designers, users, developers and managers of IS a voice, a body and situational knowledge of using Information and Communication Technology (ICT) in one's working life. Karasti (2001a), Vehviläinen (1994), Isomäki (2002) and Tiainen (2002) studied radiologists, office workers, designers, and managers. They concentrated on the working life of IS, whereas I concentrate on the consumer of these designed, developed and managed (ICT and) electronic commerce (e-commerce). They concentrated on the working life of IS and ICT, whereas I have the viewpoint of consumers' everyday life.

Consumers' everyday life gives a more holistic view of e-commerce and ICT use than only studying working life in organizations. Consumers do not just use technology, they live together with other human beings and with technology while having the power of deciding which e-commerce to use or buy from. Systems and technologies are consumed by individuals in their everyday lives in multiple ways. Consumers are mostly on the other side of electronic commerce than are designers or developers. I

choose to use the concept of consumer instead of user in order to enlighten the different state of an individual compared with employees of an organization (Orlikowski, 1991; Barley, 1996; Suchman, 1987) or (end) users of a system. Consumer consumes which means that consuming is about the action of an individual and is aimed at something for example buying a book. Consumer compared to the term user, which relates individuals to the technology and hints that a user only exists as part of something else not as an active operator itself, gives a more empowered and active role to an individual. (Greenbaum and Kyng, 1991)

1.1 Research question

My aim is to understand the consumers' e-commerce experiences and specially trust in e-commerce in the context of everyday life instead of concentrating only on working life. Although this is a rather new perspective in IS studies, it is used in other disciplines when studying various ICT-related topics, for example in cultural studies (e. g. Uotinen, 2005), in sociology (Law, 1999; Hine, 2000) and in media studies (e. g. Silverstone et al., 1992; Lie, 1995).

Besides the humanizing side of IS, this dissertation belongs to the interpretive side of IS (Myers, 1997; Orlikowski and Baroudi, 1991), as the aim is to understand the consumer. My aim is to understand how people trust in e-commerce. In this dissertation I concentrate on the consumer's side of e-commerce and especially trust in e-commerce. Consumer trust in e-commerce is the overall title under which I examine consumers' e-commerce-related elements of trust. My research question is:

> How does the consumer perceive and experience trust in e-commerce?

This question was studied in five attached articles through these sub questions:

> What are consumer related trust issues in e-commerce?
> What are the explanations consumers give for their e-commerce use or disuse?
> How does the description of ICT use produce gendered computer identity?
> What are individuals' narratives and experiences of technological consumption?
> How to study others experiences and opinions in IS field?

Through these questions my aim is to understand consumers' perceptions and experiences of trust in e-commerce and consumer-related elements of trust in e-commerce.

The first studies about trust in e-commerce concentrated on clarification of concepts and making models of consumer trust (McKnight et al., 1998; Kini and Choobineh, 1999; Jarvenpaa and Leidner, 1999; Gefen, 2002). McKnight et al. (1998, 2002, 2002b, 2003) studied initial trust formation, which takes place when a consumer

comes to an e-commerce site for the first time. Kini and Choobineh (1999) consider the task at hand, the machine, the information environment and the individual. This is in a way a human computer interaction way of seeing things, and the model was partially based on a social and psychological review of literature. Jarvenpaa and Leidner (1999) studied virtual teams and how trust is needed for collaboration in them. These studies take into account the human aspect of trust, and they all study important aspects of trust either in e-commerce or in working on virtual teams. They do not, however, have a holistic view of human beings in their everyday life. In order to find out consumer expectations and understand the elements of consumer trust in e-commerce, it is essential for both the science and practical e-commerce designers and developers to understand the everyday life of the consumers and the elements that are present in their life, also other than their working life. When the consumer is viewed as a whole it is possible to design e-commerce solutions that are appealing and used by consumers.

I wanted to find the consumers' way of trusting in e-commerce, so I used a method that allowed me to find deep insights, ethnography (Denzin, 1975; Van Maanen, 1988; Myers, 1997; Bryman, 2001). This dissertation interprets consumers' narratives of e-commerce and trust in the consumers' own everyday lives. I assumed that consumers are individuals and therefore have different views of trust and e-commerce. In IS studies it is the tradition that all systems are designed for vast user groups and individuals are not the main target as such. In that sense the consumers, individuals or users are not taken into account nor their individual views. (Tedre, 2006) Feminist studies (and also ethnographic studies) criticize that there is not just one objective 'truth', but that individuals have many subjective standpoints (Haraway, 1988). My aim was to find different consumer viewpoints about trust in e-commerce. To find out consumers' perceptions and experiences I conducted two sets of ethnographically informed interviews in the area of South Ostrobothnia, Finland. I chose to interview consumers close to my own living environment in order to get a deeper understanding of consumers' meanings and to be able to see them in their own living environments, in their everyday lives.

Deetz (1996) states that the basic goal of ethnography is to display a unified culture, and that in ethnography researchers hope to recover integrative values. According to Deetz (1996), ethnography belongs to interpretive discourse. There are different views on how ethnography is used and for which goal. In feminist ethnography the researcher gives room to the informant's own story and tells that story onwards to the scientific community according to the researcher's best abilities (Skeggs, 2001; Abu-Lughod, 2000). In feminist ethnography the researcher is aware of his/her own prejudices and reflects them back to the field and to the results of the research. In critical and dialogical discourses the basic goal is, according to Deetz (1996), to reclaim a conflict. In feminist ethnography the goal is not to reclaim a conflict or to display a unified culture, but to display the culture that is and report that culture back to the 'mainstream' culture (if there is one), whether or not there is a conflict in the

field. Feminist ethnography is to tell an individual's stories and reflect them to previous, 'mainstream' or other publicly acknowledged stories.

The results of my dissertation are:

> 1) trust and e-commerce in theory, where I present a framework of trust and e-commerce that takes into account the consumer's viewpoint and the social influence of the consumer's community;
> 2) the consumer's interpretations of trust and e-commerce; and
> 3) methodological results, i.e. the shaping of feminist ethnography in information system studies.

1.2 Structure of the Thesis

I have divided this dissertation into chapters of comprising main concepts, methodology and data, results and conclusion. This dissertation also includes five articles, which I have included at the end of this dissertation in their own chapters.

In Chapter 2 I introduce the main concepts, which are e-commerce, consumer and trust. Besides of the main concepts, I also examine gender and feminism in information systems, since my work belongs to that category. Furthermore, I locate my study to the context of everyday life, so that is also presented.

In chapter 3 I present the methodology of my study. First, I outline what ethnography and feminist ethnography are and how I applied them. Second, I describe how my research process went. I introduce the informants and research projects related to this study.

In chapter 4 I present the results of this study. I present the results in three phases: the framework of trust in e-commerce, the new concept of consumer in IS studies and finally, the methodological results. At the end of this chapter I have gathered all the articles in a nutshell and after that a short description of all of the articles.

Chapter 5 presents the discussion, which includes also the limitations of my study and the implications for further research for science, practitioners, consumers and communities.

2 Concepts

I present here the central concepts: e-commerce, consumer, trust, and feminism in relation to IS science. I chose these concepts for their relevance to my research interest in individuals' ICT use and the multidisciplinary dimension of my research.

2.1 E-commerce and the consumer

The Internet (then called as Arpanet after ARPA – Advanced Research Projects Agency) was first developed for military purposes in the 1960s, and then it spread to universities and the world of research more widely. At the beginning of 1994 the Internet and electronic (e) mail came more widely into public knowledge as WWW (World Wide Web). The Internet emerged and new ways of using it became available for public use. These new uses were largely sending e-mail, paying bills via the Internet or searching for information.

E-commerce has developed from the early technological viewpoint in the late 1990s to an increasingly consumer-oriented perspective to the technological and economical dimensions in the beginning of the 21st century (Rosenbloom, 2003). E-commerce can be defined as purchases of goods, services or other financial transactions in which the interactive process is mediated by information or digital technology at both, locally separate, ends of interchange. In this dissertation I concentrate on the consumers' side of B2C e-commerce (business-to-consumer e-commerce) where vendors sell their goods and offer services via a computer or other digital technology (mobile phones or digital television). (Turban et al., 2003)

Consumers consume products and services, but consumers also exchange information between themselves and the system (i.e. business). Consumer is sometimes used as a synonym for customer, although the term customer is typically used to refer to someone who purchases from a particular store or company, while consumers do not necessarily buy anything (make a purchase) (Loudon and Della Bitta 1988). In this dissertation a consumer is a person who uses e-commerce for her/his personal use and where the goods (CDs, clothes or train schedules) are in final use by individuals. This viewpoint takes into account the individual who uses e-commerce in her/ his everyday life. Consumer in this viewpoint includes free information services or public administration. (Schiffman and Kanuk, 2000; Turban et al., 2003)

In some earlier IS studies (Iivari, 1991; Davis, 2000) user term was used when referring to an information processor and they did not participate in system design or development. These information processors became involved at the end of the design process and were only seen as end users (as the user of a computer). (Isomäki, 2002) This view of information system end users diminishes the consumer's role and power in design and use. The humanizing view of information system development means the human is taken into account throughout the information system's design and development process. (Isomäki, 2002) The human point of view also means information technology is applied on human terms (Nurminen, 1986).

In consumer studies consumers are often studied in the contexts of demographic attributes, values, personality or socio-economics, but altogether in consumer studies the role of consumer is more central than in information system studies the end users. (Mitchell, 1998; Liebermann and Stashevsky, 2002; Forsythe and Shi, 2003; Garbarino and Strahilevitz, 2004; Pennanen et al., 2007) This shift of focus was one reason I chose to call end users consumer in this dissertation. The other is that I chose to make individuals visible through consumption in this dissertation. By consuming (or not consuming), individuals have something to say about the services they are offered.

2.2 Trust

I examined consumers' personal relationship to e-commerce through the concept or lens of trust. Trust is said to be a person's willingness to be vulnerable (Mayer et al. 1995) and have confidence in another's actions and especially in a vendor's competence, benevolence and integrity (Garbarino and Lee, 2003). Trust is a fuzzy concept that is hard to conceptualize exhaustively (Blomqvist 1997; Kohtamäki 2003). Conceptualization has been done, for example, using sociology (Luhmann 1988; Lewicki and Bunker, 1995), business studies (Swan et al. 1985; Mayer et al. 1995), philosophy (Hobbes 1750; Herzberg 1988) and information system studies (Jarvenpaa et al., 1998; McKnight et al., 2002; Gefen et al. 2003a). Not one unique concept has been agreed upon. However, one often used basic definition of trust is that it is belief that the other person (trustee) will not betray the trustor (Baier 1986; Cummings and Bromiley, 1996). From this definition it could be understood that there is someone that trusts and something that the trust is aimed at. Some aspects that have been studied in recent years in the area of trust are competence, benevolence and integrity (Mayer et al., 1995; Gefen, 1997; Bhattacherjee, 2002; Garbarino and Lee, 2003).

I gathered some of the central articles in marketing, philosophy, information systems and social studies in Table 2-1. There is a more extensive but not an exhaustive table of trust articles as an Attachment 3 at the end of this dissertation. These articles have been listed in several literature reviews of trust. (Blomqvist 1997; McKnight et al., 2002; Lee, 2002; Kohtamäki 2003, Gefen, 2004; Tan and Sutherland, 2004; Ebert,

2007) There is not many IS studies of trust; the studies are mainly from management and organisational studies as well as social and social psychology studies of trust. The one of the top ten of the mostly cited is Mayer et al. (1995) and this is also about management and therefore a work and organisation related trust definition. Mayer et al.'s (1995) is still the most suitable for this dissertation because it is the most individual related definition of trust. Individual's side or consumer's side is not that widely studied in any of the sciences during 1966 and 2006. (Ebert, 2007)

Table 2-1 Articles on trust.

Article	Definition, concepts	Discipline
Mayer et al. 1995	ability, benevolence, and integrity	Management
Gefen 2002	belief that the e-vendor is trustworthy	IS
Gefen et al. 2003a	ability, integrity and benevolence	IS
Jarvenpaa et al. 1998	ability, integrity and benevolence	IS
Jarvenpaa and Tractinsky 1999	combination of trustworthiness, integrity and benevolence	IS
McKnight et al. 2002	competence, integrity and benevolence	IS
Magrath and Hardy 1989	belief that another person or thing (company) may be relied upon with confidence	market research
Morgan and Hunt 1994	reliability and integrity	market research
Herzberg 1988	Trusting another means having a trusting attitude towards the other person, without specifying where he is trusted, as could be said after judgment somebody relied in upon certain aspects. Thus, trust is implicit, not given grounds and is never a rational option.	philosophy
Hobbes 1750	a passion proceeding from the belief of him from whom we expect or hope of good, so free from doubt that upon the same we pursue no other way to attain the same good	philosophy
Blau 1964	integrity, benevolence and ability	social psychology
Gabarro 1978	competence, goodwill, integrity, predictability, openness, carefulness	social psychology
Rotter 1967	an expectancy held by an individual or a group that the word, promise, verbal or written statement of another individual or group can be relied upon	social psychology

The elements of consumer trust in e-commerce are numerous and studies vary on the aspects of trust. For example, Gefen et al. (2003a) studied trust as one aspect affecting consumers' intended use of online shopping. McKnight et al. (2002) have other aspects in their model, for example overall faith in humanity, willingness to depend and a trusting stance as seen in Figure 2 - 1.

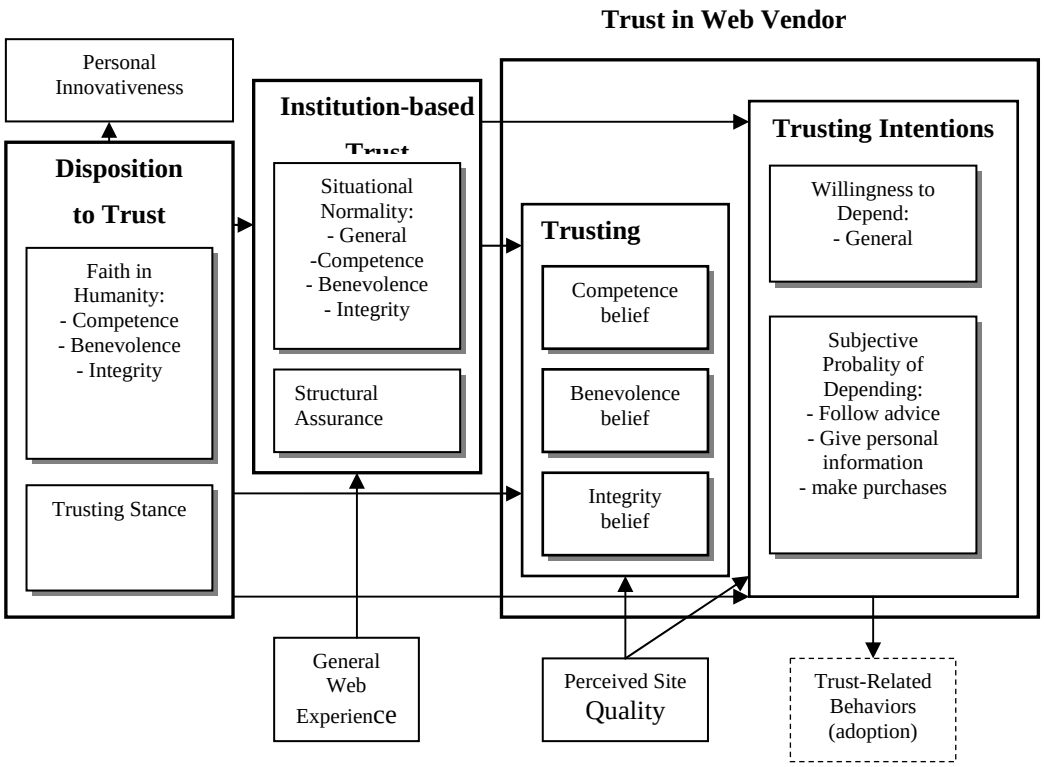

Figure 2-1. Web trust model – constructs and nomological network (McKnight et al., 2002, pp. 341)

The focus of the model is on initial trust which is the trust that the consumer has when visiting an e-vendor's web site for the first time. According to McKnight et al. (2002), in initial relationships, people use whatever information they have, such as perceptions of a Web site, to make trust inferences. The concept of initial trust is adopted the assumptions from the cognitive-based literature. Authors are convinced that people form trusting beliefs early, but that these may change as people gain experience with the trustee.

Gefen et al. (2003a) have a TAM[1]-based model of trust with perceived usefulness (PU) and perceived ease of use (PEOU). They studied calculative-based trust, institution-based structural assurances, institution-based situational normality and knowledge-based familiarity, and how they affected trust, PU and PEOU. They found that these elements affect consumers' intended use of online shopping. Their

[1] TAM - Technology Acceptance Model (Davis, 1989) models how users come to accept and use a technology. Two concepts are **Perceived usefulness** (PU) "the degree to which a person believes that using a particular system would enhance his or her job performance" and **Perceived ease-of-use** (PEOU) "the degree to which a person believes that using a particular system would be free from effort".

empirical material was collected from students, which being the only source of empirical material, has been criticized (e.g. Legris et al., 2003). McKnight et al. (2002) view consumers' trust more openly and view trust from the individual (psychological), interpersonal and institutional viewpoints. However, they concentrate solely on initial trust when a consumer visits an e-commerce site for the first time.

Three basic elements can be found from trust literature (Tan and Sutherland, 2004):

1) institutional,
2) interpersonal, and
3) dispositional trust

Institutional trust refers to an individuals' trust in institutions, like the laws in a society or in the case of e-commerce, the technology itself (McKnight et al., 2002). Interpersonal trust refers to an individuals' trust in another specific party like an e-vendor or the trustworthiness of some third party like a friend who gives recommendations about an e-vendor (Lee and Turban, 2001; Tan and Sutherland, 2004). Dispositional trust is of psychological aspects (Rotter, 1971) and it means an individual's ability to trust in general based on an individual's belief that other people are well meaning and reliable (Gefen et al., 2003a; Tan and Sutherland, 2004). The disposition to trust is a personality-driven feature. That is, an individual's personality determines his/her propensity to trust in general. Furthermore, an individual's disposition to trust may be endogenous or it may develop during life experiences (McKnight and Chervany, 2002). (Pennanen, 2006)

Mayer et al.'s (1995) definition of trust starts with the notion that trust is 'the willingness of a party to be vulnerable to the actions of another party…' (Mayer et al. 1995). The individual's willingness to be vulnerable means willingness to engage in a relationship that includes an element of uncertainty, which means, that individual is taking a risk. (Pennanen et al., 2008)

Literature presents three different relationships to trust and risk: 1) a mediating relationship, 2) a moderating relationship and 3) a threshold model (Gefen et al., 2003b). The mediating relationship means, that 'the existence of trust reduces the perception of risk'. The second relationship, moderating, means that 'trust on behaviour is different when the level of risk is low versus when the level of risk is high' (Gefen et al., 2003b). In other words, when the risk is high, trust is seen more relevant and, when the risk is low, trust is not seen that relevant. The third model, the threshold, stresses out that 'if the level of trust surpasses the threshold of perceived risks, then the trustor will engage in a risky relationship' (Gefen et al., 2003b). These models are based on Mayer et al. (1995) and they imply that when the level of trust surpasses the level of perceived risks then the trustor can engage in a risky relationship. (Pennanen et al., 2008)

The main difference between the three models is, that the mediating and the moderating relationship, assume that the relationship between the trustor and the trustee is already developed and the level of trust and risk varies during that relationship. In contrast, the threshold model assumes that there is not yet an established relationship and the trustor has to exceed the threshold of perceived risk in order to trust. (Pennanen et al., 2008)

The above models of trust and risk view human beings as individuals, not as members of a social community. As Isomäki (2002) states, an advanced view of a human being is a holistic view that also includes cultural and social aspects. The holistic view sees humans through human patterns and behaviour. This humanizing side of IS combines the cultural and technological side of IS. In some social and cultural studies of IS users, the role of community and culture is taken under scrutiny. Such examples can be found among studies of IS professionals (e.g. Gregory 1983; Hofstede 1991) and computer hackers (e.g. Håpnes and Sørensen, 1995). For example, Orlikowski (2000) found that users in different organizations use the same IS in different ways – their interpretations of the same IS are different. Social context when computers and users are concerned has also been studied by Vehviläinen (1999) and Star (1995). The latter has proved that the social aspect is related to the interpretations of phenomena and the ways of acting (also the ways of using IS). Following the idea of these examples, the users' or individual human beings' or consumers' interpretations of e-commerce and trust are connected to their social context.

2.3 Feminism and information systems

The technological aspect has been the main perspective in IS research until recently, when researchers from human and social sciences have focused on new aspects (see e.g. Hine, 2000; Lie and Sørensen, 1996). Feminism represents the more human-centered aspect that I want to foster with my dissertation. Feminist viewpoint gives a personal and individual aspect to human life, as does trust, also. Both are also under the influence of surrounding society and they are culturally bound.

Earlier gender (or feminist) studies can be divided into liberal, eco or social constructionist approaches. A liberal feminist approach wants more women in technical fields. However, this approach presents technology as gender neutral and equal to all. So, according to liberal feminists, individual women are left with their choices and responsibilities. It is up to women themselves to enter into fields of technology. The second way to deal with gender is ecofeminism, which states that there are special female and male technologies. This implies that, for example some technologies are meant to be used by women (like nursing technologies) and some technologies are for men (like shaving machines). The third way to describe the gender approach to information systems is the social constructionist way, where

gender is a process and is constantly created in a cultural context. (Vehviläinen, 1994, 2005)

In this dissertation I take a standpoint similar or near to Vehviläinen's (2005) textuality. Textuality means in Vehviläinen's (1994, 2005) work that gender is created in different ways. As an example, computer programmers make computer programs and use their own terms and language during that process. In other words they create texts that have gendered meanings inside them. Similarly, gender is created in official governmental documents through the language and metaphors used in them. In textuality then, those who make programs and documents hold power because their already gendered language and concepts are used in them. However, I do not concentrate only on social or power relations (nor does Vehviläinen in her studies, but they are emphasized), but instead on the individual, the consumer in her/his everyday life. In my work I see the use of feminist approach as a way to have a holistic view into consumer life where different communities are present and where the consumer moves around and is flexible in relations as well as actions. I view the consumer as a part of these communities and as one whole person with all aspects of life within. One person may be in a mother's (father's) role inside the family and a member of various teams or groups in working life. Altogether different roles or standpoints might exist in leisure activities, such as being a member of a sports club. These various roles and their affects may not come forward in studies about consumers' working life and there the holistic view is important.

2.4 Everyday life

The concept of everyday life is in this dissertation as a holistic view to an individual's life. The everyday life of an individual is more than just working life; it is also for example cleaning, washing, cooking and hobbies. Everyday life takes place in individual's life and spreads over from home to community and working place. In the sphere of everyday life individuals can be agents, able, create and sustain own life-worlds, their own cultures, beliefs and values. The everyday life is the sphere where the ordinariness of the world is displayed, where minor and often taken for granted activities emerge as significant and defining characteristics. (Silverstone, 2003)

The everyday life is the sphere where information technology is consumed by individuals. Domestication is a process where technology is made part of individual's life; where the newness of an artefact is made part of routines and part of everyday life. Domestication is inline with ethnographic research because individuals are seen activators and they are part of the process not just passive bystanders. (Lie and Sørensen, 1996; Hine, 2000; Uotinen, 2005)

Domestication is more home life related than holistic view of individual's life and therefore as such not straight forward usable in this dissertation. The ethnographic and

holistic view of an individual's everyday life takes into account the working life, the community life and home not separately but as part of individual's everyday life.

3 Methodology and data

In this chapter I outline the methodology and how it is used in my dissertation. First I present the overall idea of ethnography and then feminist ethnography. This is followed by the description of the research field and my informants from two sets of interviews. Finally, I describe my personal study process in this doctoral dissertation and some lessons I learned.

My research objective is how consumers interpret trust and e-commerce in their everyday life. Ethnography is a method that gives a deep understanding of an individual's interpretations (van Maanen, 1988; Myers, 1997). Feminist ethnography (Skeggs, 2001) is my choice of method due to the lack of similar studies in IS research and due to my personal interest in women's lives in particular. Women are an interesting group of consumers, for example, because they do the most of the daily purchases in households and because of their influence on families' purchasing habits. (Waters and Ellis, 1996)

3.1 Ethnography

The earlier ethnographic studies where about far away communities, for example, about tribes in distant islands. They where descriptions of lifestyles and habits that where very different or exotic to the researchers. Ethnography has its origins in social and cultural anthropology where it has a long tradition. Ethnography has since its early days changed its focus from studying those that are far away to those that are close. The very basic element in ethnography is the understanding of the field and the context that the informants are living in. Ethnographic methods emphasize understanding phenomena in their rich sociohistorical contexts. (Lewis and Weigert, 1985; Myers, 1999; Davies and Jones, 2003; Tedre, 2006) Ethnography is a method that allows the researcher to gain an in-depth understanding of informants' everyday lives. It allows the researcher to analyze at the level of meaning, social structure, power relations and history (Lather 2001). Ethnography is ultimately the deepest way to gather information about members of a certain culture or community. (van Maanen, 1988; Fetterman, 1998; Myers, 1999, Skeggs, 2001) It is also important that the ethnographer understands (or develops an understanding of) written, unspoken, spoken and body language that community members use.

The characteristics of ethnographic work are usually: fieldwork over a period of time, utilizing different research techniques or methods of inquiry, conducted within the

settings of the participants, involving researcher in participation and observation, involving an account of the development of a relationship between the researcher and the researched and finally focusing on how experience and practice are part of wider processes. (Myers, 1999; Bryman, 2001; Skeggs, 2001; Uotinen, 2005)

Participant observation is often used as a method of inquiry in ethnography. This means that ethnographers are expected to live in some specific society or with some specific group for an extended period of time and take actively part in the daily life of its members. These observations are then written down or other wise put into some form of usable notes as for example tapes, pictures and videos. (Atkinson and Hammersley, 1994) The time spent in a research area or field as it is called can vary. It is up to the researcher to decide how long time it is needed to get the understanding of the culture or the dynamics of the community. It is also up to the researcher to decide what is the focus of the research and what are the methods used. Participant observation is only one method of inquiry to use. The interviews play usually a central role in ethnographic studies, too. They are often in-depth, they may vary in their topics and the method to get the interviewees are various also for example snowballing or ads in the local information board. Ethnographers may also take part in the village activities, play in the local football team or take part in the other community activities like voluntary work. Ethnography is a way of doing; it is a way of thinking.

In anthropology and cultural studies there has been ICT (or the Internet) related ethnographic studies that have concentrated on the everyday life aspect of consumers. For example, in anthropology Miller and Slater (2000) studied the use of the Internet in Trinidad, and also Hine (2000) studied the use of virtual communication in a chat environment. In cultural studies Uotinen (2005) is an example of how ICT are present and shaped in citizens' everyday lives. The previous articles are examples of how ethnography is used in studying everyday aspect of individuals.

Ethnography can be used as a method of inquiry where interviews and observations are emphasized. However, ethnography is also the writing out of the research and a way of knowing. It is also the written outcome of the research. Experiences are in central role of all ethnographic work. Ethnographic studies (re)presents, explains and analyses the experiences of individuals and the surrounding culture. Ethnography also recognises and describes how the experiences relate to the broader societal, cultural, social and historical contexts. (Van Maanen 1995; Willis and Trondman 2002; Uotinen, 2005)

The practical value of ethnomethodological study methods like ethnography have been well recognized in IS studies; mainly in software engineering, human-computer interaction, management and organisational studies in the area of work and computers. (Wynn, 1979; Suchman, 1987; Viller and Sommerville, 1999; Crabtree et al., 2000; Clayman, 2001; Hartswood et al., 2002). Ethnography is widely used in the study of IS in organizations, the development of IS (Hughes et. al, 1992; Hughes et al., 1994; Blomberg, 1995; Orlikowski, 1991; Preston, 1991), information technology

management (Davies, 1991; Davies and Nielsen, 1992) and systems design (Holzblatt and Beyer, 1993).

Myers (1997) and Suchman (1987) are researchers from anthropology that have changed their discipline to IS. Myers has written about using ethnography in IS (Myers, 1999) and Suchman studied ICT use in a flight controlling unit. IS researchers who used ethnography include Orlikowski (1991) and Karasti (2001b). They both studied ICT use in organizations. The previous studies all concentrated on working life aspect of ICT use. The working life has been studied also by Barley (1996) where he presents the new models of work and relations of production that reflect changes in the division of labour and occupational structure in modern world.

Software packages for vast populations are more popular now than they were in the early days of computers. There fore it is thought that it is not enough to study individual actors and their surroundings because systems are no longer designed or managed by individuals; the studying of groups is necessary. Ethnographic methods offer researchers of IS science a way of understanding the processes and dynamics behind, not only the hardware and software design, but also the societal, cultural, historical and social contexts. (Tedre, 2006)

This was an overall picture of ethnography and how it has been used in IS studies earlier. I will next present feminist ethnography and how it is used in this dissertation.

3.2 Feminist ethnography

There is one definition of feminist ethnography that I find intriguing (Skeggs, 2001): “The definition as ethnographic is based on not just the methods used, but the questions asked and how they are analyzed.” She reviews earlier feminist ethnographers work and draws a route through history, theoretical instances and feminist ethics to post modern feminist ethnography.

Feminist ethnography is about understanding a process, and to understand a process, it has to be studied over both time and space (Skeggs, 2001). Consumer trust in e-commerce is a topic that needs in-depth interviews and analysis, and ethnography allows that kind of work. To formulate trust is a process, and therefore this viewpoint of feminist ethnography is relevant to my study. Feminist research in other disciplines also maps out the physical, cultural and economic possibilities for social action and meaning. For some feminists the desire is not just for interaction between the structure and the agency at the site of the social, it is to enable participants to establish research agendas, to enable women participants to have some say in how they are studied. (Skeggs, 2001) I had two more reasons to look deeper into the feminist ethnographic discussion: Firstly, ethnography is not that widely used in IS (except in Human-Computer Interaction and organizational studies), and secondly, gender (or feminism)

especially is not included in the lists of popular keywords of high journals (e.g. MISQ, Information Systems Research). IS research and as for an example, design research, is multi-paradigmatic or pre-paradigmatic according to Vaishnavi and Kuechler (2004). They mean by this that researchers are forced to consider the most fundamental bases of socially constructed realities when doing research (Berger and Luckman, 1966; Searle, 1995). In that sense I was also in a way forced to look for the basis of ethnography (not only in IS) from anthropology and sociology to get an understanding of what can feminist ethnography in IS could be.

Abu-Lughod (1990) argues that what feminist ethnography can contribute to anthropology is an unsettling of the boundaries that have been central to its identity as a discipline based on the colonial method of 'studying the other'. In IS studies 'the other' has been the user and the user is often seen as a distant figure with no power over the development of information systems (Smith, 1990; Clement, 1993; Suchman et al., 2002; Contu and Willmott, 2003). Explanatory power is one of the major ways in which feminists have used and created theory, that is, by searching for the most effective explanation for conceptualizing a process, matter, person, issue, event or context (or all of them together) that needs explaining. (Skeggs, 2001) Using ethnography as a research method is one way of giving power to the users. In IS studies it is not common that users are taken into the design process except in Participatory Design. So users in IS studies are more or less powerless regarding to the fact that they are the final end where all designed IS artefacts end up. (Tedre, 2006) In this sense I want to emphasize consumers' power more and use the concept consumer instead of (end) user. It is not just a matter of naming the user a consumer, but of emphasizing that the consumer has more power in deciding what to consume. In this case, to consume or not to consume e-commerce. Referring to my ethnography as feminist ethnography is to underline that power that the consumer has in her/his life in terms of e-commerce and otherwise.

The results of ethnographic study are mediated several times over – first, by the field worker's own standards of relevance as to what is and what is not worthy of observation; second, by the historically situated questions that are put to the people in the setting; third, by the self-reflection demanded of an informant; and fourth, by the intentional and unintentional ways the produced data are misleading. Although most ethnographers are well aware of this irreducible dilemma, they still maintain the stance that if they spend some more time in the field to dig a little deeper and probe a little further, certain crucial facts will be revealed which will tie up loose ends and provide closure to a study in danger of infinite expansion. Explanatory power is one of the major ways in which feminists have used and created theory, that is, by searching for the most effective explanation for conceptualizing the process, issue or event that needs explaining (Skeggs, 2001).

Triangulation is generally recommended in research (Denzin, 1975; Denzin, 1988; Järvinen, 2004). The use of triangulation usually refers to variation in data, investigators, theories and methodologies (Denzin 1975; Denzin, 1988). Multiple methods in data gathering give research validation and reliability (Perttula, 1995;

Denzin and Lincoln, 2000). Triangulation can also mean not just multiple data gathering methods, but multiple viewpoints (Tiainen et al., 2005; Eskola and Suoranta, 1998). In my study I used multiple methods to gather data, I used multiple data sources, wrote papers and analysed the data with various disciplines representatives and used many theories. So triangulation is taken into account in my work. Gathering and working with the empirical material, for example, the field notes, diaries and interview tapes, requires a lot of (time-consuming) work, and it is the nature of ethnography to have other viewpoints and comments on the texts during the research process (Belgrave and Smith, 1995).

I like the idea of crystallization of ideas, thoughts and analysis (Richardson and St. Pierre, 2005). It describes the process of research with multiple researchers who go over their empirical materials several times and discuss about the analysis. Crystallization also describes the way a researcher writes several articles about a subject, usually from several angles, too.

Ethnography and feminism suit for each other well. They have both the focus in experience, participants, meanings and subjectivity. They both keep the context in close sight. To differentiate feminist ethnography from 'plain' ethnography would be through ethics and attitude; it is about making feminist ethnography instead of ethnography about women. Ethnographic attitude though can be adopted in any kind of inquiry; ethnographic attitude is about remaining mindful and accountable. Feminist ethics and attitude are about political stances. This does not mean taking sides but it is about risks, purposes and hopes embedded in knowledge projects like this dissertation. The risk can be for example in doing feminist research in a male dominated area of IS while the purpose can be understanding of consumers' experiences in e-commerce and trust in e-commerce services. The hope can be that knowledge is giving something back both to the researcher and to the researched for example in the form of better e-commerce services. (Haraway, 1997; Skeggs, 2001)

3.3 The research process: The personal process and timeline of this study

This chapter describes the research process of my dissertation. This chapter is the ethnographic way and also part of the qualitative research process that provides background information of the research. (Klein and Myers, 1999) I present in this chapter also some autoethnographic notes relating to my personal study process. These autoethnographic notes are not meant to be too confessing but to give a view of how this work was done, in other words give social, cultural, historical and perhaps also societal background of what this dissertation process has been. The personal experiences during this process can give some perspective to the readers and hopefully makes it also more humanized. (Hayano, 1979)

My personal research process started at the end of 2002 when I was attending a seminar in Seinäjoki. I had already thought about doing a doctoral dissertation and was gathering literature and preparing my research plan at the time. I started the actual work in February 2003 under the supervision of Research Professor Tarja Tiainen. She had a multidisciplinary research team, eHAT[2], which I joined. I started to do a literature review on the themes of trust, gender and e-commerce. The group members, their universities and disciplines are gathered in the Table 3-1.

Table 3-1 eHAT group members, their universities and disciplines.

University, Discipline / Group Memberr	University	Discipline
Research Professor Tarja Tiainen	**University of Tampere**	**Information Systems**
Researcher Taina Kaapu *(joined 2004)*	**University of Tampere**	**Information Systems**
Researcher Emma-Reetta Koivunen	**University of Helsinki**	**Social-anthropology**
Researcher Kyösti Pennanen	**University of Vaasa**	**Consumer Studies**
Researcher Tero Saarenpää	**University of Tampere**	**Information Systems**

We started to have our own research seminars where we read articles and wrote reviews of them during spring 2003. I started the research planning at the same time and began preparing for the first set of interviews. The first interviews took place in South Ostrobothnia in 2003 and the second set of interviews the next year, 2004, in the same county. I moved to Auckland, New Zealand, at the beginning of 2005 and back to Rovaniemi, Finland, in Lapland in November 2005. The overall timeline of the research process is outlined in Figure 3-1.

The purpose of Figure 3-1 is to show what kinds of simultaneous work the dissertation requires. It shows both a beginning and an end, with many phases of evaluation, data gathering and analyzing in between. So, this process is in some way linear, going from one point straight to the next and in many ways a multilevel and multidimensional web of happenings and connections to people and article writing processes. For example, I usually write many papers at the same time. Some papers might be in the review process, while others are unfinished and raw in their points.

[2] eHat – eBusiness: Human Aspect to Technology, University of Tampere, Department of Computer Sciences

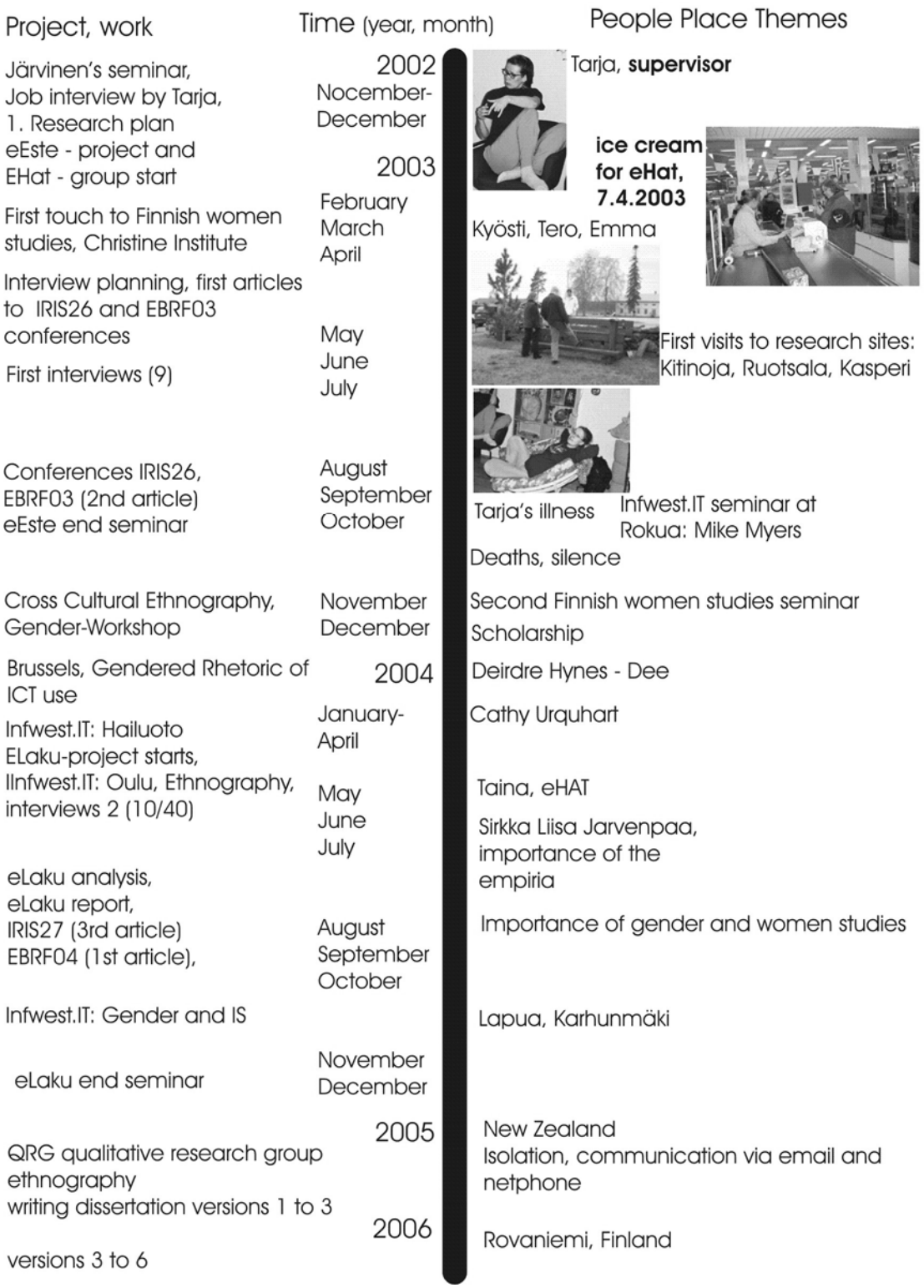

Figure 3-1 Personal study process and timeline.

I started to evaluate my dissertation process when I was in Auckland in 2005. I did this by making timelines of articles, project mileposts, and places I had been. I noticed

that during this process there were starting points and endings. I would have liked to make this process look like a circle, like any hermeneutic work could be (Myers, 1997), but after several trials I settled for this way of describing the world according to the western understanding of time: linear and resulting in an end. My own world view that is present also in this dissertation in the form of ethnography and hermeneutical background is that time is not linear nor is ethnographic work linear. In ethnography narratives and lived experiences are in focus which means that life would be described only in linear form time stamps or points. This is problematic. In IS studies there is the concept of iterative process. The iterative processes means that in software for example mathematical solution is sought through multiple times calculations until there is an answer found. This is similar to the hermeneutic process of going over and over the circle of analysing data, gathering data and so forth. Describing a process that starts over multiple times and concerns multiple articles, multiple researchers, multiple projects and multiple data would have been too overwhelming. There was also this viewpoint in my thinking as an IS practitioner that if there is not that kind of methods and tools that the description or model of this research work are not yet available, then this kind of description or model should or could not be done. I looked for example a multi dimensional way of presenting these multiple simultaneous processes but so long that dissertations are in written form of textual books and not multidimensional presentations I decided to settle for linear description with some pictures. This also reveals that although I try to be very humanist there is still a very strong technocrat working in me.

Ethnography is a very time-consuming way of doing research, not only because of the field work, but also because of personal development and the time needed to analyze the empirical material. By personal development I mean the subjective nature of ethnography and the predispositions that I had before I started my research. For example, I noticed when I read my diaries that I had thought I was very tolerant of different people and their living environments. Still, when we planned which villages we would choose for our field studies, I told the other team members as an example that Kasperi, in Seinäjoki, is similar to Hervanta in Tampere or South Auckland in Auckland, New Zealand. I mean by this that local newspapers sometimes have very sad and sorrowful news about different criminal actions or other socially non-acceptable happenings that take place in such areas, and also that they are given a label of not being as good as other living areas. So, instead of being a tolerant and open-minded person, I noticed that I might instead be a snobbish white female, which was not pleasant but altogether a very educative experience. This description of my personal development is not meant to be a highly confessional way of telling what happened to me, but to give a perspective of what happened and what it meant to me as a researcher or a person. This story is also part of our research groups' story, but still it is my view, understanding and experience of it.

Oakley (1981) said that "Now I have different sized notebooks that are filled with notes taken in very different places." I had my own notebooks, different kinds for different purposes: blank white books for IS seminars; coloured books for my own

feelings and thoughts aroused during my study time. I also collected cartoons and poems that describe my feelings or thoughts on specific topics and glued them to the notebooks; one of my habits is to draw pictures of people during lectures and meetings (some of these are very personal) wherever I went: meetings, interviews, lectures, travels, restaurants and so forth.

Our work started during the spring of 2003. I was first recruited by Research Professor Tarja Tiainen and I started my work under her supervision in late 2002. By April 2003 our first group members already started to work as a team. Our project was called eESTE (see Table 3-2), and our aim was to study what prevents consumers from using e-commerce. I started my work by doing a literature review of trust and e-commerce and started to write my first scientific article for the IRIS conference (Information Systems Research Seminar in Scandinavia). I planned my first interviews together with other group members and conducted the first set of interviews during June and July in 2003.

The information related to the projects that I attended during my dissertation work are gathered in Table 3-2. I worked in two projects eESTE and eLaku. They both focused on consumers and how they experience e-commerce.

Table 3-2 Projects related to this dissertation.

Project	eESTE	eLaku
Project Coordinator	**University of Tampere**	**University of Tampere**
Time	**1.3-31.12.2003**	**1.1-31.12.2004**
Objective	**Barriers of e-commerce use from consumer's viewpoint**	**Trust in e-services: consumer and e-vendor interaction**
Disciplines	**Information Systems Social-anthropology Consumer Studies**	**Information Systems Consumer Studies Health Technology Rural business**

I took part in a project called eESTE. The project's aim was to find out hindrances of e-commerce use. eESTE was situated in South Ostrobothnia in the Epanet research network. The project leader was Research Professor, Ph.D., Tarja Tiainen (Information Systems, University of Tampere). The other members of the team and also the other field workers were social anthropologist student (at the time a student) Emma-Reetta Koivunen, Tero Saarenpää (at the time an information systems student at the University of Tampere) and Kyösti Pennanen (at the time a student of consumer studies at the University of Vaasa). Also Research Professor Ph.D. Harri Luomala from the University of Vaasa took part in the team's work. We did our field work together and also had seminars and discussions about our findings and analyses. Besides working the official hours at the university, our group sometimes worked very closely and even some of our meetings were held at my home in Kauhava. These meetings and also spending more time together, including eating ice cream, made our group well connected and we became more aware of other disciplines outside our

own. In order to form a collaborative group like eHAT, it requires a creation of togetherness; forming or creating a special kind of social context for the group. An informal community can facilitate this kind of grouping process. The collaborative working group requires the members to know each other and this can be done by spending time together. Buying and eating of ice cream was our 'special thin' at the beginning of the group formation process. The informal side of our group working habits involved also visits to each others homes; my house seemed to start this tradition at the beginning since it was the most conveniently located for our field work in South Ostrobothnia. (Tiainen and Koivunen, 2006)

The objective of the eLaku project was to study the trust formation process of e-commerce consumers. The project members were representatives from information systems studies, consumer studies, telemedicine and rural entrepreneurship. The eLaku project was lead by the University of Tampere and implemented in cooperation with the University of Vaasa; the Ruralia Institute, University of Helsinki (Seinäjoki Unit); and the Telemedicine Laboratory of the Tampere University of Technology. More information about the project and interview processes can be found in Tiainen et al. (2004).

As for the multiple methods concerned, I also did several lookups in the local newspaper of Kauhava (Ruotsala village is in Kauhava), searched local websites for information about the place (Kitinoja, in the town of Ylistaro, and Kasperi, a suburb of Seinäjoki) and discussed about these places and the information I gathered with team members. I visited these villages more often than the interview occasions, more often in Ruotsala than the other two because I lived in the same city and it had my favourite swimming beach. I kept diaries of all of my interviews and some of the visits I made to these research sites. Because I passed often through Ruotsala, I have not made diary entries of all my visits to that village. However, I have collected all the articles related to this project or these interviewees that I found and read in the local newspaper. This local newspaper comes out every Thursday and is widely read in the city and in the community. It has local news and local people in it.

I also gathered statistical data about the villages, cities, and South Ostrobothnia from Fennica.Net (4.6.2003) in order to get a wider picture of the area and its occupations, services and population. The background information about the field is helpful in orientation for the field work period. Fennica.Net is a Finnish encyclopaedia on the Internet containing official statistics and other information about Finland. I analyzed this information and circulated it to my fellow team members in eHAT group.

There were many places that I recall as 'mine' in this study, places that sort of 'belong to me' or are 'close'. These are the villages I visited and observed during my study, but also the places I visited with and without my group members in order to 'develop' myself and in order to learn. I visited many places because of a multidisciplinary post-graduate program I attended (Infwest.IT) and other post-graduate seminars (information system studies, women studies) I went to. I have these places in my mind when I write about my study, the interviewees or other important things in my study. I

have visited many locations around Finland, I attended a seminar in Brussels[3] and I also moved to Auckland. So, places definitely have importance to me and therefore to my study. I attended a seminar in Brussels with an earlier version of one of my articles. During the seminar I met for the first time a future member of our team, Ph.D. Deirdre Hynes (see e.g. Hynes et al., 2006a). I also listened to many long-time gender and women studies researchers, like Ph.D. Merete Lie (see e.g. Lie, 1995) and Ph.D. Els Rommes (Rommes, 2000).

After the Brussels seminar I attended an Infwest.IT seminar in Hailuoto, where I met Ph.D. Cathy Urquhart. After discussing with Dr. Urquhart I decided to proceed with my plans to get away from my field, and New Zealand is far away from South Ostrobothnia, over 16,000 kilometres away. In a way this follows the traditional principles of making a distance between the research area and the researcher. Only that I did not go there to do my ethnography which was the case for the early ethnographers. In ethnography it has been a custom to move away from the research area when the field work is done (Skeggs, 2001; Bryman, 2001). In contemporary ethnography this is not the case any more since more and more field work is done in familiar and close places. My discussion connection stayed somewhat with my research group but mostly I got to know new persons and new ideas of qualitative research.

In Auckland I attended regularly the Qualitative Research Group's (QRG) meetings. These meetings were useful in that they were places where "doing qualitative research" was something "normal" and I did not have to justify myself in that sense. Previous encounters for example in IS study groups had given me the impression that qualitative research needs to be truly and thoroughly justified; that qualitative and especially gender research is not something valuable or understandable. This I noticed from my own notes and I have written same kind of notes after almost every presentation I have held anywhere in IS seminars about my dissertation and its background scientific choices. Everybody in the group was either doing or planning various kinds of qualitative research. I heard very good presentations about grounded theory and the way it is conducted. I heard a lesson on ethnography that addressed the same problems I did. I also got an understanding of how the work is actually done in the New Zealand environment, with different laws and practices than in Finland.

I also held two presentations: one for the ORG members and the second time I presented the article "The Influence of Trust in Commitment and Future Use of Internet and Mobile Use" (Paakki et al., 2006) at the CODE research seminar for representatives of industry and University of Auckland staff. My personal office was in the CODE (Center of Digital Enterprises) at the University of Auckland's Business School. My roommate on the campus was Minna Pura, a researcher from the Swedish School of Economics. My understanding of qualitative research was greatly widened because of the QRG meetings and the discussions held there. I also had at my disposal

[3] The Gender and ICT Symposium 20.1.2004, Brussels, Belgium.

a huge library database of various qualitative references and books written by numerous qualitative researchers at the University of Auckland. My understanding of the placement and contents of information systems was like opening my eyes and seeing that there are many ways of doing research and many ways of deploying qualitative methods inside information systems. I had many discussions with Minna Pura about the ways of doing research in Finland and in New Zealand. We also compared our universities' and departments' ways of guiding Ph.D. students and how actual research work is done. So, my New Zealand visit really broadened my understanding and helped me situate my work in the information systems research field.

During the dissertation work I attended quite many seminars and conferences. These had an impact on my thinking and evaluation; in other words they educated me in a way I probably could not have learned from books or mere lectures. For example, I attended a research ethics seminar[4] in Helsinki arranged by the Christina Institute and met some remarkable feminist researchers (e.g. Dr. Aili Nenola and Dr. Soile Veijola) from Finland. Their research presentations of violence studies (Nenola) and ethics in science (Veijola) showed that I am doing relevant work and that there are people in Finland that need my research. These presentations and the whole seminar was one the few ones that view gender studies as relevant research both as a method and a discipline; and also the qualitative method was seen as relevant. I was the only attendee from IS discipline while the others came from for example gender studies, anthropology and political science. Dr. Nenola presented her long-time work inside violence studies with rigour but without any over emphasizing or anger. She looked like someone's grandmother in the lecturer's booth and as far from violence that it good be imagined. She nevertheless made her point very clear and I good easily understand and evaluate the grounds she gave for her topic.

The ethics presentation by Dr. Veijola was appealing to me because I was just starting to plan my research and go into the field and I was not sure at the time that what kind of actions I should take to protect my interviewees' privacy. The ethics presentation also revealed a great deal of information about how research is seen in the wider science community (e.g. how to build trust inside the community, what are the social practices inside the science community). I have studied and gone back to my notes from that lecture many times during my dissertation work. That can not be said from many of lectures I have taken part into. I also wrote an essay about that presentation, where I addressed the issues of trust in the scientific community in different disciplines. The overall idea of trust being emotional and system trust was Veijola's dichotomy, and I found it quite usable in my own study of consumer trust. Although I address the trust discussion from the information science point of view and Veijola from the social science viewpoint, it is clear that there are similar elements like trust in the overall system (institutional trust in e-commerce literature, McKnight and Chervany, 2002). I was the only attendant from information systems, the others were

[4] Ethics seminar, 2003, University of Helsinki, Christina Institute

mostly from sociology, women studies or cultural anthropology. My own research topic compared with theirs seemed to me very rational and not at all insignificant.

One seminar I attended regularly was Emeritus Professor Pertti Järvinen's Information Systems Seminar in Seinäjoki. After that seminar I have read, for example, the article by Boland and Tenkasi (1995) where they wrote that knowledge-intensive firms are composed of multiple communities with specialized expertise. They argued that producing knowledge to create innovative products and processes in such firms requires the ability to make strong perspectives within a community, as well as the ability to take the perspective of another into account. This is same kind of viewpoint I like to think I have now, but I certainly did not possess it when I started this work. I have found it very educative and also fun to discuss about my findings and thinking with others in similar situations.

3.4 Research sites, description of the field

Next I will tell about my field of study and present the three villages and the county of South Ostrobothnia. Ethnographic work requires an understanding of the field. My field was three villages in Finland, in the county of South Ostrobothnia. The area is known for its entrepreneur-friendliness, although most of the enterprises are small or medium-sized. There are more small and medium sized enterprises in South Ostrobothnia than larger companies by the amount of employees and revenues. (Alanen, 2003)

The research sites are Ruotsala, in the city of Kauhava, Kitinoja in the municipality of Ylistaro, and Kasperi, in the city of Seinäjoki. The area of South Ostrobothnia is circled in Figure 3 -2.

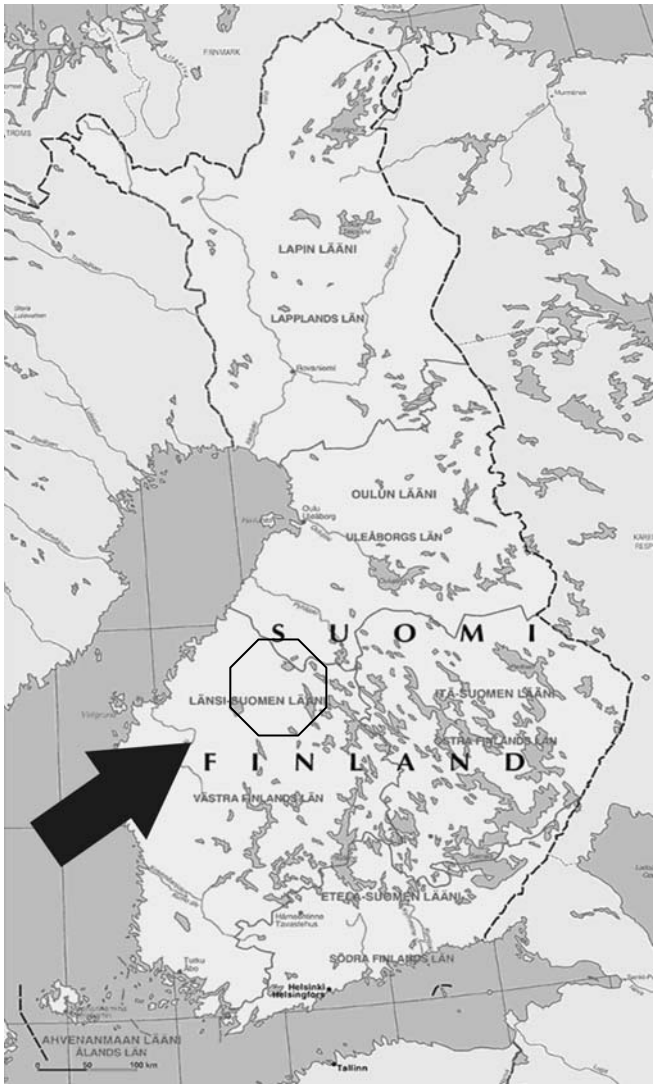

Figure 3-2. The research field in western Finland.

The villages are located close to each other but they still have their own unique atmospheres. They all are part of the county of South Ostrobothnia and have from that point of view similar possibilities or disabilities. For example, they are almost equally as far from Helsinki (the capital of Finland) and their residents speak the same dialect. Some people from all these villages work in Seinäjoki and the central hospital is also situated in Seinäjoki. The villages have the same Finnish infrastructure, like roads, laws and social services. From these similarities and differences rises the interesting part of this dissertation: how do these people view and understand e-commerce and trust in e-commerce?

Statistical information is relevant also for ethnography and for qualitative studies in general. I gathered information for my background study through Internet services like encyclopaedias for statistical information and the villages own web pages. I also

looked for information in telephone books as I tried to find some central people from each city (or town). I looked for central administration information and school principals' information in telephone books. I tried to find out how many schools there were in the city (or town) and how they are situated (addresses). This telephone book information was sometimes more accurate than the information on web sites. This was partly due to the shutting down of some minor schools in South Ostrobothnia.

I gathered some statistical information from a Finnish encyclopaedia from 2003 (Fennica.Net, 4.6.2003). These figures (official statistics from 1999) tell for example what kinds of political parties each city (town) has and what main trade areas there are in the city (town). The Central Party of Finland has the most political power in all three cities. This is partly because agriculture is a major trade in the county of South Ostrobothnia. There right-wing National Party and the left-wing Social Democrats are also represented. The Christian Democrats have minor seats in the town councils of Ylistaro and Kauhava. I did not, however, find anything about the Green Party in Kauhava or Ylistaro, but there was one representative in Seinäjoki in 1999 (Fennica.Net, 4.6.2003). South Ostrobothnians are also known for their firm beliefs in religion and patriotism.

Similarities among the villages are quite visible when you know them: the village houses are either built by the villagers themselves or at least they have worked there voluntarily many hours. Voluntary work is common in South Ostrobothnia and the villagers are not exceptions. In all three places the village houses are the central place of activity and development.

I familiarised myself with the villages by visiting the research site several times alone or with other team members. I took the habit of driving along these roads sometimes just to see if there had been any changes in the landscape, like new buildings or roadwork. These landscapes where first quite new to me, but as time passed I learned the curves of the road, the speed limits and speed zones. The knowing of field gives an opportunity to be able to discuss about places with people, it gives also a possibility to 'by accident' met people of the villages and it is also a way of understanding the experiences in living those villages. It gives an idea of long way it is to the nearest shop in the closest city and what kind of people actually live in those areas despite the ones that I interviewed.

3.4.1 ICT development activities in the villages

The eESTE project was not the first one to do academic research on ICT interpretations in South Ostrobothnia. The eKylve project was started earlier and worked in parallel with eESTE. eKylve's project leader, M.Sc. Matti Tyynelä, gave us guidance and helped us to get to the field. He actually made the first reservation for the meeting with Kitinoja village members. He put the meeting on the village's web calendar. A more detailed description of our work and the optic fiber and

computerizing project can be found at “En kehu, mutta tulipahan sekin taas tehtyä. Kenttäpäiväkirja tietotekniikasta Etelä-Pohjanmaan kylissä. (I’m not bragging, but it got done again.)” (Tiainen, 2004)

I chose my informants from these villages partly due to the villages’ activity in various ICT development projects. The main ICT development project was eKylve and all three villages took part in it. I will tell more about the project in the next chapters. The first contact with all these villages came through the eKylve project.

3.4.2 Kitinoja

The village of Kitinoja belongs to the municipality of Ylistaro. Kitinoja has about 400 inhabitants. In the village center there is a primary school, a grocery shop and a village church. The administration and maintenance of the church is in villagers' own hands. Ceremonies and other services are provided by the parish. Village members arrange weddings and other functions in the church with voluntary help so that they can raise money for maintenance and other needs. The strong feeling of membership comes perhaps partly from this work. The main street through the village is paved but the other minor roads are not, as you can see from the lower part of Figure 3-3 below. When you look closely you can see the tall church steeple right in the middle of the picture (circled).

Figure 3-3 View from the Karhunmäki (Malkamäki) side of the river towards Kitinoja village.

There was a clear distinction at least in the minds of older people that Kitinoja is a different village altogether than Malkamäki. The river divides (at least in people’s minds) Kitinoja village from the village of Malkamäki (which belongs to the municipality of Lapua, a border neighbour of Ylistaro). This distinction was also apparent as school zones or as municipal borders. Despite that the people were friendly with each other and had joint projects. The optic fiber project (building

Kitinoja's own optic fiber network for the villagers) and our coming to study the village were two such projects. At least one person from from Malkamäki on the other side of the river came to the meeting. That person was considered an expert both in using computers and in ICT development.

They developed the village in the ways society is driven. This development can be part of other village projects. People are keen and enthusiastic about developing their environment and living conditions. They are proud of their village and their doings, like development. An example of development is the village house (or community building) that they made. This development of the village is everybody's business. Children, adults and elders alike come and do for the "greater" good. Some cook, some clean, others build, while others take care of the village church. There is work for everybody and they gather money from the villagers, for example, for church improvements.

3.4.3 Kasperi

This suburb is situated on the southeast side of the city of Seinäjoki. Seinäjoki has about 30,000 inhabitants and Kasperi is the biggest suburb (in 2003). Kasperi is one of those areas that many refer to in bigger cities as a state housing or rental apartment area. Kasperi's centre has shops, a village house, day care and other similar functions. The centre is surrounded by high (in Seinäjoki standards, 5-7 stories) apartment buildings (around 10-20). Private housing is common in Finland, and Kasperi also has many privately own houses as well as terraced houses. There are quite a few parks and playfields with trees and bushes. Most of the streets are paved and there are also paved lanes for bicyclists and pedestrians. Kasperi has its own primary school near the centre, also.

Figure 3-4 View in the center of the Kasperi area from the Village House to the west.

The view in Figure 3-4 is towards the nearby apartment building in which I did one of the interviews. This is the main area of Kasperi and the village house in situated in the midst of it. The village house is called Actions House (Toimintojen Talo). It is a former supermarket which the villagers have restored themselves. The village house is a meeting place where is a second hand market, little library, a 'village sauna' and cafeteria. We held one meeting (4.6.2003) with the village's head person in the village house. This person became later one of our interviewees and she was at that time in charge of the village house and its activities. She introduced to us the village house, its activities, programs, key persons and told us how they had renovated it together with the villagers.

3.4.4 Ruotsala

This village is part of the municipality of Kauhava. Kauhava has around 8,000 inhabitants and Ruotsala is one of it's active villages. Ruotsala is situated around 1.5 kilometers from Kauhava center and it has primary school and a sports stadium that was built with the voluntary work of the village inhabitants. The village has a development plan and is actively searching for new ways to improve living conditions. For example, they have plans to clean up a small lake in the village. The photo in Figure 3-5 is taken from the road passing by the primary school towards a smaller school building. The village has an agricultural image and agriculture is the main trade in the area.

Figure 3-5 View towards the Ruotsala school.

The primary school is the central area of Ruotsala and home for the village's computer place and village house which (again) was made by the villagers themselves. This pride in being able to build a village-owned recreation centre is one of the common things in South Ostrobothnian villages and among people in South Ostrobothnia. They collect the money, the supplies and doers from inside the village or seek funding from the EU or the city council. Anyway, they do it for themselves and again for the greater good.

3.5 Informants in the field: data gathering and analysis

In qualitative research and especially in ethnography, informants' roles are at the centre together with the interviewer. From this dialogue between the informant and the interviewer comes the text that the researcher analyses along with other observations. My research consisted of various ways of gathering information. I looked through various documents related to the villages (e.g. development plans, web pages and news articles), official statistics about Finland, the municipality and South Ostrobothnia, an Internet encyclopaedia about Finland, and other documents I could find from the villages (e.g. their history, brochures). I took pictures of the interviewees, their surroundings (home, office), their technologies at hand (television, phone, computers, lawn machine, white technology), and also of the surrounding

landscape. I taped the interviews and then transcribed them. I kept a personal diary about the research and related topics. I also wrote before and after field notes and kept a field diary. These field diaries are very important in remembering what happened, what kind of atmosphere was present at the time of the interview (before, during and after) and other memory refreshers.

Multiple ways of gathering information led to an empirical data 'warehouse'. A vast amount of varying data is richness in ethnographic studies and also a burden. The richness of this data is that it gives a broad and in-depth picture of what is going on in the field, in the villages, in interviewees' lives and also surrounding society. The burden comes when this information is analysed. The analysis part in my dissertation work consisted of reading the transcribed interviews thoroughly several times over. I wrote texts about these interviews. These texts where then discussed and commented in our research group alongside with other researchers' texts. We did not however concentrate solely on the interviews and texts that we wrote. All the other data was discussed, too and we shared our field experiences regularly in our seminars and informal meetings. We discussed about our informants and their e-commerce experiences, we shared sometimes to a certain extend our field notes within the group members.

The observational data that I gathered mainly during the interview sessions in interviewees' homes was written into my field notes and diaries. This information I read several times over when analysing the interviews and the observational data served as a basis in developing my interpretation of interviewees' e-commerce use and trust in e-commerce. The interpretations that I made where then turned into articles for a wider audience. I will discuss more about individual interviewees in the next chapter. Clarke (1975) says that "acceptance is important, not just in getting an entrée to the field – sponsorship – but in giving a sense of security". Due to ethical reasons and also to enhance the informants' privacy I will not describe each one in detail. Instead I give some points that are similar with all of them and what in my mind are differences between the informants. The purpose of this description is to give a vivid picture of consumers and their everyday lives.

3.5.1 Summer 2003 informants

Our group entered the field during the summer of 2003. We all did many interviews in the same villages. Sometimes the interviews took place at the same time (even at the same place, in the interviewees' homes, at the same time). The interviews were simultaneous partly because it was my car we used when going to the field. Sometimes I loaned my own car to other members for their field visits.

I did one test interview (with one woman) to get an idea about how long the interview would take, how to handle myself and the equipment I had (paper for compiling an interview guide, pencils and a tape recorder, and I also had a phone, which I switched

off). After the test interview I did some minor changes to the interview guide and the way to enter into the interview (what to say first, how to tell the person what kind of pictures I want to take, and so on).

I did nine interviews with nine women. I chose to interview only women for this first set of interviews because in my mind talking with and to women would make the interviewing situation more comfortable to both the informant and the interviewer and also because I thought this way I would make a difference to these women and myself. (Oakley, 1981) I decided to choose women to enhance the idea of giving them a voice to speak about their matters in their own language and to interpret their own meanings. Nine interviewees were also relatively small group, and that way I could get deeper insights by concentrating in them. Women are also more often the ones who are responsible for daily groceries and other supplements for the family.

So, at first I conducted three interviews in three villages. I used the snowball method to get in touch with the interviewees. Usually at the end of my interviews I asked if the interviewees knew anyone they thought would be interested or otherwise important to me. It was then the first interview that influenced the other two. I took pictures of the villages and the interviewees if they gave their permission. Earlier I presented one picture of each village in conjunction with the village descriptions just to show how I looked at the village. These pictures give some hints about the landscape and the time of year. They also somehow reflect the feelings they raised in me. These are the views that I had as an outsider to these villages. These places became somewhat familiar to me but I did not live in these areas. These pictures remind me of the situations, the weather, the smells and colours (due to copying they are greyscale in this dissertation, but I have them in colour form in my computer and photo albums) of the interviews. My understanding of these places comes more vivid with the pictures.

Thick description usually refers to written texts of interviews and the analysis of these interviews but I like to think that thick description compared to the photographs could also be the description of the experiences that I shared with the interviewees. Usually I interviewed in the informants' homes, as for example the interviews took place four times on terraces, once at the kitchen table and twice in the living room. One of the interviews took place at the informant's workplace (her suggestion because the place is "her second home", as she described) and another one took place in the sauna department of the village house. Because it was summertime and rather hot in July (most interviewees were also on holiday at that time and seemed very relaxed in their shorts and t-shirts), it was possible and wise to hold the interviews outside. In two terrace interviews the local air force (the Air Force school is located in Kauhava) practiced and that interrupted the interviews a couple of times. Once I was attacked by a turtle, once I interviewed while a mother breast fed her youngest child. So I saw the real life of the field and of the interviewees' everyday life. I was shown quite remarkable trust from the interviewees' side since they sometimes showed and talked to me very private and very personal things. These I could not represent in my articles and they were also not on the focus of this dissertation either. The informants in a way

put me in a very difficult situation in telling me secrets and then relying in me to keep them. (Geertz, 1993; Hine, 2000; Stacey, 1988) Stacey (1988) wrote in her article about feminist ethnography and how feminist ethnography can be more exploitative than any other research method. This came very true while going from home to home in these villages.

Nine interviewees could also make a homogeneous group. At the time the informants were aged between 30 and 50 years. They were all mothers (one to four children). Seven women were married and living with their family. Two were divorced and living with their children. Their occupations varied and in that sense they were diverse: two were entrepreneurs; one was on parental leave at the time, one was a police, one was a nurse, three were office workers and one was the head of the village house. They all seemed to enjoy their work because they described it quite willingly and enthusiastically.

Most, but not all, of my informants were originally from South Ostrobothnia. The discussion about the interviewees' origin and roots sometimes lasted long, sometimes not (sometimes we spoke about my origin and roots, too). Some of the informants had never lived outside South Ostrobothnia; some had been away during studies or due to work. Some attached themselves quite strongly to one place, while others described "breathing spaces" outside South Ostrobothnia. Only one talked about leaving when retired.

All the informants used computers for various tasks or enjoyment. These purposes and needs involved retrieving information, paying bills online and/or keeping in touch with friends. Most of the informants had used computers since the coming of personal computers (PCs) in the eighties; some had only recently started. The informants talked about the feelings they had towards PCs, the Internet or special services. They also talked about other things important to them either at present or in the future.

The overall atmosphere of the interviews was friendly and understanding. I could communicate with the informants very well most of the time. In just one case I felt that although I was polite and friendly, I could not get any information from or contact with the interviewee. In that case I did not linger long with the interview but left quite quickly. Quite opposite was the interview with the head of the village house; that interview was longest, lasting around two hours.

I have transcribed the interviews in different ways, some very accurately with notations of sighs and laughter and others with only the main themes and citations that I could use. This could have effected in the way I reported these interviews or how deep insight views I could get to the informants lives. Since I used in all interviews the same interview guide and roughly went through same kinds of question it felt in the end that I did not get any new information. The laughter and meaningful nods did not seem that important anymore after a few interviews. The overall picture and the e-commerce habits, services and stories that the interviewees told came more

meaningful towards the end. Ethnographic interviews are not meant to be calibrated and the purpose of these interviews may have at first been to get a unified picture of e-commerce. At the end it was more of a getting an understanding of the informants differences than similarities that interested me and came through from the data. At a very early stage I made a picture of the consumers' e-commerce and trust in e-commerce (reported later in Chapter 4) and this picture kind of opened my eyes to the differences beneath similarities. The differences came through from various innovative ways of e-commerce use, different stories about what had happened to interviewees and the way they had made e-commerce as part of their lives.

In one trace of articles I concentrated on the three interviews from Kitinoja (see Ojavainio et al., 2004; Tiainen et al., 2005), because we had several researchers at that field site at the same time. We had interviews in the same families and we could discuss about our findings related to our observations within these two families. For example, we discussed the same situations of weddings and family happenings from both the husband's and the wife's point of view. This kind of concentration to one set of interviews may not be the idea of analysis and reporting the study but it gave a deeper inside view, gave thicker description possibilities and then helped to transform the data to a more objective view of e-commerce use. This is in a way contradict to the idea of interpretation and understanding of interviewees' everyday lives but it is also the way scientific texts are produced for a wider audience to discuss and interpret.

3.5.2 Summer 2004 informants

I did the summer 2004 interviews as part of the multidisciplinary eLaku research project. We used as a starting point the first version of my framework (Ojavainio and Tiainen, 2003) and developed that into the framework of consumer trust in e-commerce (Paakki, 2005). This framework is an important part and outcome of my study, and therefore these interviews are included here, although they are not reported in the same manner as were the previous summer 2003 interviews. The second set of interviews was informative and relevant to the development of the consumer's trust framework.

We did four sets of interviews, each discipline in its own area: information systems in e-media, consumer studies in e-groceries, telemedicine in e-health services and rural entrepreneurship in rural businesses' e-commerce (e-media group, e-grocery group, e-health group, and rural enterprises group). We all did separate pre-questionnaires with possible interviewees according to Kahle's value list (Kahle and Kennedy, 1988) on a scale of 1-9 to find individuals for our interviews. The differences between disciplines after the first meetings and discussions made it clear that we needed specific questions for each four areas. The themes and background concepts e.g. the theoretical framework (consumer, technology, community, service provider and service/product) was agreed upon discussion of trust theories. We needed the same thematic base for the interviews because we wanted to compare the results between our four main

research areas. These choices we had to make in order to get results in the given project. There was a time limit with this study and we were a group of ten or more researchers working together with 40 altogether interviews of qualitative data. So we needed a framework for analysis too in order have a data comparable between four different disciplines and e-commerce services. The value list mentioned above (Kahle and Kennedy, 1988) has these nine values:

1. Sense of belonging
2. Excitement
3. Warm relationship with others
4. Self-fulfilment
5. Being well-respected
6. Fun and enjoyment in life
7. Security
8. Self-respect
9. Sense of accomplishment

These values made it possible the segmentation of the chosen consumers. According to Kahle and Kennedy's (1988) segmentation that is based in consumers' values is more effective than segmentation for example with demographic information. In the eLaku project we decided to compare two different most relevant values chosen consumer groups because we wanted to find differences between consumers in their trust formation processes in e-commerce services. All the pre-questionnaires of consumer values were done via the Internet. From those who answered we selected (as we thought they would be) two opposite sides: excitement and safety driven. This distinction of these values was considered so vast that it would show in results more clearly. We wanted to find out if the values affected consumers trust formation process and what kind of differences there would be. Each group tried to select both men and women, altogether ten interviewees per set (40). The interviews were done by each group with different interviewers. This process in described thoroughly in Tiainen et al. (2004). All the interviews took place during the summer of 2004.

Our choices during the consumer selection might have influenced the results we got. Although we did have forty (40) interviewees and the selection process was quite similar in all areas we noticed already in the selection process that these groups are heterogeneous. For some areas we did not get that many possible answers from consumers, and there is also those that used the questionnaire in incoherent manner, so we could not used those. Despite these we believe that those consumers that we did interview were sincere in their intentions and we could find relevant results from these interviews via our group's collaborative analysis method: by using an independent researcher to cross check our analysis and results and by discussing, comparing our data during the analysis process.

The e-media group to which I belonged had the pre-questionnaire on the local newspaper's (Ilkka[5]) web site. So, our research area was South Ostrobothnia, although one interview was done in a nearby town in the county of Satakunta. We found twenty possible interviewees from South Ostrobothnia (and one from Satakunta) and we wanted ten. We contacted the interviewees and asked if they want to take part in our research. We had some unfortunate setbacks during this process, but we found ten interviewees and made further arrangements. We did most of the interviews in either our office or at the informants' homes. The locations were Seinäjoki, Lapua, Kurikka, Karvia (in the county of Satakunta) and Soini. Our interviewees were: a retired principal, a language teacher, a computer support person, two computer course teachers, a person responsible for electronic service, an accountant and computer support person, an office worker, the head of a social service office and the head of a local post delivery brand. Our interviewees varied in many demographic ways by location, occupation and age range (early thirties to early seventies). We had both men and women, although due to our setbacks we did not get equal amounts, with 7 women and 3 men. We had five security driven interviewees and five excitement driven interviewees.

I was responsible for doing interviews under the topic of media and especially Internet newspapers. The interviews again took place in South Ostrobothnia, this time in various places. We did ten interviews, some together with my research colleague[6] Taina Kaapu and some alone. I did four interviews alone, Taina Kaapu did three interviews and we conducted three interviews together. These interviews differed from the summer 2003 interviews in various ways. These interviews lasted from around a half an hour to a maximum of one hour. All the interviews were transcribed by one interviewer (not me) and then analyzed by the multidisciplinary team. The interviews were ethnographically informed, but we did discuss somewhat about our diaries on the research team, but not as much as with the first set of interviews. The ethnographically informed interview means that the interviews where planned with more structured interview guide than that thematic interview guide that we had in summer 2003 interviews. We did not however use those questions as such but merely checked from it that all the relevant things had been discussed during the interviews. The term ethnographically informed interviews came from a discussion with Professor Michael Myers in an InfWest.IT seminar in Rokua, during autumn 2003. The research team was different than the previous one and the members' topics and locations varied relevantly from ours, although we had one overall topic (trust formation in e-services). The various research team was so diverse in disciplines that the first meetings we just tried form an understanding towards other disciplinary methods and ways of working.

[5] http://www.ilkka.fi

[6] Taina Kaapu, Lic. Phil., Researcher, University of Tampere, Department of Computer Science

3.5.3 Summary of interviews

The interviews are presented in Table 3-1. This table shows the two sets of interviews, when they were conducted, the topics of the interviews, empirical material I gathered and the multidisciplinarity of the research community in which I worked during the research process.

Table 3-3. Summary of interviews.

	Interview set 1	**Interview set 2**
Time	Summer 2003	Summer 2004
Interviewees	9 women	7 women, 3 men
Topic	ICT use	Trust in e-commerce/ e-services
Other empirical material	photos, diaries (field and private), visits to villages, local newspapers, village web sites, maps	diaries (field, own shared), maps, web sites, value questionnaire
Disciplines represented on the project team	IS studies, consumer studies, social anthropology	IS studies, consumer studies rural entrepreneurship, telemedicine

My research process in the field lasted two years and the multidisciplinary work was done during the same time. More on my personal research process is in the next chapter.

3.6 The process of this doctoral dissertation: locally situated in time

Like Abu-Lughod (2000) wrote about doing ethnography, “the issues of location or 'situatedness'” (emphasis original) are important. The researcher is doing research in a location but can not control what situations she/he takes part in. This dissertation is partly located in South Ostrobothnia, as the interviews and starting place were in South Ostrobothnia. South Ostrobothnia is a Finnish county with the laws and infrastructure of the Finnish welfare society. I visited three villages in the county and did most of the interviews there.

I lived in the county of South Ostrobothnia and in the municipality of Kauhava for approximately 15 years. So before, during and after the study I lived in the area where my informants lived. I read the same local newspaper (Ilkka), attended the same

summer, winter and other festivals, voted in national elections and so on. So, in a way I lived the same kind of societal and cultural life as my informants. I was therefore locally situated in time, as I call it. The whole research process (my study) lasted from 2002 to 2008. The time frame of my study and 'interference' in these locations was during the summers of 2003 and 2004, which were the actual times of the interviews. The issue of belonging to a place, being a Finnish or a South Ostrobothnian, and recognition of the variety of ways of belonging, is important not simply in terms the composition of these communities, but also in terms of research methodology. Ethnographers must cultivate a reflexive awareness of their own ways of belonging to the communities they study and how such belonging affects their findings. In my case it was as I was part of all of those communities that I visited and interviewed people in. I might have been too 'in' in the discussions and know too much before I even to these villages. I, for example, knew about the religious background of one of the village's because I had attended a boarding school in that area and they attended to that Christian boarding school's activities. Those villages are not that close to each other and still I knew many of the people that we met. I might have not got a thorough 'outsider' look into these villages but then again I did not have asked all those community related things that were unknown to the rest of our group members. The words that people used in the villages and the dialect they spoke was familiar to me. The interviewees knew me or my background somewhat (not all of them but many). This might have influenced to the way they talked to me and acted towards me. The interviewees might have been more open to me because they knew me and trusted me (to my good intensions) but as easily they could have been distant and not talk to me at all. The line in this interviewer – interviewee relationship is at first thin and interviewer needs all the help she can get in order to be able have interviews. (Clarke, 1975; Davies and Jones, 2003)

Abu-Lughod (2000) says that where ethnography takes place the 'locations' can be not just physical locations like buildings but also social and cultural locations. I for example have Karelian ancestors and although I have not lived in the 'real' Karelia (now in Russia) I have heard stories of places and people in there and I have got the sense of longing in there. It is a real location for me although I never visited there and it does not exist in that form anymore that is has been described to me. In feminist discussions, situated knowledge has been emphasized from the 1980s onward. The seemingly neutral or objective research methods have hidden the place where the information is produced. So, situatedness is a criterion for relevant information in feminist research. (Haraway, 1991; Dyer, 1997)

The situatedness of the researcher and self-reflectivity are techniques for achieving situatedness. Haraway (1991) uses situated as a referential term for the situations we are all put into. This means we have situations where we are given or lose power or a role by other people, so that we ourselves cannot much influence those roles or power relations. While I was doing my study in the field the questions of ethics and power bothered me sometimes. I went into people's homes and sat there asking questions about their family life and family relations. These were for to get an insider picture of the life of the informant. But this information is still with me, it is in those tapes and

those articles that I wrote. Interviewees have no power over these. They cannot control what I write and to whom I speak about these things. It is up to my own sense of responsibility that I keep my research papers in a safe place and my electronic material in secured formats. Ethnographic offers greater explanatory power than other methodologies but at the same time it has offers greater risks. (Stacey, 1994)

During and after the interviews and especially when I was in New Zealand I thought about my own feeling of being a South Ostrobothnian or not being. Most of the time I pass as a local and very few mention or notice that I am not. Still, according to local habits and knowledge I am not from and never will be from (that is originally from) South Ostrobothnia. So, I can indeed speak the local dialect and I know what people talk about when they say, for example, 'kökkä' (local word for voluntary unpaid work). In ethnography it is essential that the researcher understands the dialect and semantics of the research area. I was both outsider and insider at the same time in my research area.

4 Results

Consumer trust in e-commerce is an individual, local and social matter combined with the technological side of e-commerce. The consumer's own personal views and expectations have an influence on trust. These influences and aspects vary from consumer to consumer, but they can be recognized from their talk and the elements of their everyday lives: the social aspect, the communal aspect, the infrastructure aspect and the personal aspect. The development projects in the village or municipality and the situations in the surrounding society were also present in the consumers' narratives.

One contribution of my dissertation is a theoretical framework of trust and e-commerce. It is created on the basis of the consumers' narratives. I describe it in section 4.1. The second contribution underlines the importance of human aspect in IS research, which is in a minor role in IS studies. This is covered in section 4.2. The third contribution of my dissertation belongs to the methodological field and it is the use of feminist ethnography in IS research. I describe it in section 4.3.

4.1 Theoretical framework of trust and e-commerce

Theoretical framework of trust and e-commerce is consumers' view of e-commerce and trust in e-commerce. Framework takes into account the consumers' everyday life with the social aspect of trust together with the dispositional, institutional and interpersonal side of trust in e-commerce. The framework was developed in two phases: first I made a preliminary model after the first set of interviews (Figure 4 - 1) and then this integrated model was further developed and defined after the second set of interviews (Figure 4 - 2). The integrated model was developed from the analysis of the 2003 interviews and it represents the elements and views of those consumers. The preliminary model has the elements of the Internet (which was viewed more like a dizzy cloud than anything concrete), the web site (or e-commerce site), the consumer, the consumer's connections to business (e-vendor) and nearby communities/ individuals and the overall society that the consumers live in. I also put three earlier trust research articles (McKnight et al., 2002; Calcanis et al., 2002; Gefen et al., 2003a) in order to illustrate how they are situated (the ideas in the articles) in relation to consumers' narratives.

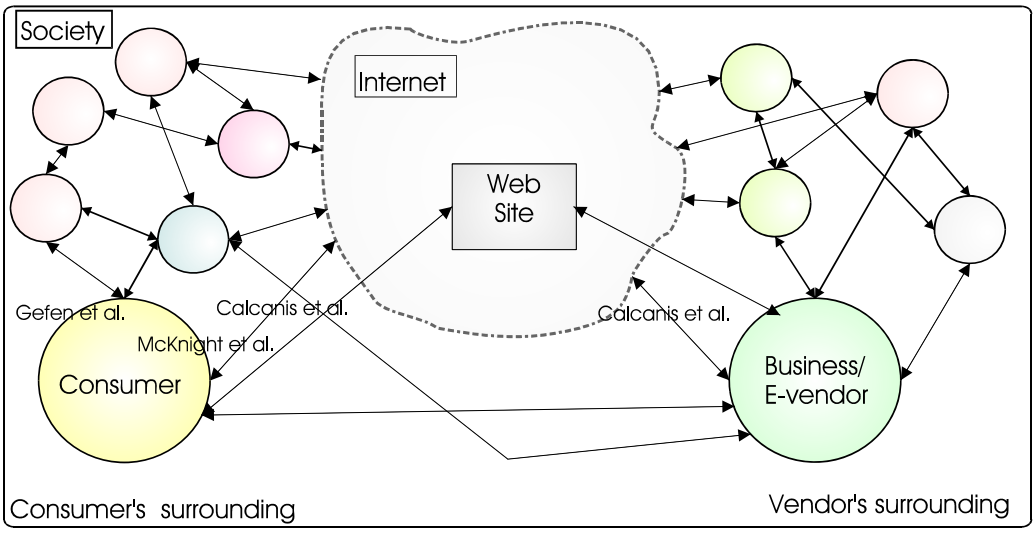

Figure 4-1 Integrated model.

Compared to the integrated model McKnight et al.'s (2002) and Gefen et al.'s (2003a) models lack the social environment that consumers live in and how that environment might influence e-commerce use. Calcanis et al (2002) represent the technical view of trust which is based on trust requirements in an online transaction process. During the analysis of the first interviews it came apparent that the living environment and social contexts are also important as well as the technology used. The consumer's individual aspects will affect her/his actions in an e-commerce situation. The e-vendor's social contexts and reputation and the appearance of the web site are only a few of the things that affect the consumer when making decisions about trusting. Consumer trust in e-commerce is an individual, local and social matter combined with the technological side of e-commerce. The consumer also has a personal history and the consumer may have some predispositions and history with that e-vendor or technology.

The integrated model was then used as a base for further development during the second set of interviews. Before the interviews took place I decided to look more deeply into the element of trust, which was not so clear in the integrated model. I took the idea of a lens from Orlikowski (2000). Orlikowski (2000) describes users of an information system can understand and use the same system differently inside one organization. In Figure 4-2 the lens is put in front of all communication to the e-vendor and e-service/e-product in order to illustrate the consumers' trust in e-commerce. The (lens of) trust comes before there is a real experience made to the 'other side' of the mediating channels; it is not initial trust (not experienced for the first time). This is the main difference and result compared to McKnight et al.'s (2002) model where they studied initial trust in e-commerce.

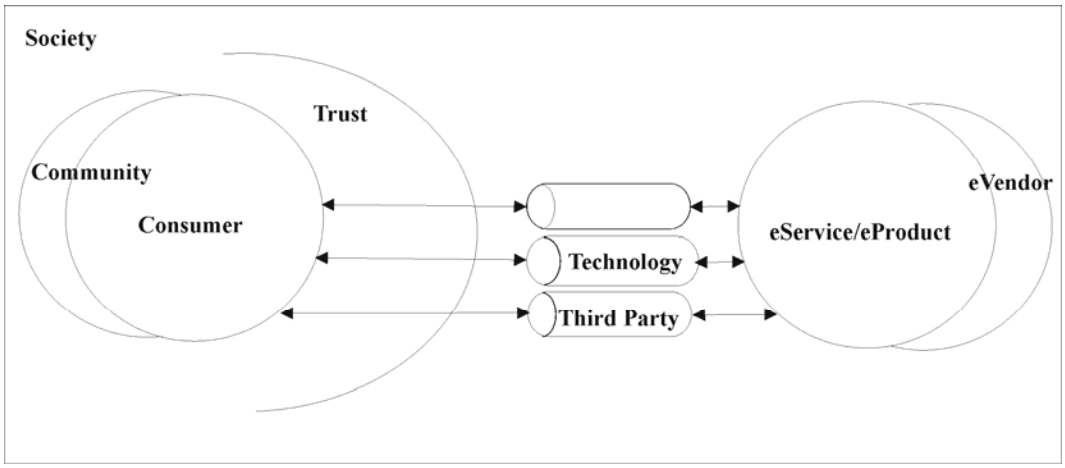

Figure 4-2 Framework for consumer-related trust issues in e-commerce.

The consumer in this framework is thought to be in an interactive process with the e-vendor. This interaction happens both face-to-face and/or through a technology channel or through other channels given to them by third parties. In Figure 4 – 2 the channels are technology, third party and blank. Blank is for other than third party or technology, for example the newspapers consumer reads. The consumer gets information about the e-vendor (e-services and e-products) from newspapers and other media in the surrounding society. The communities consumer lives in have a role in information gathering for example in the form of word-of-mouth. The consumer uses this information to formulate trust towards the e-vendor. Information gathering and evaluation is one aspect of the consumer's trust formulation process. In face-to-face contacts with the e-vendor the consumer can physically visit a traditional store and formulate trust through that interaction. The consumer can also interact with the e-vendor through a web site where technology is the mediating channel. Consumer uses these ways when developing trust in the e-vendor and its (e-) services or (e-) products. So before consuming the consumer usually has formulated at least a preconception of trust in e-commerce, in communication channels and in e-vendor (e-services/ e-products).

The theoretical framework of trust and e-commerce represents the consumer in her/his everyday life and how trust is a lens through which the consumer views e-commerce. The framework includes elements from the consumer’s everyday life, such as the society the consumer lives in, the communities the consumer associates with, channels (technology, third parties and other), e-services/e-products the consumer consumes, and the vendor. These elements were present in the interviewees’ everyday lives in their talk during the interviews and they show how consumers deal with different (and similar) things concerning trust and e-commerce. There are differences in the use of third parties and technology, but also in the e-services and e-products that the interviewees consume. The similarities are that the community members are present in many ways: as recommenders, as helpers, as gatekeepers or other kinds of activators. In small-scale communities individuals affect their community and vice

versa, as shown in Giddens' structuration theory (Giddens 1984) and Orlikowski's study of ICT use (Orlikowski 1991).

The existing models can be improved and further developed by adopting the social and cultural views together with the historical and societal view into them. This means that the researchers for example McKnight et al. (2002) would have in their model alongside with the dispositional trust the community aspect or other social relationships aspect. There should be multiple two headed arrows to describe communication between the various elements in their model not just one way communication. This would better model the idea that the trust in e-commerce is about ongoing processes not just something that happens once. It is incorrect to think that there would be for example initial institutional trust in this e-commerce era when most of the people have some experience in e-commerce use from early stages in their life. The general web experience itself is not adequate enough to describe the historical and cultural contexts in which the user is or has been living in and experienced.

4.2 New consumer perspective to IS studies

The user in IS literature refers to a technologically oriented user of a system (e.g. Iivari, 1991), whereas the use of consumer gives an idea of a person that consumes, is capable of making decisions and is maybe ready to use money to purchase something (Loudon and Della Bitta, 1988). In marketing studies the research is focused more on the content of web advertising rather than on the web user (Joines et al., 2003). Marketing and consumer studies tend to concentrate more on demographical information than the consumer's own experiences (Korgaonkar and Wolin, 1999). It is the consumer that I concentrate on, and I have also looked the demographics of consumers as a means of getting a historical perspective of the interviewees, which is one way of seeing them as individuals in feminist ethnographic research (Skeggs, 2001).

It is not the computer and the technology that is present in the consumers' narratives; on the contrary, technology is very much absent. Consumers talk more about actual use of the Internet or ICT as a means to get something, for example information or products, not so much about just technological issues of megabytes or processors. There are of course exceptions, as there are as many ways to use or not use ICT and as many narratives about ICT as there are individuals. (Lie and Sørensen, 1996; Silverstone and Haddon, 1996; Hynes et al., 2006a)

A wider understanding of consumers' everyday lives and e-commerce in their lives are two objectives of this dissertation. I have told in the consumers' words what is their understanding and viewpoint on e-commerce and trust in e-commerce (see e.g. Ojavainio and Pennanen, 2003). This of course is my interpretation of the consumers' narratives and in that way only a glimpse of the ever changing life of the consumer.

This interpretation is by no means exhaustive nor does it even try to be. However, it gives an important insight into consumers' ways of dealing with e-commerce and the experiences they have (see e.g. Ojavainio et al., 2004). A rich view of the consumers' experiences comes through from the narratives, and these narratives relate to discussions in Information Systems studies in many ways.

Consumers give various explanations about hindrances and breakthroughs in their experiences with e-commerce. Explanations of hindrances are about risks that consumers experienced in their e-commerce use, such as technological risk in using e-commerce, which sometimes was due to the consumers' own technological inexperience. Then again, explanations about breakthroughs were innovative and showed that consumers find their way through technological or other barriers. Some consumers have other persons who help them and show them through various problems and barriers, while others find they own way. (Smith et al., 2005)

One way of viewing consumers' everyday lives comes through the narratives of families in a close community of one village. These narratives give a glimpse of Finnish society and its influences or rather changed viewpoints from the individual's side. Consumers talk about technology from their viewpoint and give technology meanings in their own lives. Some consumers see technology from a more objective side, which means they talk about the wider meanings of technology in Finnish (or global) society. Other consumers talk about more subjective matters that technology has brought into their lives, like keeping in touch with friends or finding information for a hobby.

The consumer's view of trust in e-commerce is at the same time similar to and different from the overall picture presented in IS literature. The often used dimensions of trust: dispositional, institutional and interpersonal are present in consumers' views. The similar views concern the institutional aspect of e-commerce (McKnight et al., 2002). The overall society with its laws and infrastructure are present in consumers' narratives as well as in their personal attitudes or dispositional trust, as McKnight et al. (2002) call it. The interpersonal part of McKnight et al.'s (2002) model is different from the consumer's view. The interpersonal part has a more social nature than in the previous models. Consumers' narratives about the surrounding community's influence, pressure, weight or persuasion are present in multiple ways. The communities are part of consumers' lives and consumers have constant communication with communities' members. Consumers get help from other members of their communities, they give advice and take advice from others. Consumers also discuss with others about the nature of their use or disuse, problems and problem solving. The social nature (or presence) of e-commerce has been acknowledged lately (Gefen and Straub, 2004; Tan and Sutherland, 2004), but there is still a lack of a deeper understanding of consumers' lives and especially an understanding of the social, cultural, societal and historical contexts.

Barley (1996) studied the work of electricians at their workplaces. He was around the workers during the research and came to understand their language and their silent knowledge (tacit knowledge). In a way I have stayed in my research area for a prolonged time and know the language and meanings of different vocabulary and also the different silences and meanings of my interviewees. However, I did not visit the working places; I visited my interviewees' homes and living environments. Suchman (1987) studied the working habits of flight controllers over a long period and Karasti studied radiologists' work (2001a). These are all examples of working life and the use of ICT there.

Karasti's work is part of the Human Computer Interaction (HCI) and participatory design and Computer Supported Cooperative Work (CSCW) side of IS. Ethnography has been used in HCI and CSCW to find ways in which users could better use and especially interact with computers (and with other workers through computers). (Hughes et al., 1992; Hughes et al., 1994; Blomberg, 1995) These are, however, descriptions and interpretations of an official part of human life and as such good descriptions and much needed analyses of ICT work. My interpretations are of consumers' everyday life at home with family members and relatives and with members of communities at hand. At times the narratives include talk about working life, but also about the rules of ICT use in the family, the placement of computers (in bedrooms, in living rooms or at hand) and the feelings of disappointment and failures as well as happiness, enjoyment and successes.

4.3 Methodological results: Feminist ethnography in IS

The methodological objective of this work is to apply feminist ethnography in IS, which is not a common approach in IS and therefore novel. With the exception of the work done by Alison Adam (2000), most research in IS that is feminist in nature is done under the label of gender (Vehviläinen, 1994; Karasti, 2001a; Tiainen, 2002; Lie, 1995; Rommes, 2000). I chose to use the concept of feminism because on one part it means I am taking a political stance of enhancing the women's cause so to speak, as has been done in the past. The other reason is that it is very demanding and challenging to apply a method that so clearly emphasizes the human point of view and makes the researcher to reflect on her/his own opinions and predispositions during the whole study process.

The definition of feminism that I use and how I understand feminism is similar to Skeggs (2001) view:

> "But as with most spaces, the boundaries are permeable and so for the purposes of clarity the term feminist is used to signify the political stance that motivates and brings the

> practice of ethnography to life and to our attention." (Skeggs, 2001, p. 426)

At present gender is no longer seen as the primary determinant of women's lives and the constitutions and disruptions of other categorizations such as race and class are seen to be as important as gender. The traditional object of feminism studies, 'woman', has come under critique (Ahmed et al., 2000; Riley, 1987) and there has been a shift from ethnographies on women to ethnographies informed by feminist theory. (Skeggs, 2001) This is more the way I see myself doing feminist ethnography. The word feminism clearly states that my work has a political stance and that it is one more aspect that I want to include in ICT and Information Systems research discourse. The feminist (or gender) discussion is present in articles Ojavainio, Koivunen and Tiainen (2003) and Hynes, Tiainen, Koivunen and Paakki (2006a; 2006b). In these articles we describe how consumers' narratives are gendered and how these discussions are also present in higher level societal discussions too.

Furthermore, feminist ethnography opens up the actual lives of the interviewees and the language they use. The humanizing viewpoint (Isomäki, 2002) is not a totally new viewpoint, but still it has not had very wide success among IS researchers. Along with the humanizing viewpoint is that in ethnography, and especially in feminist ethnography, the whole individual and the social context in which individuals (consumers) live are seen and included in the analysis of empirical material (see e.g. Paakki et al., 2004; Paakki, 2005). The social context has only recently been noticed in literature on IS and trust (Gefen and Straub, 2004), but still it has not been seen as a method of inquiry or a starting point to wider popularity of interviewing and analyzing the consumer's everyday life in a more valuable and holistic way.

The third point of using feminist ethnography in IS research is that the researcher is also under analysis and under the scrutiny of taken-for-granted viewpoints that the researcher her/himself has and the viewpoints that are 'given' by the surrounding IS research community. In ethnography this is called reflection of the researcher's own predisposition, beliefs and values during the gathering of the empirical material and in analyzing the empirical material. The analysis part takes a long period of time and in ethnography it is preferred that the researcher takes a distance from the research area after the empirical material is gathered. The distance can mean timely distance (to leave the material for awhile and not analyze it), geographical distance (as my moving to New Zealand, 16 500 kilometres away of the research area) or other distances (social distance to the working group as I partly did also by moving to New Zealand). When I took distance, I could see my empirical material more clearly and hear my own thoughts about the analysis. During that time the empirical material was mine, and mine alone, I did not have to share my thoughts about it if I did not want to. There multiple ways of distance as in my case and this is needed after the material gathering.

This kind of collaboration is one point of using triangulation to improve one's work. According to Denzin (1975), triangulation is the use of multiple methods and sources

in data gathering, having multiple researchers in fieldwork and analysis (also multiple ways and frameworks to analyze), and using of multiple disciplines and theoretical concepts in the research process. Multiple triangulation provides an answer to two of Klein and Myers' principles: the principle of multiple interpretations and the principle of suspicion (Klein and Myers 1999). Then again, Richardson and St. Pierre (2005) bring up a new concept of crystallization that frees the researcher(s) to have multiple perceptions, to see empirical material and to analyze in various lights. Crystallization means researchers come to discussions with their backgrounds, beliefs and values and through the discussions and shared writing processes the knowledge and knowing of each other's ways of thinking is enhanced. And, in this kind of collaborative work the researcher is able to see her/his boundaries of knowledge clearly and may finally realize that there is always more to know.

The way ethnography and especially feminist ethnography can and could be used is one of the methodological results. The understanding of feminist studies in general is often viewed very strictly as giving voice to women (Adam et al., 2006) and also to discussions of the masculinity of technology (Cockburn, 1983; Wajcman, 1991; Grint and Gill, 1995; Faulkner, 2000; Adam, 2005). In this dissertation it is not a question of giving voice to women, but to understand as a researcher, a fellow citizen, the ways ICT and e-commerce are used in everyday life; what kinds of patterns of consuming e-commerce consumers have; and also what are the elements of trust in consumers' worlds. It is not the aim to deny the masculinity of technology but to show that it is not all masculinity and masculine ways, but refreshingly various, altering, emergent, innovative and individual ways that are present in consumers' everyday lives.

4.4 Articles in a nutshell

The five articles that I include in this dissertation are briefly outlined in this chapter and listed in Table 4 - 1.

Table 4-1 Results in a nutshell.

Articles / Contribution	Theoretical framework of trust and e-commerce	Consumer narratives	Methodological results
Article 1. The Framework of Trust in e-Commerce (2005)	**Description of the framework**		
Article 2. Consumer's Explanations of E-Commerce Use and Disuse (2004)	**trust and risk relation**	**Narratives**	**an empirical case**
Article 3. Gendered Rhetoric of ICT Use (2004)		**Narratives**	**an empirical case**
Article 4. Articulating ICT Use Narratives in Everyday Life (2006, submitted)		**Narratives**	**an empirical case**
Article 5. Triangulation in Ethnography – The Case of Collaborative Research (2005)			**description of the research practices**

Trust is related to many elements, but from the individual's point of view. Trust takes consumers into account and gives individuals the power to tell their own stories about their own everyday life. I have discussed trust and consumer trust formation in Article 1. The Framework of Trust in E-Commerce (Paakki, 2005). IS science deal with trust as one of the crucial elements of e-commerce. Trust is said to be one of the hindering or encouraging elements for consumer to use or not to use electronic commerce. I have looked into this discussion in the Article 2. Consumers' explanations of e-commerce use and disuse (Ojavainio and Pennanen, 2003). In the article we have both trust and risk as the interpretative dimensions.

In order to study e-commerce and ICT use in general and to contribute to the discussion on gender and IS I have written (partly) articles 3-4 titled "Gendered Rhetoric of ICT Use" (Ojavainio, Koivunen and Tiainen, 2004) and "Articulating ICT Use Narratives in Everyday Life" (Hynes, Tiainen, Koivunen and Paakki, 2006b). The focus in these two articles was in the social aspect of ICT use inside a community and mirrored also to the wider social discussion of ICT use. The basis of the articles was in my and my colleague Emma-Reetta Koivunen[7]'s analysis of the interviews from summer 2003. In the first article our focus was in gendered rhetoric of everyday ICT use inside one community. In the second article the analysis was developed further to a wider perspective. These two articles provide a view of the subject of gender in IS. It is important to reveal the biases we all have about gender in the framework of information systems.

One of the methodological points of this study is the multidisciplinarity and teamwork (collaboration). Multidisciplinarity is a concept I use for the way I (and our group) worked while gathering and analyzing our empirical material. This is a way of doing research that has gained wider attention lately in Finland and in global science

[7] Emma-Reetta Koivunen, M. Soc., Postgraduate Research Student, Manchester Metropolitan University, UK.

communities. I choose to include one paper from this side of my work here; the Article 5. Triangulation in Ethnography – The Case of Collaborative Research (Tiainen, Paakki and Koivunen, 2005).

4.4.1 The framework of trust in e-commerce

The first article introduces a model of consumer-related trust issues in e-commerce. The model describes the different elements that are present in consumers' everyday lives when they are forming trust relations with various e-commerce sites and e-vendors. The elements that are present are society, community, consumer, technology, e-vendor, e-service and third parties. These elements and their presence are discussed in detail and some remarks are made for e-vendors and e-commerce designers to take into consideration.

The users' – or individual human beings' – interpretation is connected to their social context which in IS studies is often forgot. (Tedre, 2006) Although Orlikowski (2000) found that users in different organizations use the same IS in different ways – we can say that their interpretations of the same IS are different. Mol and Law (1994) recognized similar differences in a regional context. The social context where computers and users are concerned has also been studied by Vehviläinen (1999) and Star (1995), and these studies have shown that social context is important. The latter has proved that the social aspect is related to the interpretations of phenomena and the ways of acting (also the ways of using IS). The issue of social context in this article and in this dissertation comes from the feminist ethnographic method that I used and that way from the consumers' narratives of their e-commerce use.

Previous work in IS concerning consumer trust in e-commerce (McKnight et al., 2003; Gefen et al., 2003a) does not emphasize the social environment that consumers live in and how that environment might influence e-commerce use. The consumer's individual aspects will affect her/his actions in an e-commerce situation. The e-vendor's social contexts and reputation and the appearance of a web site are only a few of the things that affect a consumer when making decisions about trusting. The consumer's trust in e-commerce is an individual, local and social matter.

4.4.2 Consumer's explanations of e-commerce use and disuse

This paper focuses on consumers' explanations regarding e-commerce use and disuse from the viewpoint of their perceived risks and trust. Consumer studies and Information Systems are joined in this paper in order to take the consumer's side of e-commerce into account. The theory of perceived risk in consumer studies is used together with Information Systems theories of trust. Our target was to find explanations from consumers for their e-commerce use and disuse, which gave interesting views for e-vendors in further developing their services.

The role of trust is important in e-commerce use. It seems trivial that when trust is high, e-commerce is used but this is partly due to the experience of low risks and also the risk management methods that consumers use. Consumers use various risk management methods especially when risks are high or then consumers might not use e-commerce at all. An interesting result was that when experience with ICT use was high it seemed consumer trust decreased considerably (although experienced consumers seemed to find multiple ways to minimize risks). Information also has an important role in building trust and minimizing risks, but consumers are also interested in information concerning the e-vendor itself, not only the product.

4.4.3 Gendered rhetoric of ICT use

This article describes the gendered rhetoric of ICT use in everyday life. The rhetoric with which an individual describes her/his own ICT use is connected to the describer's computer identity. Computer identity is constructed in relation to the narrations presented by other people, "ready stories" that exist in the culture, and the language that includes the ways to analyze and present experiences and events (Talja 2003). The interviewees share the symbolic views of women and men, although they describe some variety among women and also among men, as Lie (1995) described.

In the interviews the men often talked very widely about ICT and its benefits, while the women talked about their specific needs and actions in the use of ICT. Both genders used ICT in their everyday lives. The interviewees used ICT to handle their everyday lives and they used ICT mostly for specific needs. The expectation that the interviewees would use ICT for fun, to entertain, did not come up that much.

The female interviewees often referred to others when describing their own use of ICT. This came out in the talk about support and also in general talk about ICT use. Women mentioned how it would be good for the children to be able to be true citizens in the future information society. Although one of the interviewed women said she is an active user of ICT and inside the future information society, she talked about machines and technical matters as something that was not hers. This again produces gendered computer identities and minimizes the room for computer and Internet use for women. The interviewees' rhetoric on ICT use gave different kinds of action space to women and men; to youth and middle-aged.

Although in Finnish public discussion it is now obvious that computers and the Internet are not solely male, designers still seem to think so despite the fact that women use computers and the Internet in many ways. They use them because of various needs they need to fulfill. Women are not so keen on technical details, but they want their computers and the Internet to work properly, anyway. So when women ask for help inside and outside their families, it gives room to discuss and share knowledge inside the families and it gives work possibilities for various

computer and Internet experts. Through this sharing of computers and the Internet in the families, in the communities and in society in general, wider use of computers and the Internet, as well as e-commerce, would become possible.

4.4.4 Articulating ICT use narratives in everyday life

This paper further elaborates the discussion and analysis started in the previous paper on the rhetoric of ICT use. The discussion leads to a wider perspective of media studies and how a different, new way to present the ICT user or consumer is emerging. This article presents a way to discuss, to present the shift of emphasis from technical expertise and technological and transformative benefits of artefacts to more individual/ user-focused narratives.

The further analysis of the empirical material gathered in the summer of 2003 brought about a dual-narrative process through which the respondents described their experiences. For example, when people described their uses, consumption patterns, and domestication experiences of ICTs, they tended to do so by employing contrasting frames of reference. These frames of reference we have termed an objective lens (or narratives) and a subjective lens (or narratives). Although we did not look for or find stable gender categories, the emergent gender narratives seem to renew the existing gender roles that link masculinity and technology (Vehviläinen, 2002).

4.4.5 Triangulation in ethnography – The case of collaborative research

The aim of this paper was to describe how the quality of ethnographical research can be improved by using triangulation. Denzin's (1975) view of triangulation is the use of multiple methods and sources in data gathering, multiple researchers in fieldwork and analysis (also multiple ways and frameworks to analyze), and multiple disciplines and theoretical concepts in the research process. We argued in this paper that multiple triangulation provides an answer to two of Klein and Myers' principles: the principle of multiple interpretations and the principle of suspicion (Klein and Myers 1999).

Belgrave and Smith (1995) noticed during their work after hurricane Andrew that there are issues raised in doing multidisciplinary collaboration. For example, every interviewee has an influence on the interview process, and different interviewers may have different ideas of what is seen as "important data". As there are multiple interviewers and multiple analyzers with multiple background disciplines, triangulation can thoroughly be reached. As Belgrave and Smith (1995) say: "theoretical perspectives involve the differences in positivist/quantitative and interpretist/qualitative methodologies. Both researchers have different theoretical biases, different views on the meaning and use of quantitative and qualitative data, and different notions of what aspects of any given problem are interesting." The

interviewers' own personal experiences of the matter of study may also differ considerably.

5 Discussion

The importance of taking the consumer's view into account has been the guideline during this study. Interviewing consumers and interpretations of trust in e-commerce and mediating their views to the research community have been the main points. The new ideas in this dissertation are applying feminist ethnography in IS study and taking the viewpoint of the consumer instead of the (end) user. One objective would have been enough, but ethnography is a method that requires much from the applier and so it became, that trust, the consumer, feminism and ethnography are all present.

Feminist theory has shown that women are not a unified class that all women could be put into, but women are different, women are individuals, although there may be similarities between them. (Riley, 1987) This study has shown that consumers are also more than just e-commerce or ICT users which a reminder to the wider IS community that individuals and their societal, cultural, social and historical contexts should be taken into account. Consumers are those who have the power in their hands and money to buy what they decide. Consumers are as innovative in e-commerce use as they are in their everyday lives as the example of one female consumer showed in her consumption of online flea market service (Keltainen Pörssi) in Ojavainio and Pennanen (2003). New ways of using e-commerce can and have been found and sometimes old habits follow into the world of e-commerce. Trust in e-commerce is a personal matter that includes many aspects of the consumer's life: the personal and interpersonal, the public and private. Surrounding communities are present in consumers' everyday lives and also in their use of e-commerce. Consumers make the decision (based on a feeling or rational thinking) to trust (or not to trust) in e-commerce in general or in e-services, e-products or e-vendors. Consumers are willing to take the risk (financial, psychological, social, physical, technological) and sometimes the decision seems to come from nowhere, but when examined thoroughly it is usually based on previous experiences in life (including also previous experiences in e-commerce consuming).

During this dissertation I worked alongside with ethnographic traditions and gained a deep understanding of consumers' interpretations of trust in e-commerce in their everyday lives. This was done in three villages, in one county, inside one country. My aim was not to gather quantitative information (how many, what is the mediation of usage) about e-commerce usage or usability. It is always possible to find more and more relevant and even more relevant information, to do more interviews and further analyze the empirical material. The ethnographic method is time-consuming, and more villages, more counties or countries could have led to a process with no end. I

did the analysis to the empirical material I had and the results are reported in this dissertation.

Some ideas and future implications are left after this study. For example, when an experienced consumer says she/he does not trust in e-commerce (in general or in e-services, e-products or e-vendor) and sees high risks in them, but still consumes? One could further study what kinds of risk measurement methods experienced consumers use when they say there are high risks involved and they still use e-commerce frequently.

An important topic for research would be the safety and security aspects of consumers: How do they make sure risks are not materializing for them or are less experienced consumers less caring or more daring in their usage of e-commerce? It was not the main topic of this dissertation but consumers mentioned safety and security in consuming e-commerce and how they feel about these issues. In contrast to those some consumers did not mention these safety and security related risks at all.

Another research topic is to do another round of interviews and participant observations, possibly with the same consumers, to explore if their view of trust in e-commerce has changed over a period of time or if there are new elements in the world of consumer trust than there were during this dissertation. This kind of study would be longitudinal and it should focus on the changes in e-commerce consuming in everyday life. In this dissertation everyday life and the aspects of evolving e-commerce were taken into account. Applying feminist ethnography in other studies of ICT-related topics of security, risk and trust is intriguing. Trust and risk are related, but what about safety and security from the consumer's viewpoint: Is it important, how is it important and how do consumers view safety and security in e-commerce? This was not part of the objective of this dissertation, but is one possible area of research that would shed light on the barriers to taking security into account when using e-commerce. Technology did not come out as a very important element of the world of trust in e-commerce, so maybe it would be possible to study what elements there are in security from the consumer's viewpoint, if it is not just a question of the technology of security.

Consumer trust in e-commerce is an individual, local and social matter combined with the technological side of e-commerce. The consumer also has a personal history and the consumer may have some predispositions and history with that e-vendor or technology. The (lens of) trust comes before there is a real experience made to the 'other side' of the mediating channels; it is not initial trust (not experienced for the first time). This is the main difference to McKnight et al.'s (2002) model where they studied initial trust in e-commerce.

These are just a few ideas for future research that came from my dissertation. I will present next the limitations that may be present in this dissertation and after that I will

present some recommendations for science, practice and consumers as well as their communities.

5.1 Limitations of the research

There are some limitations that are acknowledged in this dissertation. In ethnography the reflexivity is written to the text. This is perhaps the main idea of ethnographical work. There could be more reflexivity in this dissertation and not just in the discussions that I had with various persons during this process. I am aware of the ethical dilemmas that ethnographers encounter during field work and while analyzing there empirical material. Reflexivity is also researchers own reflections of surrounding society; researchers own voice during the writing process. These are although present in my field notes and diaries. However, I do not have the training of an anthropologist and in IS studies it is not that 'personal', 'understanding' or 'novelist-like' tradition of writing.

The research was conducted in one county, inside one country. The place may have influenced the results because of the cultural differences between for example United States of America and Finland. It is a different culture and society altogether. The South Ostrobothnian consumer might have different perspectives to e-commerce services than a New Yorker. There is a place for further research in this area.

The empirical material was gathered by many researchers and we could of course not calibrate the interview situations which was not the idea either in feminist ethnography. The interviews took place in consumers home and sometimes workplaces too. There was a year between the first and second interview set; consumers world might have changed (and was) there between. Since the interviews in 2003 and 2004, time has passed, e-commerce has developed and more consumers have started to emerge themselves into the e-commerce world. The rapid changes in e-commerce would probably give other kind of results today and this would be a very interesting follow up research.

Qualitative research in this dissertation is about interpretation and different researchers may interpret differently (or similarly). The researcher also affects in qualitative research to the choice of interviewees. This again may influence to the analysis and results. The multiple triangulation has helped in all previous limitations to make this dissertation more crystallized.

5.2 Implications for future research

Consumer trust in e-commerce is a wide field to explore from the IS viewpoint. There are many close disciplines that require examination regarding e-commerce. Previous

cooperating sciences have been, for example, organizations, marketing, engineering and psychology. As e-commerce is becoming more and more a part of everyday life and is also constantly becoming entwined with working life, it would be good to take other elements of life into account, too. The other elements are the communities where consumers live. The members of the various communities in which consumers live have an effect on how consumers view the world and especially on how they view e-commerce. This way there could become a more understanding and tolerant attitude in designing and developing ICT systems and specific e-commerce solutions for consumers, which is an important issue. Previous studies have also shown that designers and developers (and others working) in ICT-related work have a tendency to not take consumers into account. The systems they designed often do not work, or if they work they require adjustments from consumers.

There are new research questions that result from this kind of new trust in e-commerce framework. The formulation of trust in e-commerce has various ways to develop. The new research questions could be for example: what are the communities and their members' co-operative trust formulation processes and how the institutional trust is seen in multinational communities? These questions would take the consumer viewpoint and the social, societal, cultural and historical contexts in front in the research.

Applying feminist ethnography in Information Systems is a very challenging way of doing research. The researcher is constantly challenged by other researchers in seminars and other places of scientific discussions for the methodological choices and for the whole idea of making feminism or women visible in spoken and written scientific text. It is also a question of being believable as a researcher, and one has to provide more background information and justifications of relevance than do those who do research with traditional and more widely used methods. It is also a good way to be educated as a researcher. Predispositions are exposed and the researcher is forced to be reflective and see other perspectives besides his/her own. This kind of reflection and taking the other's point of view into account when doing research (creating new theories, new methods, and so forth) is important and makes the research more believable also to the outside world of science.

5.3 Implications for practitioners

The results of this study can be used in the practical work of developing and marketing services for consumers. These results are about products (e-services and e-products), about the buying process and some overall guidelines. These elements are present in consumers' world of trust and e-vendors should consider taking them into account.

Practitioners of e-commerce (e-vendors) could offer consumers something that both increases trust and decreases risks. Consumers feel information about the e-vendor and the products increase trust. Consumers want information that tells them something about the history and location (and nationality) of the e-vendor so they can see where the e-vendor comes from and what laws are binding them if something goes wrong (for example if a product is not delivered as it was ordered). Consumers also want some warranties that show them the e-vendor has the consumer's best interests in mind. These warranties can be money-back guaranties or product replacements. The information about products should include information about materials, prices and also a picture of the product. This information about warranties and products decreases the risk of losing money (financial risk). Information about the buying process reveals to the consumer how the product can be retrieved. The buying process information should include information about payment methods; it should tell the consumer how he/she should move about in the service while buying the product.

E-vendors could also keep in mind that communities affect consumers' decisions about trust. Communities (the consumers inside the communities) can (and they do) give information to other consumers about bad products and any problems they have has with some e-vendor. There are specific virtual communities (and their active members) that give worldwide feedback about misbehaving e-vendors. This information is posted to discussion groups of consumers with similar interests (for example, Unix groups or security groups or other computer-related groups; there are many other active groups outside the computer-related topics that do this kind of information sharing, too). Communities also provide information about things that have gone well. For example, if one consumer has ordered a product from an e-vendor and all has gone well, this kind of information is also shared (virtual or in some other way). When consumers feel that e-vendors are open toward them, they feel they can trust them more. E-vendors should also see that the quality of their offered products or services should not vary. Consumers consider it bad service if products are not of the same quality (first good then bad) when they order them. This also applies if the product is physically touchable, like a T-shirt, or if it is an electronic product like a game. Both kinds of products should be of good quality. The psychological risk of e-commerce can be in joining popular communities or using accepted e-commerce. The risk is high when consumers use e-commerce that is not accepted inside the communities they live in (for example, religious or nature-preserving services are not accepted everywhere, although they seem to be serving the common good). Practitioners should remember the cultural, social, societal and historical context consumers live in.

5.4 Implications for consumers

The most important and interesting part in this dissertation has been besides the scientific objectives, those who are often neglected and forgotten in the world of e-commerce: the consumers. They deserve few implicative notions at the end.

Consumers are the ones that keep e-commerce on and going; e-vendors keep e-commerce going because they want to sell there goods to consumers. Consumers are sometimes too humble in their claims of better functioning e-commerce (or e-services/e-products). Even though consumers are innovative in their consuming they could also be more demanding. Consumers seem to believe that most of the bad functioning of the e-commerce is their fault and do not realize that actually there is a person that designs, develops and maintains these e-commerce sites. The messages from consumers to the e-vendors, designers and developers could have more attention not just that more money would be spent but that life would become easier with well designed, well functioning and well further developed e-commerce solutions.

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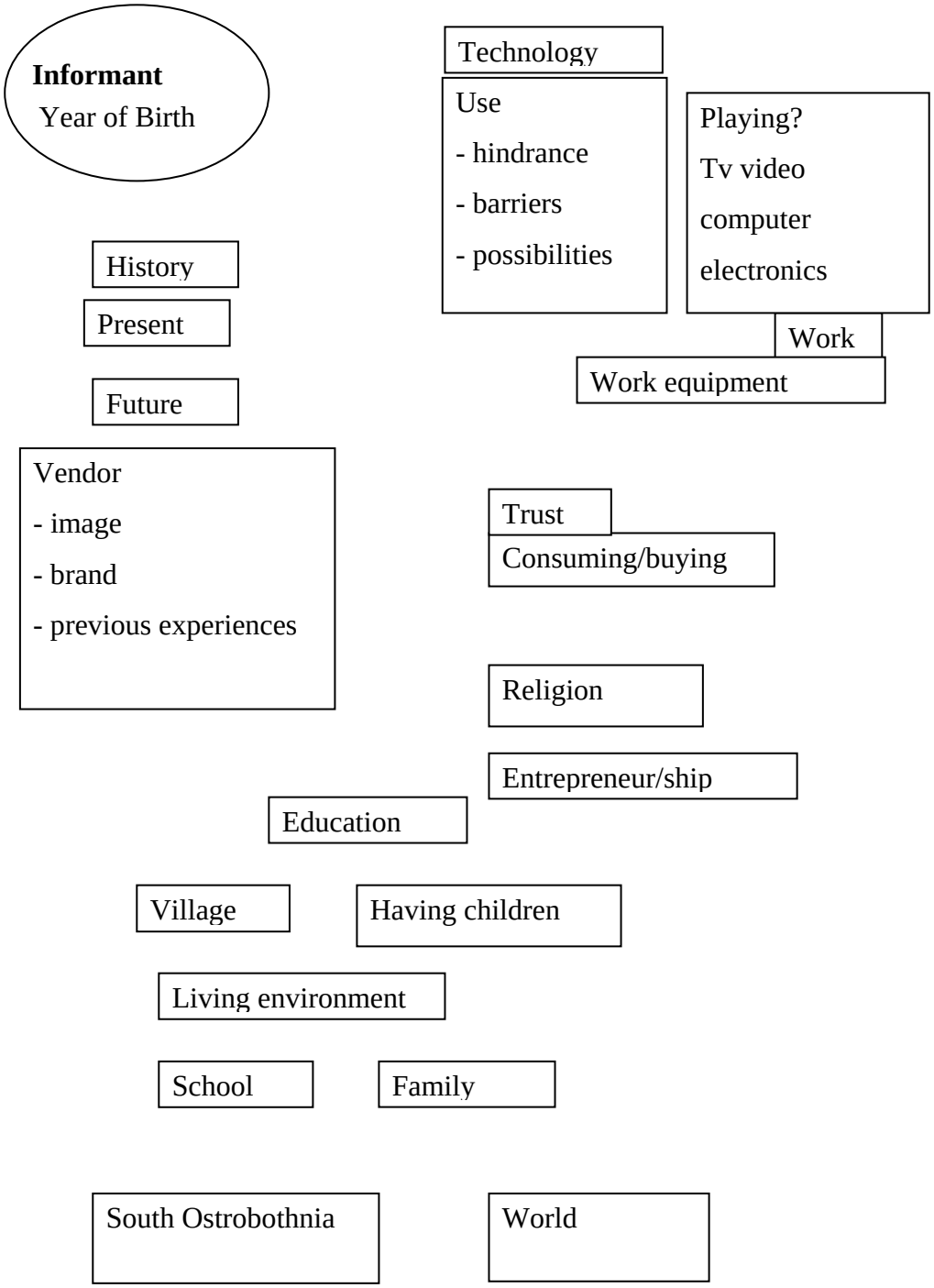
Attachment 1. Interview Framework 1.



Attachment 2. Interview Framework 2.

Haastattelukysymykset (p=pätevyys, h=hyväntahtoisuus, r=rehellisyys)

Taustatiedot (Background information)

0.1 Syntymävuosi
0.2 Siviilisääty
0.3 Koulutus
0.4 Harrastukset, tietotekniikkakoulutus
0.5 Asuinpaikka
0.6 Lapset

1. Kuluttaja (Consumer)

1.1 Kuinka usein käytät sähköisiä palveluita?
1.2 Mitä sähköisiä palveluita käytät? Miksi?
1.3 Kuinka usein?
1.4 Mitä nettilehtiä luet? Miksi? Mistä lähtien?
1.5 Missä luet nettilehtiä? Töissä tai kotona?
1.6 Kuinka usein?
1.7 Minkälaisia tietoja ja taitoja nettilehtien käyttö mielestäsi vaatii?

2. Web-sivu (Web page)

2.1 Minkälaisen vaikutelman tämä nettilehti antaa sinulle?
2.2 Kerro, miltä sivu sinusta näyttää? (ulkoasu: pirteä, väsynyt, aurinkoinen…)
2.3 Millaista nettilehden käyttäminen (lukeminen) mielestäsi on?
2.4 Kerro tyypillinen nettilehden käyttötapa! (sisäänkirjautuminen, liikkuminen sivuilla)

3. Sosiaalinen ympäristö (Social environment)

3.1 Palveluntarjoajan valitseminen. Kuka kertoi? Ketkä neuvoivat? Mitä?
3.2 Tiedätkö, mitä nettilehtiä ystävät/ perhe/ työkaverit/ kylä käyttävät?
3.3 Onko kukaan suositellut nettilehteä, joka on ollut erilainen kuin on luvattu?

4. Palveluntarjoaja (Service provider)

4.1 Oletko antanut palautetta nettilehdistä? Miksi? Mitä? Milloin viimeksi?
4.2 Onko palautteeseesi vastattu?
4.3 Luetko myös tavallista lehteä? Kumpaa mieluummin? Onko eroja?
4.4 Mikä vaikutti tämän nettilehden valitsemiseen?

5. Palvelu/ tuote (Service/Product)

5.1 Millaisia kokemuksia sinulla on nettilehtien käytöstä?
Kertoisitko esimerkein/ tarkemmin? (tilaus, maksaminen)
5.2 Oletko jonkun nettilehden rekisteröitynyt käyttäjä?
Mitä mieltä olet rekisteröitymistä vaativista nettilehdistä? (yksityisyyden suoja)
5.3 Annatko aina oikeita tietoja itsestäsi? (r, h)

Attachment 3. Trust literature.

Author(s)	Main Concepts	Discipline
Anderson and Narus (1990)	Trustworthiness	Market Research
Baier (1986)	Competence, Goodwill	Philosophy
Barber (1983)	Competence, morality	Sociology
Bhattacharya, Devinney, and Pillutla (1998)	Predictability, Trustworthiness	Management
Bonoma 1976	Benevolence, Credibility, Reliability, Dependability	Psychology
Butler (1991)	Trustworthiness	Management
Cook and Wall (1980)	Benevolence, Goodwill, Integrity	Social Psychology
Crosby, Evans, and Cowles (1990)	Integrity, Benevolence	Marketing
Cummings and Bromiley (1996)	Benevolence, Honesty, Integrity, Reliability, Dependability	Organization Science
Das and Teng (1996)	Goodwill, Reliability	Management
Dasgupta (1988)	Benevolence, Integrity	Economics
Deutch (1958)	Benevolence	Social Psychology
Doney and Cannon (1997)	Credibility, Benevolence	Marketing
Gabarro (1978)	Competence, Goodwill, Integrity, Predictability, Openness, Carefulness	Social Psychology
Gambetta (1988)	Trustworthiness, Benevolence, Integrity	Sociology
Ganesan (1994)	Confidence, Credibility, Benevolence	Marketing
Gefen (2000, 2002)	Trustworthiness	IS
Gefen and Silver (1999)	Ability, Integrity, Benevolence	IS
Giffin (1967)	Integrity, Benevolence, Ability, Expertness, Dynamism, Goodwill, Reliability, Dependability, Predictability, Attraction	Social Psychology
Govier (1997)	Benevolence, Competence, Integrity, Trustworthiness, Dependability	Sociology
Gustafsson (1996)	Trusting a person means believing she would never willingly harm the trusting person	Philosophy
Heimovics (1984)	Expertness, Dynamism, Benevolence, Reliability	Social Psychology
Herzberg (1988)	Trusting attitude, Integrity	Philosophy
Hobbes (1750)	Benevolence, Integrity	Philosophy
Hosmer (1995)	Morality, Benevolence, Integrity	Economics
Husted (1990)	Morality	Economics
Jarvenpaa et al. (1998)	Ability, Integrity, Benevolence	IS
Jarvenpaa and Tractinsky (1999)	Trustworthiness, Integrity, Benevolence	IS
Johnson-George and Swap (1982)	Benevolence, Responsiveness, Integrity, Reliability, , Dependability	Social Psychology

Kasperson et al. (1992)	Competence, benevolence, Predictability,	Sociology
Kee and Knox (1970)	Competence, benevolence	Politics
Koller (1988)	Competence, Benevolence, Integrity, Reliability	Social Psychology
Krackhardt and Stern (1988)	Goodwill	Social Psychology
Legace and Gassenheimer (1991)	Benevolence, Integrity	Marketing
Lewicki and Bunker (1995)	Benevolence, Integrity, Predictability	Management
Lewis and Weigert (1985)	Trustworthiness, Confidence.	Sociology
Lindskold (1978)	Benevolence, Reliability	Psychology
Lorenz (1988)	Goodwill, Benevolence, Penalty	Economy
Luhmann (1979)	Integrity, Benevolence	Sociology
Magrath and Hardy (1989)	Confidence	Market Research
Mayer et al. (1995)	Ability, Benevolence, Integrity (as antecedents of perceived trustworthiness)	Management
McAllister (1995)	Trustworthy, Caring	Marketing
McKnight et al. (1998)	Competence (ability), Benevolence, Honesty (integrity), Predictability	IS
McKnight et al. (2002)	Competence, Integrity, Benevolence	IS
McLain and Hackman (1995)	Competence, Benevolence	Administrational Studies
Meyerson, Weick and Kramer 1996	Goodwill, Benevolence, Integrity	Philosophy
Mishra 1996	Competence, benevolence, Reliability, Openness	Organization Science
Moorman et al. (1992)	Trustworthiness	Market Research
Moorman et al. (1993)	Integrity, Ability, Confidence.	Market Research
Morgan and Hunt (1994)	Reliability, Integrity	Market Research
Moore (1999)	Trustworthiness	Economics
Pavlou (2003)	Trustworthiness	IS
Pearce (1974)	Benevolence, Integrity	Communication
Ramaswami et al. (1997)	Trustworthiness	Marketing
Rempel et al. (1985)	Benevolence, Responsiveness, Integrity, Dependability, Predictability,	Social Psychology
Ridings and Gefen (2001)	Ability, Integrity, Benevolence	IS
Ring and Van de Ven (1994)	Goodwill, Morality	Organization Science
Rotter (1971)	Predictability	Social Psychology
Rotter (1980)	Dependability	Social Psychology
Rousseau, Denise, Sitkin, Burt, and Camerer (1998)	Positive expectations	Management
Sabel (1990)	Confidence, Benevolence	Economy
Sako (1992)	Benevolence, Predictability	Economy
Sato (1988)	Benevolence, Integrity,	Psychology
Schlenker, Helm, and Tedeschi (1973)	Trustworthiness, Benevolence, Integrity	Social Psychology
Schurr and Ozanne (1985)	Predictability	Consumer Studies
Sellerberg (1982)	Trustworthiness, Confidence	Sociology
Sitkin and Roth (1993)	Competence	Organization Science
Solomon (1960)	Benevolence	Social Psychology

Swan et al (1985)	Benevolence, Integrity, Reliability	Market Research
Thorslund (1976)	Competence, Goodwill, Morality	Psychology
Worchel (1979)	Goodwill, Morality	Social Psychology
Yamagishi and Yamagishi (1994)	Goodwill	Psychology
Zaheer and Venkatraman (1993)	Integrity, morality	Management
Zaltman and Moorman (1988)	Responsiveness, Dependability, Predictability	Marketing
Zand (1972)	Benevolence, Integrity	Management
Zucker (1986)	Shared social expectations	Organization Science

Original Papers

Framework for Consumer Related Trust Issues in E-Commerce

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Abstract

This is a preliminary paper for introducing the framework of consumer related trust issues in e-commerce. Framework describes the different elements that are present in consumers' everyday lives when they are forming trust relation to various e-commerce sites and e-vendors. Elements that are present are society, community, consumer, technology, e-vendor, e-service/e-product and third parties. These elements and their presence are discussed in detail and some remarks are made to e-vendors and e-commerce designers to take into consideration when designing e-commerce.

Keywords

Trust, e-commerce, framework, consumer

Acknowledgements

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Introduction

This trust framework (see Figure 1) is developed because of the demand to capture different aspects of consumer's understandings of e-commerce (Electronic Commerce) and trust issues related to e-commerce. Trust is said to play the key role in consumer's enthusiasm to buy from various e-commerce sites. Although a lot of research is done in e-commerce and trust (McKnight et al. 2002; Gefen et al. 2003; Calcanis et al. 2003); many models have been made but trust issues are not clear for e-vendors. E-vendors need information and guidelines for what to take into account when designing e-commerce sites that the consumer trusts. This framework introduces some aspects found in an undergoing study of consumer's trust formation.

Trust is a fuzzy concept which is hard to conceptualize exhaustively (Kohtamäki 2003, Blomqvist 1997). Conceptualization has been done, for example, by sociology (Luhmann 1988; Lewicki&Bunker, 1995), business (Mayer et al. 1995; Swan et al. 1985), philosophy (Hobbes 1750; Herzberg 1988) and information system (eg. Gefen et al. 2003) but one unique concept has not yet been agreed upon. Some aspects that are

studied in recent years in the field of trust are competence, benevolence and integrity (Garbarino&Lee, 2003; Bhattacherjee, 2002; Gefen, 1997; Mayer et al., 1995). One basic definition that trust is often said to be is that is a belief that the other person (trustee) won't betray the trustor (eg. Baier 1986; Cummings & Bromiley 1996). From this definition it could be understood that there is someone that trusts and something that the trust is aimed at. This framework of trust issues consists of a trustor (consumer) and trustee (e-vendor).

Consumers live in the society and consumers belong to various communities around them. These communities have affect to consumers understanding and use of e-commerce. Relatives, colleagues and friends give advice and hints of links to e-commerce sites. Communities can affect more or less to consumers trust on e-commerce. When speaking of these small-scale communities we think that individuals affect on their community and vice versa, as shown in Giddens structuration theory (Giddens 1984) and Orlikowski's study of ICT use (Orlikowski 1992).

Consumer gets information from e-vendor also from newspapers and other media in surrounding society. This information consumer uses to formulate trust towards e-vendor. Information gathering and evaluation is one aspect of consumer's trust formulation process. Consumer in this framework is thought to be in an interaction process with e-vendor. This interaction happens both face-to-face and/or through a technology channel. In face-to-face contacts with e-vendor consumer can physically visit a traditional store and formulate trust through that interaction. Consumer can also interact with e-vendor through a web site where technology is the mediating channel. In this framework consumer uses both these ways when developing trust on e-vendor and its services or products. In Figure 1 consumer's trust is drawn to look like a lens through which consumer sees e-vendor and/or e-services / e-products. This is only to illustrate the way consumer understands and evaluates trust issues concerning e-commerce.

Research question in this paper is: What consumer related trust issues in e-commerce there are? We have interviewed consumers to find this out and we developed framework based on the results of these interviews.

This paper is structured in a following way: first we tell about methods we used for material collecting, secondly how we analyzed the material and thirdly we go into detail about framework of trust issues in e-commerce that we made. Finally we draw this model back to theory and discuss framework and its usability in future work.

Method, material and analysis

We had two multidisciplinary projects from which we gathered material. We conducted more than 80 interviews altogether during summer 2003 and 2004. In these projects we had multidisciplinary participants from information systems, consumer studies, anthropology, health technology and rural enterprise studies. Main method we used in

interviews was semi-structured and open ended questions. Some interviewers also made field notes and kept field diaries during they stay in the field.

In the first project 2003 we used the snowball method to get interviewees. We had one meeting in each village and invited villagers to these meetings through village associations. We got contacts to these associations through local eKylve project (http://www.ekylve.fi) and its' project manager, Matti Tyynelä. In these meetings we told villagers in site what we are going to do in these villages (interviews and observation) and asked if they would want to be interviewed. Some of the villagers wanted to be interviewed and after each interview we asked if interviewee knew anybody who would like to be interviewed (names and contact information).

In the other project 2004 we found interviewees by advertising on local newspaper's website, we told about our project in seminar, send emails to possible interviewees and called to some company's customers. Any one who wanted to be part of the study should first fill out a value questionnaire that was in our website. From these answers we decided to pick up those two groups that we most likely thought would differ from each other the most: fun loving life enjoyers and security seeking people.

We made qualitative research with different methods partly due to interviewers' backgrounds and partly due to project objectives. In the first project most of the interviews were conducted with open ended questions and inspired by ethnography. So some interviewers made field notes and kept diaries. In both projects 2003 and 2004 we had regular meetings and discussions over our interviews and material we gathered. From these discussions we made some changes to our interview questions. We used discussions between project members also to get a better understanding of our material and found some general themes from our interviews. These themes we have presented in research articles.

In ethnography the aim is to study a community and employ a wide range of observational techniques (face-to-face contact, participation in community activities) (Van Maanen, 1979, in Järvinen, 2001). From these observations researcher writes field notes and field diaries as some of us did in our project during summer 2003.

Our interviews in both projects started from general discussion about interviewees' backgrounds and continued to discussion about e-commerce. We had many open-ended questions in order to give interviewees space to tell with their own words about their views on e-commerce. Our analysis consisted of looking for general concepts that interviewees used and categorizing concepts to main themes. (Kvale, 1996) We want to take into consideration that our interviewees represent only part of consumers of e-commerce.

In the next chapter we present our findings of consumer related trust issues in e-commerce in more detail.

Framework

Main elements in this framework are consumer, e-vendor and trust. We wanted to see trust from consumer's viewpoint and consumer's trust on e-vendor. From consumer's viewpoint there are many elements affecting or helping trust formation towards e-vendor. These elements are society, community, technology, third party and e-service/e-product which are in Figure 1. These elements are next discussed in detail. Arrows in Figure 1 indicates interaction between two elements, circles are main elements, pipes are mediating channels and trust is seen as practical lens (Orlikowski, 2000) that consumer sees e-vendor.

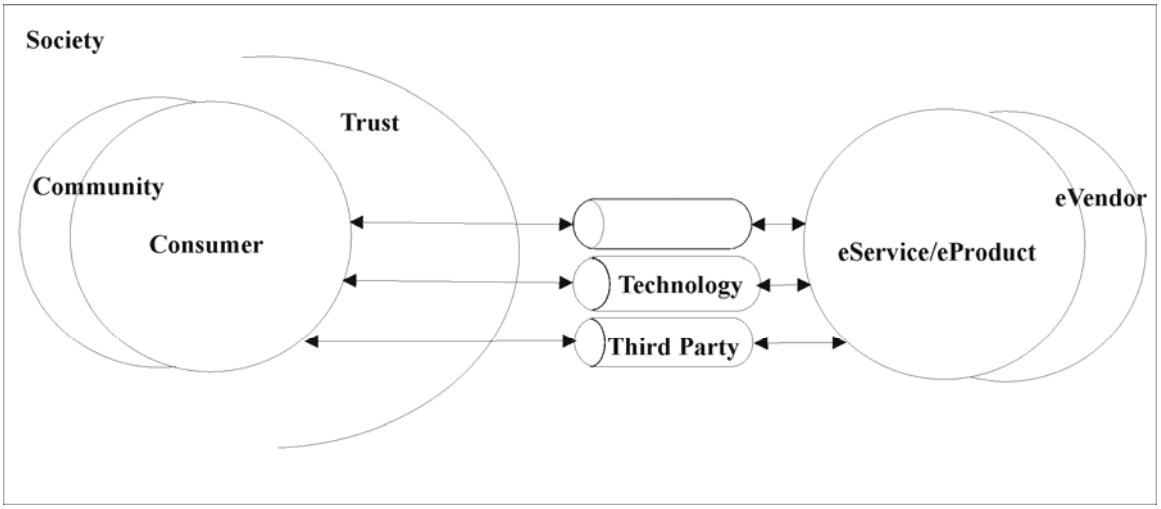

Figure 1. Framework for consumer related trust issues in e-commerce.

Consumer

The viewpoint in this framework in consumer's. Consumer is an individual who wants to use e-services or e-product for her/his own purposes (Schiffman&Kanuk, 2000). Consumer differs from customer because consumer is not a person who pays from a specific company's services (Loudon&Della Bitta, 1988). A consumer can be in many roles when consuming e-services or e-products, for example, as a citizen or as an online shopper.

Consumer may have earlier experience in using e-commerce but not necessarily. McKnight et al. (2002) concentrate in their model for the initial trust developing e.g. that the consumer sees the website for the first time. Gefen et el. (2003) see in their model that consumer needs to have a long interaction relationship with e-vendor before she/he trusts in it. Both of these models seem to think that consumer is either way. We on the contrary like to think consumer as a whole. All the past experiences, values, norms and understanding gathered so far, consumer uses all of these in developing trust towards e-vendor.

E-vendor

E-vendor is in this framework an organisation who makes e-service or e-product available for online consuming. E-vendor can have also traditional commerce like a grocery store. Consumer can interact with the e-vendor either straight without technology or then through technology. Straight contacts can be phone calls help service or visiting personally traditional store. Consumer can get information about e-vendor also from media or community members. This information then affects consumer's understanding of e-vendor's competence, benevolence and integrity. E-vendor's competence is for example delivering orders in time or keeping e-service functional at all times. (McKnight et al., 2002.)

Community

Communities have an impact on consumer. There can be many communities in consumer's everyday life, for example, relatives or work colleagues. Giddens (1984) points out in his structuration theory that social structures shape through individuals actions and vice versa. Orlikowski (1992) studied technologies in organizations and found out that communities shape technologies according to their own needs despite the original purpose of technology. There are in the Internet various virtual communities also that consumer can participate and get influenced by. The impact of a community on developing trust in e-commerce can be either positive or negative. Consumer can get help and advice in using some e-service or not to use an e-service.

Technology

E-commerce differs from traditional commerce because of the technology in use (Gefen et al., 2003). Technology is often taught to be Internet and web pages (not only email). Technology could also be mobile services or digital television. Grint and Woolgar (1997) describe technology as physical objects (cables, central units, monitors), as artifacts related to physical objects (software) or individual's ways of using technology. In this framework only the physical objects are technology, other elements such as e-service is thought to be software or the way technology is used.

Technology has the role of a mediator in this framework. Consumer interacts through technology with e-vendor. This interaction is two way interaction so e-vendor gives for example feedback to consumer and vice versa. This interaction aspect is different from models like McKnight, Choudhyry and Kacmar (2002) and also from Gefen , Karahanne and Straub (2003). In their models there is no interaction between trustor and trustee but only action from consumer to e-vendor.

E-service/e-product

E-service is in this framework something that consumer uses through technology for example e-news service and e-product is a news item that consumer gets from e-news service. E-service or e-product can be either non-physical (news) or physical (CD). Consumer evaluates the function of an e-service or the quality of an e-product. From these evaluations consumer develops trust in e-service or in e-product.

Third party

Third parties can affect consumer's trust developing in many ways. Third party can be an organization that gives certificates or gives credit for individuals (VISA). Phone companies and banks keep reference lists in their e-services that tell these organization have our trust and that these referenced organizations work with us. These reference lists consumer may take as positive marks when developing trust in e-vendor. (McKnight et al., 2002.)

Society

Surrounding society has the laws and infrastructure that consumer needs in everyday life. Consumer needs to know that e-vendor has some legal obligations and possible sanctions when necessary. The overall stability in an society is also important for consumer. (McKnight et al., 2002.)

Conclusions

The users' – or individual human beings' – interpretation is connected to their social context. For example, Orlikowski (2000) found that users in different organizations use the same IS in different ways – we can say that their interpretation of the same IS are different. Mol and Law (1994) recognized similar difference in regional context. Social context when computers and users are concerned has also been studied by Vehviläinen (1999) and Star (1995) and these studies have shown that social context is important. The latter has proved that the social aspect is related to the interpretations of phenomena and the ways of acting (also the ways of using IS).

McKnight et al.'s (2003) and Gefen et al.'s (2003) models lack the interaction in social environment and how that environment might influence e-commerce use. The living environment and social contexts are important as well as the technology used. Consumer's individual aspects will affect her/his actions in an e-commerce situation. E-vendor's social contexts, reputation and appearance of a web site are only a few of those things that affect a consumer when making trusting decisions. Consumer's trust in e-commerce is an individual, local and social matter. We think that community is an important element in consumer's life and affect in many ways to consumer. It is important to think about different communities and their affect when designing e-commerce.

E-vendors need to have competence, benevolence and integrity. Consumer needs the information of e-vendor, e-service and e-product. This information helps consumer to developed trust. Also the functioning of e-service is important that the e-service is available in all hours of the day. E-vendors need also to ensure consumer that e-products are of good quality and delivered on time.

Surrounding society and third parties have also an impact on consumer. Media is sometimes in key role affecting consumer's understanding of the security of e-commerce such as credit card numbers.

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CONSUMERS' EXPLANATIONS OF E-COMMERCE USE AND DISUSE

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Abstract

This paper focuses on consumers' explanations regarding e-commerce use and disuse from the viewpoint of the consumers' perceived risks and trust. In information systems science the consumers' side is rarely taken into account and therefore we have chosen to use some theories from consumer research. From information systems science we have taken theories of trust and from consumer research we will use the perceived risk theory.

An interesting point of view is the method used for collecting empirical data. We used a qualitative approach inspired by ethnography. We chose this method because it provides the opportunity to give space to the consumers' voices and views on e-commerce use and disuse in their daily lives. The study was carried out in villages in South Ostrobothnia, Finland.

Our target was to find explanations of consumers' for their e-commerce use and disuse which will give interesting views for e-vendors for further developing their services. Preliminary findings of the field study will be presented through consumers' feelings and thoughts related to e-commerce.

This kind of study has not yet been done in Finland in the field of information systems or in consumer research. We aim to give some guidelines when taking the consumers' viewpoint into account when developing such systems. This study will also provide information for other researchers in relating consumer, risk, trust and e-commerce in information systems and consumer research.

Keywords

Trust, consumer, e-commerce, ethnographic method, field study

INTRODUCTION

Although e-commerce is available to consumers, they do not use it as much as has been expected. There are numerous shopping opportunities on the Internet, still few consumers buy from electronic emporiums (e-shops) or use electronic services (e-services). An alleged reason is the lack of trust in electronic commerce (e-commerce) vendors. Many researchers (e.g., Jarvenpaa & Tractinsky 1997; McKnight et al. 2002; Calcanis et al. 2002; Gefen et al. 2003) have tried to define trust in the context of e-commerce and made models of trust and its elements.

A concern is that consumer perceived risks influence e-commerce disuse. How are different kinds of risks influencing consumer behavior? Mitchell (1999) says that consumer perceived risks are very powerful in predicting consumer behavior because consumers are more motivated in avoiding risks than maximizing benefits in purchase situation. It has also been said that especially on the Internet, consumer perceived risks play a very important role and perhaps consumers perceived risks are even more powerful in the context of Internet shopping than in traditional shopping (Bhatnagar et al. 2000).

E-commerce can be defined as purchases of goods, services or other financial transactions in which the interactive process is mediated by information or digital technology at both, locally separate, ends of interchange. This paper concerns especially consumers' e-commerce which is also called "B2C e-commerce" (i.e. business-to-consumer e-commerce). It involves goods, products and services but also inherently involves the two-way exchange of information between a user (i.e. a consumer) and a system (i.e. business). From this point of view B2C e-commerce can be defined as "an exchange between producers and end consumers of goods, services and explicit knowledge about goods and services (or information about consumers) for available consumption in return for the actual or potential payment of monies" (Jewels & Timbrell 2001). Consumers differ from customers; the term customer is typically used to refer to someone who purchases from a particular store or company while consumers do not necessarily buy anything (Loudon & Della Bitta 1988). A consumer is thought of here as a person who uses e-commerce for her/his personal use and where the goods are in final use by individuals (Schiffman & Kanuk 2000).

We are interested in the consumer's side of e-commerce and our research question is: What are the explanations consumers give for their e-commerce use or disuse? The research question will be solved through three goals. The first goal is to use the theory of trust and risk and investigate how trust and risk are affecting consumers' e-commerce use and disuse. The second goal is to analyze empirical data in order to find consumers' explanations on e-commerce use and disuse in the context of e-commerce. The third goal is to discuss the findings and give some theoretical and managerial implications.

We chose the qualitative approach, inspired by ethnography to find out what consumers say about their e-commerce use. In our minds it gives the possibility to give space to the consumers' point of view and it also leaves room for something new to be found. Ethnography is not a typical research method in Information Systems (IS) research (e.g., Orlikowski 1991; Suchman 1987; Karasti 2001). The empirical part of this study comes from the research project eEste in the Innovation and Development project of Electronic Business in the Epanet

Research Network. eEste has other researchers who come from the fields of IS research, Anthropology and Consumer Studies. In this study there is cooperation between IS and Consumer Studies and therefore it has a multidiscipline insight for consumers, their every day living environment and use or disuse of e-commerce. This study is important for e-vendors and will help them design better e-commerce sites for consumers and understand the consumers' side of e-commerce use and disuse reasons.

We have divided this paper into the following chapters: theories of trust and risk, methodology, results, discussion and managerial implications. Theories include theories of trust and risk related to e-commerce; in methodology we describe how we gathered empirical data. Then we give examples of consumers' explanations on their e-commerce use and disuse. Finally we discuss our results and future work. We have also written a managerial implications chapter at the end of this paper.

THEORIES OF TRUST AND RISK

Trust and risk seems to be a very black and white point of view when studying consumers' use or disuse of e-commerce. We chose these two (trust and risk) based on previous research in this field (Gefen et al. 2003; McKnight et al. 2003; Mick & Fournier 1998; Bhatnagar et al. 2000). These studies state that trust leads to consumer use of e-commerce and that consumer perceived risk leads to e-commerce disuse. These two view points are now explained in more detail.

Trust is selected for its importance in e-commerce use. The viewpoints and theories of trust have been studied extensively. (McKnight et al. 2003; Calcanis et al. 2002; Gefen et al. 2003). Trust elements for consumer trust in electronic commerce are numerous and the elements differ from consumer to consumer. For example Gefen et al. (2003) studied trust as one aspect affecting consumers' intended use of online shopping. They have a TAM- based model of trust with perceived usefulness (PU) and perceived ease of use (PEOU). They studied calculative-based trust, institution-based structural assurances, institution-based situational normality and knowledge-based familiarity, how they affected trust, PU and PEOU. They found that these elements affect consumers' intended use of online shopping. Their empirical material, however, was collected from students and that has been criticized (e.g. Legris et al. 2003). McKnight et al. have more aspects in their Web Trust model, for example overall faith in humanity, willingness to depend and trusting stance. More in-depth review of these models can be found in Ojavainio and Tiainen (2003).

The models of trust, views human beings as individuals, not as members of a social community, although Isomäki (2002) states that the most advanced view of a human being is a holistic view which also includes cultural and social aspect. In some studies the role of community and culture is taken under study. Such examples can be found among studies of IS professionals (e.g. Gregory 1983; Hofstede 1991) and computer hackers (e.g. Håpnes & Sørensen 1995). Furthermore, the users' – or individual human beings' – interpretation is connected to their social context. For example, Orlikowski (2000) found that users in different organizations use the same IS in different ways – we can say that their interpretation of the same IS are different. Mol and Law (1994) recognized similar difference in regional context (they studied the interpretations of anemia in Africa and the U.K.). Social context when

computers and users are concerned has also been studied by Vehviläinen (1999) and Star (1995) and these studies have shown that social context is important. The latter has proved that the social aspect is related to the interpretations of phenomena and the ways of acting (also the ways of using IS).

McKnight et al.'s (2003) and Gefen et al.'s (2003) models lack the social environment consumers live in and how that environment might influence e-commerce use (Ojavainio & Tiainen 2003). The living environment and social contexts are important as well as the technology used. Consumer's individual aspects will affect her/his actions in an e-commerce situation. E-vendor's social contexts, reputation and appearance of a web site are only a few of those things that affect a consumer when making trusting decisions. Consumer's trust in e-commerce is an individual, local and social matter. (Ojavainio & Tiainen 2003)

Consumer perceived risks have gained interest among researchers since the 1960s. (Mitchell 1999) Perceived risk has traditionally been divided into different kinds of dimensions (for example financial, time loss, social etc.). (e.g. Cox & Rich 1964; Mitchell 1999; Campbell & Goodstein 2001) In the context of e-commerce five different dimensions of risk can be identified: financial, physical, psychological, social and technological. (Liebermann & Stashevsky 2002)

Financial risk can be defined as a loss of money for consumers (for example credit card stealing), physical risk means that a consumer can hurt him/herself when he/she uses the product purchased (for example Internet addiction). Psychological risk means that a product purchased does not fit the consumers' self-image (for example pornographic or violent material). Social risk means that a product or service can negatively affect the ways others think of a consumer (for example chats) and technological risk means that a consumer perceives a risk towards new technology (for example web security). (Loudon et al. 1988; Salisbury et al. 2001; Liebermann et al. 2002; Forsythe & Shi 2003)

How do these perceived risks influence consumer behavior with e-commerce? Is it possible that consumer perceived risks have such a powerful impact on consumers that the perceived risks could lead to e-commerce disuse? Some evidence relating to the latter can be found. For example Mick et al. (1998) found in their research that consumers are using different kinds of strategies in order to cope with their perceived risks. One of the strategies is refusing. Refusing means that a consumer is declining the opportunity to own some sort of product or service. Miyazaki and Fernandez (2001) also found that consumer perceived risks towards Internet shopping affected purchase rates negatively. In their research Miyazaki et al. (2001) concluded that the more experience a consumer has with e-commerce the less he/she perceived risk. In contrast they also found that certain types of risks (for example privacy risk) were higher among those consumers who had more experience with online shopping than consumers with less experience. There are also other kinds of perceived risks, which have a major impact on a consumer's purchase decision. The most common are considered to be privacy risk, security risk and risk of credit card stealing, (for example, see Liebermann et al. 2002; Miyazaki et al. 2001; Prabhaker 2000).

In conclusion of the theoretical part of our study it can be said that consumer trust towards e-vendors leads to e-commerce use. In contrast, different kinds of consumer perceived risks can lead to e-commerce disuse. In the empirical part of this paper we try to find out if trust and

perceived risks are strongly affecting consumer behavior to the point that they can lead to e-commerce use or disuse in a way that the theoretical part proposes.

METHODOLOGY AND DATA COLLECTION

To be able to understand what trust or risk means to consumers we decided to ask consumers their points of view. We chose the qualitative approach inspired by ethnography for this study because we wanted to give space to individuals' talk about their e-commerce use and disuse (Myers 1997; Hine 2000). On the basis of their talk we will try to seek understanding of the reasons for individuals' e-commerce use and disuse.

Data was collected during the summer of 2003 and the sample size was 19 (ages 20-57, 6 males). All materials were collected via semi-constructed and open-ended interviews. The interview themes were trust, risk and e-commerce use or disuse. Before the actual interviews both interviewers held test interviews in order to find out if there were any discrepancies. After the test interviews we discussed our interview structures and how the interviews went. On the basis of these discussions and the test interviews we rephrased some questions and the overall structure of our interviews. There were two separate interviewers and Minna-Kristiina Ojavainio (MKO) also made field notes during and after the interviews.

All the interviews were held in the area of South Ostrobothnia in western Finland, six of the interviews were held in a village called Kitinoja, ten in Seinäjoki and three in Kauhava. All the interviews were recorded and the interview length varied from 35 minutes to two hours. Some interviews took place in the interviewees' home, while some were held at their place of work or in a village house. There were criteria that all the respondents had to meet. The most important criteria was that the respondent had to have some experience with Internet use, respondents also had to be 18 years or older.

There are many studies in which the sample of users consists of students. The use of students has been criticized because it does not provide viable results about the real use of e-commerce (Legris et al. 2003). For that reason we selected interviewees for this study among inhabitants of South Ostrobothnian villages. We chose the qualitative approach inspired by ethnography for the method because it provides the possibility to give space to the consumers' voice and enables us to see what consumers do in their every day life. In ethnography it is possible to observe the consumers in their own environment as a part of their living environment and as individuals. Ethnography is not always seen as a method but merely a lens through which human activities are viewed (Blomberg et al. 2003).

The sample consists of workers, entrepreneurs, students and the unemployed. The age of respondents varies from 20 to 57 years. They all, more or less have experience in using e-commerce. They are all possible consumers of e-commerce. Because of their age and occupation, the interviewees give a good representation of those living in these villages. Entrepreneurs are common in South Ostrobothnia and because two of the villages are part of cities office workers and students are common. South Ostrobothnia was chosen because there are many ICT development projects under going and there are many development projects in the villages. Interest in this study comes from the trust and risk elements in their daily lives and e-commerce use or disuse.

RESULTS

Next we will give some examples of e-commerce use and disuse. This chapter is divided into two subsections: explanations of trust and use and explanations of risk and disuse. In each subsection there are parts of the interviews transcribed from tapes and the interpretation from trust or risk viewpoints related to that specific part.

Explanations on Trust and Use

Some interviewees used e-commerce to find specific information. They used e-commerce from well known e-vendors that they were familiar with. Some interviewees also asked their work colleagues about interesting e-commerce sites to visit. Most interviewees were not, in their own opinion, experts in ICT but three interviewees acted and sounded like experts. So all interviewees had some experience in using e-commerce.

Interviews showed us that consumers sometimes use e-commerce in a very innovative way. If an e-vendor closes down some options on their site, consumers can still find what they are looking for. For example: a woman, 43, entrepreneur, who regularly uses flea markets to find out information on work tools (carpenter) and about a family hobby: *It is not possible to see the price but with this search engine you can see all the options, then you can narrow down the range and then you can find out what there is left and then you know the price*. She looks for specific tools within a certain price range and if an e-vendor does not tell the price outright, she lowers her price little by little until she finds out the price. She seems to trust e-vendors and other flea market users to tell the right prices and sell the right products. The actual selling takes place between the two individuals and you have to be a registered consumer of that flea market to find out contact information about sellers. This consumer does not regard herself as an ICT expert.

Trust can also be seen from the e-vendors' point of view and one consumer told an interesting story. Woman, 45, an entrepreneur, answered the following question: When did you start using bank connection?: *Well, it was when I went to the local bank and asked for bank connection so I could access my account from home. They told me that I couldn't have it because I would mess up their bank accounts, it was in the late eighties, I think.* Bank connection means here a direct connection to a bank and for bank connection you need also a special program which bank provides and installs for you.

This consumer trusted the e-vendor to give her a working bank connection but instead she was told at the local bank office that she could not get one because the bank personnel (possible e-vendor in this case) did not seem to trust her. Actually they probably had not even heard of bank connections and therefore could not give her a connection. After this incident she went to the local bank's regional office and asked for a bank connection, and she got one. In this case bank connections were unfamiliar to the bank employees and the result was not selling a connection.

Explanations of Risk and Disuse

In this chapter we are going to report some consumers' explanations regarding e-commerce disuse which are caused by perceived risks. In the theoretical part of our study we assumed that consumer perceived risks can lead to e-commerce disuse.

Woman, 50, a farmer and student, telling why she doesn't use her e-bank any more: *Well, I don't handle the bills any more, my husband does it. I still have those numbers to access my e-bank but when I tried to use it for the first time it went crazy and I didn't get any further than he beginning. So, that's why I don't use it any more.*

This woman has low experience with e-commerce use and that is why she is afraid of using it. She has access to an e-bank but because of one unhappy experience she perceives so much risk concerning her own abilities with e-service usage she would rather let her husband pay the bills and make other transactions. This woman perceives technological risk and that led to e-commerce disuse.

There are also different kinds of risks, which can lead to e-commerce disuse. For example, a man, 57, unemployed, talked about the reasons why he does not use e-shops: *Well, I could buy products from e-shops, but I don't have enough money to do so and actually I don't have needs which I couldn't fulfill in real stores.*

This man mentioned that he has used the Internet and e-services regularly since 1997 and he considers himself as an intermediate user of such services. He is quite well aware of different kinds of risk and his level of trust is quite high. Actually, the only reason why he is not using e-services is that he perceives financial risk and also, at least at some level, social risk. During his interview he emphasized several times that he is not willing to buy via the Internet because he does not want people to consider him lazy.

Also, a man, 20, a student, told us why he does not buy from e-shops: *Their (e-shops) delivery system doesn't work properly and I don't like the idea of buying something without touching it or comparing it with other similar products.*

This young man perceives one of the most common risks concerning e-commerce use (see Liebermann et al. 2002). He emphasizes that he would like to see or touch a product before buying it. In this case the respondent perceived this risk so strongly that it led to e-commerce disuse. What is important here is that this man has a very high experience level using e-services. During the interview it was noticed that this man recognized and perceived many risks and they strongly diminished his e-commerce usage.

DISCUSSION

Our research question at the beginning was: What explanations do consumers give for their e-commerce use or disuse? We found out that explanations vary from consumer to consumer. Every consumer has explanations related to her/his own life. That was also a predisposition in the integrated trust model (Ojavainio & Tiainen 2003).

Interviewees received some tips about various web sites from their friends, family or colleagues. Internet usage also varied from very active to not so active users and that depended somewhat on the interviewees' opportunities to use the Internet in their daily lives. Our interviewees used at least one e-commerce service in everyday life. Many use an Internet

banking service and many use email. In banking services they use both a direct connection to a bank and Internet banks.

Explanations were related to our predispositions of trust and risk but we also found one new aspect of trust and risk: The more a consumer knows about ICT the less he/she trusts e-commerce and e-vendors. This is something that needs further research and maybe some refinements. Interviews also proved that in some cases a consumer may perceive risk so strongly that it leads to e-commerce disuse. We also noticed that although consumers do use e-commerce they do not place much trust in it. So as a conclusion we noticed that the more you know the less you trust.

It seems that some perceived risks have a stronger effect than others on consumer behavior. For example, lack of physical contact related to the product purchased seems to lead to e-commerce disuse while some other perceived risks do not. Mick et al. (1998) ended up with the same kind of result. They said that some consumers are refusing to own some specific technological product when risks perceived are too high. Also Forsythe et al. (2003) concluded that there are some sorts of consumer perceived risks, which lead to e-commerce disuse. However, none of these research studies specify which perceived risks lead to e-commerce disuse. Therefore, it seems to be worth studying consumer perceived risks in order to find out specific risk components, which lead to e-commerce disuse.

Interviews will continue during 2004 with previously interviewed individuals. We will continue to deepen our understanding of this matter with future interviews and observations in villages.

MANAGERIAL IMPLICATIONS

In this paper we found that trust towards an e-vendor will lead, at least to some extent, to e-commerce use. We also found that consumers' perceived risks may lead to e-commerce disuse. These results showed us there are still many barriers to strike down before e-commerce will be fully utilized by consumers. The question that arises here is what e-vendors can do to maximize consumers' trust and minimize perceived risks toward e-commerce? Some sort of proposition can be given. Firstly, e-vendors have to understand the role of trust and perceived risks. When trust is high, e-commerce is used and when risks are high consumers seem to disuse e-commerce. But how can trust be maximized and risks minimized? One piece of concrete advice is to offer consumers something that both increases trust and decreases risks (for example free trials, warranties etc.). It also seems that information plays quite an important role in building trust and minimizing risks, but e-vendors have to understand that consumers are also interested in information concerning the e-vendor itself, not only the product. So e-vendors have to offer as much information as possible. When consumers feel that e-vendors are open to them, they can trust them more.

There are also other points e-vendors should consider. For example the quality of products or services offered should not vary. When consumers know what they are going to get they can trust an e-vendor more. Also delivery of products purchased is something that every e-vendor should consider. Consumers want to know when and how they are going to get the products. So again, information is what counts. E-vendors can also give alternatives in the way products

are delivered so consumers can choose the way that best fulfils their needs. Also the mode of payment is something that interests consumers. Many of the interviewees said that they do not want to use a credit card when buying products or services from e-shops. So if possible e-vendors should think of some alternatives in the mode of payment.

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Gendered Rhetoric of ICT Use

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Abstract: *Information and Communication Technology (ICT), as technology in general are thought to be masculine. We study how individuals, female and male, speak about their ICT use in every day life. We gathered empirical material by interviewing and observing interviewees in their every day life. Our research question is: How does the description of ICT use produce gendered computer identity? This we study by a case of two families, analysing how they talk about their ICT use. This study includes several aspects which are non-typical in IS studies: there are few IS studies of individuals' everyday use of ICT and also gender studies are uncommon. Furthermore, the method we chose, ethnography, is not typical, despite there exist some ethnographical IS studies.*

Our research focuses in gender aspects of ICT use. Our interviewees use ICT to handle their every day life by using three themes: 1) rhetoric of ICT uses in general; 2) rhetoric of price and technical information; and 3) rhetoric of help. In all cases men focus more on the devices and technological features, whereas women focus more on people.

Keywords*: ICT use, Gender, Rhetoric, Ethnography.*

1. Introduction

We want to contribute to the Information System (IS) studies with our empirical field study of ethnography combined with the view of feminist approach. To more practical way this paper gives an insight of the ways individuals view ICT world and at the same time how their needs could be fulfilled in respect of better services. ICT comes from words "Information and Communication Technology"; in practice, we mean with "ICT use" the use of computers, the Internet and mobile phones.

The discussion of the information society includes one way to present the ICT use. This way is technology centered, for example, the number of computer and Internet accesses are seen important (in several areas: in administrative plans (see, e.g., Bangemann 1994), in everyday talk as in newspapers (see, e.g., Aro 2000, Vehviläinen 2002), and in research (see, e.g., Castells & Himanen 2001)). The way that is used in the information society discussion, is the one that is created by men; almost all actors who participated to the commissions, which defined the future information society, were men, and so are the experts who are presented in media (news and reports about information society). However, there exists also another way to describe the ICT use; we found this way in women's description of their ICT use. The gendered rhetoric was not the starting point of our project, but it was an issue that arose from the empirical material and so we had to deal with it.

The objective of our study is discourse. Often we are asked if the described situation is the same as it happened in reality.. This kind of question includes an underlying assumption of objective reality (based on Vehviläinen 1994, p. 156). Instead, we view that a socially organized reality is an ongoing practical matter of accomplishing presence by and among subjects (Vehviläinen 1997, based on Smith 1987, p. 126). The same situation in real life can be described in several ways, as, for example, the case of ability and disability which is presented in Moser (2000). We view that the same reality is described in several ways.

Someone's way to describe his/her own ICT use is related to the describer's computer identity. Computer identity means individual's own interpretation of his/her ICT skills and his/her relation to ICT, which is based on his/her experiences in everyday life. However computer identity is not just based on experiences but it is constructed in relation to the narrations, which are presented by other people, "ready stories" which exists in the culture, and the language, which includes the ways to analyze and present experiences and events. (Talja 2003.) We study how individuals speak about their ICT use. As stated by Talja (2003) these narrations include 1) something about others' descriptions about their ICT use, 2) something about relevant ready stories, as the cultural norms of gender and technology, and 3) the possibilities and constrains of the language.

Our study concerns gender and technology. The issue could be studied by using statistics – for example, how often or how many hours women and men respectively use

ICT – instead we chose to study women's and men's ICT use as a cultural issue. The cultural point of gender is seen in the connection which technology and masculinity have on a symbolic level (Wajcman 1991). The thinking of ICT is not gender neutral; designing and managing ICT is viewed as a male issue, whereas the use of ICT is somehow not so masculine. The users of computers in Finland are as often women as men (Lehto & Sutela 1999) and also women find it a pleasure to use new ICT (Korvajärvi 2004). Nevertheless, there exists an area of computer use that is characterised as a male area. This area comprises new systems made for use in leisure time, as the example of the first digital city in the Netherlands (that is an Internet web site) shows: it was designed by male hackers and they portray of masculine, highly competent and technologically interested users (Rommes 2000).

According to Merete Lie (1995), exploring the symbolic connection between masculinity and technology does not imply that all men are equally attached to technology, or that one can prove empirically that a majority of them are. Lie (1995) presents a concept of masculinity as an abstract frame of reference; a kind of standard one refers to in the articulation of one's own as well as other people's gender. The point is that the cultural ideals of masculinity need not correspond to the actual personalities of all men - or not even of the majority of men. The hegemonic model is more often a norm, that ordinary men are not expected to fulfill, but to support as an ideal. Symbols may not be reflections of the capacities of "real" men, but more probably images of hegemonic masculinity. Gendered symbols and behavior are not stable. They are not just presented but they are continuously in the making. (Lie, 1995.) Lie describes masculinity as an abstract frame of reference, which comes near to rhetoric, to the way of talking and depicting the issue. The connection is seen in Kuosa's study on system professionals' talk about ICT expertise; they present young men skillful and the elder and the women as their opposite (Kuosa 2000).

We view gender as a process, which is continuously under construction. One part of the process is discussion in which the existing gendered norms can be confirmed or challenged. The existing view of technology is masculine. We focus on the gendered rhetoric on technology with the research question: *How does the description of ICT use produce gendered computer identity?*

We have collected empirical material from a project of electronic services (e-Services) use in a Finnish village. We use the Finnish case to study gendered rhetoric of ICT use, since Finland is often thought as pioneer both in gender equality and in the use of ICT (although some studies refute gender equality, e.g. Kolehmainen 1999; Rantalaiho & Heiskanen 1997). We do not study individuals but the members of families, since the gendered norms are presented clear in family context (see, e.g., Facer et al. 2003; Nieminen-Sundell 2003; Oksman 2003). We describe our empirical case and methodological choices in Section 2.

In Section 3 we describe our findings from interviews. We present three topics. First, rhetoric of ICT uses in general; women describe their use with detailed examples. Second, rhetoric of price and technical information; men focus on detail information of devices. Third, rhetoric of help; women describe who have helped them with ICT,

instead, men describe that they have learned to use ICT by themselves. Finally, in Section 4, we discuss about the implications of our findings.

2. The Case

Our empirical case includes the members of two families. This case belongs to a large project set, which we describe in Section 2.1.

The methodology of this study is ethnography. We chose ethnographic method to this study because we want to understand the individuals in their own social and cultural context (Myers, 2003; Hine, 2000). According to Hine (2000) and Miller and Slater (2000), the most studies on the Internet focus on future visions of Internet potential effects, but there are few empirical studies on the Internet use and practices. Ethnography is a useful method in studying how technology related practices (as the everyday use of the Internet) are shaped (Escobar 1994, p. 216; Hine 2000; Miller & Slater 2000).

Next we first describe our large project set and its fieldwork, which is the background to the study of gendered rhetoric. Then we describe the empirical case of this study.

2.1. Practical Background

This study about gendered rhetoric is a part of bigger project about ICT and electronic services use in a local community. We decided that a rural village is convenient both of its size and its coherence. We chose three villages in the South Ostrobothnia, Central Finland, for the local communities under study. Matti Tyynelä, University of Vaasa, guided us in choosing the villages, since he knows the area very well. He managed a project which aim was to computerize the South Ostrobothnian countryside (see, http://www.ekylve.fi/).

We study South Ostrobothnian villagers both as a part of our (researchers') own culture and as a foreign culture. The Finnish society is the shared cultural background between us (the researchers), and the villagers. We share the same societal environment, its values, norms, practices and discussions (e.g. about the information society). Furthermore, we share the ICT artifacts, which are similar globally (e.g. mobile phones are quite similar world wide). On the other hand, the culture of South Ostrobothnian villages is unfamiliar to us as we come from other parts of Finland. South Ostrobothnia differs from other Finnish counties by the great number of entrepreneurs and a small number of foreigners. Furthermore, we researchers are city dwellers and so the close village community differs from our living environments.

Our project of e-services in a local community started in spring 2003 and is still continuing. The project is multidisciplinary. As we view (based on Haraway 1997) that the researcher influence on the study we present the members and their backgrounds:

- Project leader, research professor, Ph.D, Tarja Tiainen, background in information system science.
- Researcher, M.Sc. Minna-Kristiina Ojavainio, background in information system science, studying consumers' trust on e-commerce.
- Researcher, M.Sc. Tero Saarenpää, background in information system science, studying e-vendors' views on consumers.
- Researcher, M.Sc. Kyösti Pennanen, background in consumer studies, studying e-commerce consumers' strategies on mastering risks.
- Student, Emma-Reetta Koivunen, background in social and cultural anthropology, studying the use of ICT in local communities.

The fieldwork to which this paper is based was conducted in summer 2003 (from May to August). Fieldwork as well as the whole project continues during summer 2004. Pennanen and Saarenpää collected interview materials. Ojavainio's and Koivunens' fieldwork was ethnographical. Besides of interviewing they collected information also in other ways as taking photos, observing activities and writing field diaries. As an anthropologist, Koivunen was interested in the local community and its history; she dealt with ICT use as a part of acting in the local community. She read local newspapers and web-sites, and visited homes and public places (as in a school and net café) and participated to community activities (as computer recycling and religious summer fete). Aspects of local community were also part of her interviews. Ojavainio is an ICT expert, who has lived for 15 years in South Ostrobothnia (and still feeling as an outsider). She has noticed the invisibility of female actors and so she wanted to give some space for women with her study.

There are active village associations in Finnish countryside, and so is in our target villages, too. The chosen villages have active village associations, which work for keeping the village as a good living environment with lots of activities, also promoting for using ICT in the local communities. Each association chooses a chairman, which is called village chief in everyday speech in the county. We started our fieldwork by contacting the village chiefs and they opened for us the access to the village's activities. For this paper we use a minor part of our empirical material, but the chosen individuals represent the gendered rhetoric of the whole empirical material. We chose the interviews of members of two families, since in these cases the gender differences are especially clear. According to our interpretations the rest of our empirical material does not include decided opposite examples to those we present in this paper.

2.2. The Families in their Cultural Context

Since we study gendered talk as a cultural issue, we must not ignore communities to which the interviewees belong. The ones that we look to in this paper are the village,

South Ostrobothnia, and Finland, as is presented in Figure 1[1]. Finland is the largest unit here. In this study the significant issues of Finland are that it is presented as a pioneer in gender equality (Korvajärvi 1998) and in ICT use (Castells and Himanen 2001). South Ostrobothnia is a district in Western Finland about 350 km north from Helsinki.

South Ostrobothnia differs from the general picture of Finland. It is thought to be masculine or even patriarchal and also very entrepreneur friendly. These are the overall predispositions we researchers had before we started the interviews. From these aspects we go to the individuals' everyday living environment, family and village. In this paper we will use the word community in that meaning. When speaking of these small-scale communities we think that individuals affect on their community and vice versa, as shown in Giddens structuration theory (Giddens 1984) and Orlikowski's study of ICT use (Orlikowski 1992).

The village where interviewees live is a village of 400 inhabitants in South Ostrobothnia. The village is in some ways traditional and in other ways modern. Most of the villagers are from families that have lived in the village for generations, thus many villagers are related to each other. Religion has been, and still is, one of the defining aspects of the village life. The village is quite vital; there is a school, shop, bank and church in the village.

We interviewed the members of village chief's family. Besides of them we interviewed the members of another family; they are known as active and innovative ICT users. Both families have a long history in the village. One expression of the patriachality of South Ostrobothnia is that both families live in father's ancestors' land.

Next we introduce these families and their members. Family 1 includes the Village Chief[2] and his Wife, Chief's Brother and his Wife, and their children who we did not interview: Village Chief and Chief's Wife have two daughters (aged 9 and 13); Chief's Brother and Brother's Wife have four daughters (aged from 2 to 13). Village Chief and Chief's Brother have their own houses next to each other and their lives intertwine in many ways. Children have mutual hobbies and both children and adults visit each other very freely not phoning beforehand and often even without knocking on the door before entering.

Family 2 includes a grandmother and grandfather, father, Mother and Son. They all live in the family farm. From this family the father does not use ICT and was not interviewed, but we interviewed Mother and their 20-year old Son. Both Mother and Son use ICT fluently in many ways, but they are the only ones using ICT in the family.

[1] Among other communities which affect the ways interviewees think and talk about ICT are for example work communities (for example, Garsten 2001, Gregory 1983).

[2] Since in this paper we deal our interviewees through their families, we chose for them pseudonyms that reflect the family relations. In Family 2 the relations are obvious, Mother and Son. Instead in Family 1 they are more controversial, the relations are described through men. This was a conscious decision since in this village, as is common in South Ostrobothnia, men are more actively visible in public life. The pseudonyms for interviewees are written with a capital, and are thus separated from not interviewed family members.

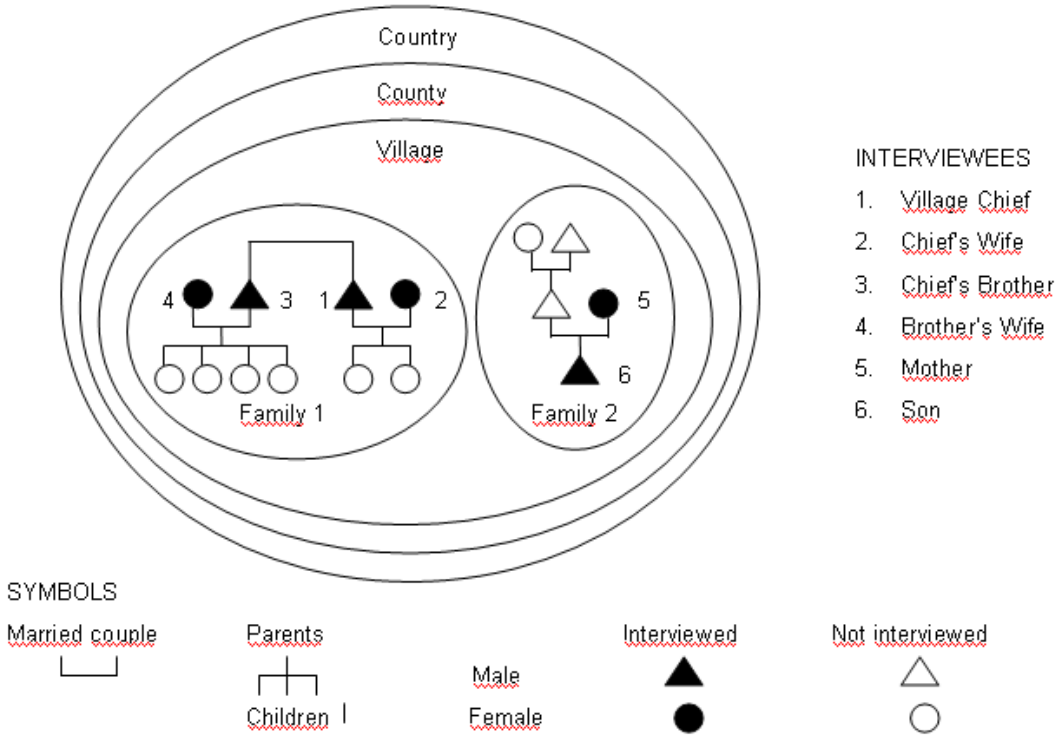

Figure 1. *The different social communities to which the interviewees belong*

In May 2003 we organized a meeting in the village. We introduced ourselves and our project to the villagers and they told about their experiences and interests towards e-commerce. In that meeting we met many of our interviewees-to-be, and through them we found other ones by using snowball method.

Koivunen and Ojavainio interviewed Chief's Brother and Brother's Wife at the same time. The interviews took place at their home, which is one of the oldest houses in the village, where Chief's Brother's family has lived for generations. Koivunen interviewed Chief's Brother in the kitchen, which is the first room when coming in to the house. During the interview the family daughters were coming and going through the kitchen. Also Chief's Wife popped into the kitchen for a moment. Ojavainio interviewed Brother's Wife in the living room and family's youngest daughter was present until older sisters came back from their hobbies and took her upstairs to watch TV.

Also the interviews of Village Chief and Chief's Wife were done simultaneously at their home. They live in a rather new house (only 10 years old), built and designed by Village Chief (he is an architect). The house is built right next to Chief's Brother's house. Koivunen interviewed Village Chief in their kitchen, while Ojavainio and Chief's Wife were sitting outside in the terrace in warm summer air with an effect of

thunderstorm about to come over us but eventually went around. Family's younger daughter was popping in from time to time and also served us some lemonade.

The interviews of Family 2 were not done simultaneously. Koivunen interviewed Son together with another researcher, Kyösti Pennanen at the family farm. The farm is quite old, and related in many ways to the area's history. Son is enthusiastic about computers, and there were many computers and other ICT equipments in the house, both those in use as well as older ones. Ojavainio interviewed Mother at her workplace, her second home, as Mother called it. Mother is an active user of Nokia Communicator and a GPS system because she is on the move around Finland doing consultants' and therapist's work and she uses GPS[3] to be able to find the routes to various places she goes.

Ojavainio interviewed the women and Koivunen interviewed the men. After the interviews both Ojavainio and Koivunen wrote field diaries and then later transcribed the interview tapes. Ojavainio and Koivunen separately looked for main themes that came up from the transcribed text. From the main themes we then discussed together. After the discussion we read through again our transcribed texts and looked for examples of the main themes. We also looked for sub themes under the main themes. Afterwards we discussed again about those cases which did not fit to any main theme. These few exceptions are discussed later on in Section 3. Drawing of Figure 1 cleared to us that the interviewees' different social communities have to be dealt with in this paper quite thoroughly.

3. The Results

We found three main themes how the interviewees talk about their ICT use. These are three elements by which the interviewees describe their computer identity. In Subsection 3.1 there is general talk of computers and Internet that the interviewees talked about. The general talk includes the way the interviewees present their ICT use. This includes the interviewees' estimation which things should be presented in describing ICT use. The other way to talk about ICT use is described in Subsection 3.2. It is technology centered talk. This was mainly the way men talked about computers. In Subsection 3.3 we introduce the way interviewees talk about everyday practices within ICT. This includes how the interviewees' get help when having problems with computers and the Internet.

3.1. Rhetoric of the ICT Use in General

General rhetoric of ICT use is mostly talk about interviewee's use of the Internet and its services. They describe what services they use and how these services function. This comes partly also from how we asked about their use and what was our context (e-Services). Although we used open-ended questions, the topics were similar from one

[3] GPS: Global Positioning System

interviewer to another. We noticed that men speak more often of the wide picture of ICT and its benefits when women mention the actual use and actions. Women also give more examples of their use than men. For example, Brother's Wife uses ICT for specific needs mostly. She seeks for information about work related things or other specific information. She has played some card games but not much.

> We have had trailer now for two summers so caravan related things I've sought from there or flee market we've sought for some machine and then sometimes caravan supplies or something like that. (Brother's Wife)4

Both families use banking services in the Internet. In Family 1 Village Chief and Chief's Brother use them mostly, whereas in Family 2 Mother uses them mostly, since the father of Family 2 does not use ICT. Both Village Chief and Chief's Brother use ICT in an innovative way in their work and at spare time. Chief's Brother gives some examples of his using of ICT:

> Yeah, banking services and then I do accounting and then these farming programs I use and then these word processing and then Internet regularly. (Chief's Brother)5

Later he gives more examples of what services he uses in the Web.

Chief's Wife and Brother's Wife use ICT mostly at their leisure time and usually for specific needs. The children in Family 1 use ICT many ways for playing and surfing around Internet. ICT has a big role in Village Chief's and Chief's Brother's lives but only a minor role in Chief's Wife's and Brother's Wife's lives.

In Family 2, ICT has a big role in Mother's and Son's everyday lives. Mother, for example, takes her Nokia Communicator almost everywhere with her and uses it for emailing as well as for telephoning and text messaging. She uses her table computer for writing and searching information for private and professional needs. Son described that he uses computer for everything. He participates actively to different discussion forums, maintains some web sites and, like Mother, when he is away from home he uses the Internet through GPRS.

3.2. Rhetoric of the Price and Technical Information

This subsection describes how the interviewees talked about technical matters concerning computers and the Internet. Technical and price related talk was quite common in male talk and almost non-existing in female talk in our interview material. This was one main difference in the ways men and women talk of computers and the Internet.

[4] asuntovaunu on nyt ollu meillä jo toista kesää, karavaanariin liittyviä asioita oon sieltä haettu tai sitte keltases pörssis haettu joskus on jotaki konetta ja sitte taas joskus asuntovaunuun liittyviä tarvikkeita tai tällasta

[5] Joo, pankkipalveluita ja sitten mää teen kirjanpitoa ja sitten näitä maatalousohjelmia mä käytän ja sitten näitä tekstinkäsittelyohjelmia ja sitten internettiä säännöllisesti.

A typical example of the technical and price centered talk can be taken from men's description of their computer history. As when asked from Son how long they had had computer, he answers:

> Well it was then when 2266 cost thirty tons of old money. (Son)7

Similarly Village Chief tells of the time when his company purchased one of their first computers:

> Then was a bigger model than that, such that printed already to such small paper roll those prints that standard it was you know in the beginning and then we did in year eighty eight we bought then first hp-micro, hp 286. (Village Chief)8

Women talk about what they do with the computer and what they need it for. Technical matters did not come so often than they did with men. When similar kind of question was asked from Mother - when did you get your first banking connection?[9] - she answered:

> Well, it was then when I went to [local] bank and asked for and they told me that I could not have one because then all the other bank accounts in the bank could go to a mess. (Mother)10

Mother did not give any technical information or price; instead she referred to how people reacted to her request. She also told that she needed that bank connection to pay bills from home and sought for an answer for that specific need.

But probably it came from that need that cause I spend long day at work always and I did not have the possibility to go to that bank. Physically go. And so came the need to handle things from home and also that I could move money from one account to another and that kind of thing connects to it. To that need. (Mother)[11]

3.3. Rhetoric of Help

The third theme which the interviewees dealt with in their descriptions of their ICT use, concerns the community around their ICT use. This focuses on the other people with

[6] We believe that Son refers to the computer 286.
[7] No se oli sillon ku kaks-kaks-kutonen makso kolkyt tonnia vanhaa rahaa
[8] sitten oli siitä vähän niinkun isompi malli, sellainen joka tulosti niinkun jo sellaselle pienelle rullapaperille niitä tulosteita että sen tasosta se oli niinkun aluksi ja sitten kyllä me kahdeksankytä kahdeksan vuonna ostettiin sitten ensimmäinen hp-mikro, hp:n 286
[9] Bank connection means here a direct connection to a bank. For using the bank connection system you need also a special program which bank provides and installs for you. This happened before Internet time and the bank personnel probably had not even heard of bank connections and therefore could not give her a connection. After this incident she went to the local bank's regional office and asked for a bank connection, and she got one.
[10] niin kauan että kun mä menin [paikalliseen] pankkiin ehdottamaan et jos mä hankkisin tällasen niin ne sano siellä et ei se taida oikein onnistua että jos se sekottaa heidän tilit.
[11] Mutta varmaan se siitä tarpeesta syntyi että mä päivän pitkän aina töissä ei mul ollu mahdollisuutta käydä siellä pankissa. Fyysisesti käydä. Ja sit tuli tarve hoitaa asiat kotoa käsin ja sit myös se et pystyy niinku liikuttelemaan tilien välillä rahoja ja tämän tyyppisiä asioita niin siihen se liitty. Siihen tarpeeseen.

whom they use ICT and discusses about it. Mostly the interviewees told from whom they got help and how they manage the problematic situation, so we named this theme "Rhetoric of Help".

Chief's Wife uses ICT in her working place because her work requires it for reporting; at home she uses it mostly to seek information. According to her own saying she is not very interested or very skillful user. She tells that when she has problems she asks help from Village Chief or their daughters. Brother's Wife gets also help for ICT problems from her husband (i.e. Chief's Brother) and their eldest daughter. Unlike the two other women, Mother cannot get help from her husband, since he does not use ICT at all. She does get help from her adult child (i.e. Son). Besides that Mother has special way to get help: She has several service agreements with different persons and when something needs to be fixed or updated either she calls for them or their call her to a reminder.

> And then if I have a problem [with communicator] somewhere me myself in Helsinki and I don't get some part to function then I have the awareness that I can call him [service provider]. For example. And then I have also agreement that he keeps my machine on time and in function and so I do so. Ain't that great? (Mother)12

Contrary, the men told that they have learned to use computers mostly by themselves. Village Chief has learned to use ICT while he was studying, but afterwards he has kept his knowledge up-to-date by himself. We asked the interviewees if someone has taught them to use computers or if they have learned it by themselves. Son replies to the question:

> Totally by myself. I have been in one course, one course sometime about computers, but just so ridiculous some --- I had to teach him [the teacher] to use the machine he couldn't even copy in DOS, ridiculous, I left [the course]. (Son)13

4. Discussion

In this paper we focused on gendered rhetoric of describing ICT use in everyday life. The rhetoric who an individual describes her/his own ICT use is connected to the describer's computer identity. Computer identity is constructed in relation to the narrations, which are presented by other people, "ready stories" which exists in the culture, and the language, which includes the ways to analyze and present experiences and events (Talja 2003). Analyzing individuals' descriptions we encounter cultural stories of gender roles, as the symbolic connection between masculinity and technology, which is earlier described by Wajcman (1991) and Lie (1995), for example. The interviewees share the symbolic view of women and men, although they describe some variety among women and also among men, as Lie (1995) described.

[12] Ja sitte jos mulla on joku ongelma jossakin mä oon vaikka helsingissä ja mä en saakaan jotain kohtaa toimimaan niin mulla se tietoisuus et mä voin soittaa sille. Esimerkiksi. Ja sit mul on myös sopimus että hän pitää mun koneen ajan tasalla ja kunnossa ja sit mä käytän niin. Eiks oo hyvin?

[13] Täysin ite. Mä oon käynny yhen, yhen kurssin joskus tietokoneista, mutta vaan niin naurettavaa joku --- mä sain opettaa ite sitä [opettajaa] käyttämään konetta ei se osannu ees käyttää dossissa kopiointia, naurettavaa, lähin pois [kurssilta]

In the interviews men often talk very widely about ICT and its benefits when women talk about their specific needs and actions in use of ICT. Both genders do use ICT in their everyday lives. Our interviewees used ICT to handle their everyday lives and they used ICT for specific needs mostly. What we expected to find out was that interviewees would use ICT for fun, to entertain, but that did not come up that much except for Son's past playing activities. We will continue to analyze our material and seek for more understanding from individuals' ICT use, especially how gender affects on ICT use.

In the analysis of interviews, we found three themes about the difference between female and male talk of ICT use. First, rhetoric of ICT uses in general; women describe their use with detailed examples whereas men tell about using in a general level. Second, rhetoric of price and technical information; men focus on detail information of devices. The both above show the gender difference in ICT talk: women focus on ICT use in their everyday tasks and men focus on the devices.

Third, rhetoric of help; women describe who have helped them with ICT, instead, men describe that they have learned to use ICT by themselves. Women tell that in their ICT related problems they have got help from men (e.g., their husbands) and from young women (e.g., their daughters). This discussion describes the men and the youth as competent in ICT, and on the other hand, the women as unskillful. Similar way to talk is described in Kuosa's study of ICT professionals' way to talk (Kuosa 2000).

The female interviewees often referred to others when describing their own use of ICT. This came out in the talk of help and also in general talk of ICT use. Women referred how it would be good for the children to be able to be a true citizen in the future information society. Although one of the interviewed women said that she is an active user of ICT and inside the future information society, she talked about machines and technical matters as something that was not hers. This again produces gendered computer identities and minimizes the space in computer and Internet use for women.

The rhetoric of ICT use is remarkable as it is connected to the discussion of the ICT expertise and to the shaping of the expertise. The way of talking is one thing that effects on the individual's possibilities and freedom to act in a certain situation (i.e. individual's action space). The talk of ICT expertise is not gender neutral, as the description of technical details is valued higher than the description of ICT in everyday practices. (Tiainen 2004.) Interviewees' discussion of the ICT use give different kind of action space to women and men; to youth and middle-aged.

Although in Finnish public discussion it is now obvious that computers and Internet are not solely male, designers still seem to think so despite that women use computers and the Internet in many ways. They use them because of various needs they need to fulfill. Women are not so keen on technical details but they want that their computers and Internet work properly anyway. So when women ask for help inside and outside their families, it gives space to discuss and share knowledge inside the families as well as it gives for various computer and Internet experts work possibilities. We believe that through this sharing computers and Internet become more "in" in the families and in that way computers and Internet may get more wide use.

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Articulating ICT Use Narratives in Everyday Life

A

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INTRODUCTION

The most common definition of the information society lays emphasis upon spectacular technological innovation and the transformative effects of new information and communication technologies. The key idea is that breakthroughs in information processing, storage, and transmission have led to the application of information technology in virtually all, public and private, sectors of society (Webster, 1995). By the 1990s, to admire and indeed enthuse over new ICTs had become highly fashionable and popular. Such technological enthusiasm has become so pervasive that it has seeped not only into political and policy discourses, but also into the whole spectrum of the media and fora of public communication (Preston, 2001). In addition, discourses of the information society are often dominated and shaped by male commentators (e.g., Castells, 2000; Gates, 1995; Kelly, 1999; Negroponte, 1995). For example, when compiling a collection of the dominant players of international information-society discourse, Cawley and Trench (2004) were hard-pressed to find female commentators, succeeding only in finding 3 out of a total of 18 critics.[1]

We argue that the focus on the artefact, and thus technological celebration, takes precedence over the largely ignored field of technological uses and consumption issues. Hence, we present a study that analyses the individual user experiences to challenge the stereotypical user traditions represented by the information-society discourse. We wish to present a counternarrative that shifts the emphasis from technical expertise, and technological and transformative benefits of artefacts to more individual-user-focused narratives.

As a result, this brought about a dual-narrative process through which the respondents described their experiences. We found that when people described their uses, consumption patterns, and domestication[2] experiences of ICTs, they tended to do so by employing contrasting frames of reference. These frames of reference we have termed the objective lens (or narratives) and subjective lens (or narratives). Through what we term objective narratives, we found that some respondents would describe their use through official and technical frames of reference. For example, they employed primarily dominant information-society jargon to frame how they made sense of technologies and their use experiences. Through subjective narratives, we found that respondents would describe their use and experiences from primarily a personal perspective to explain how the technology fitted their lives, the role it played in their everyday routines and habits, and the associated meaning and significance of the artefact.

While these contrasting narratives are not mutually exclusive or contradictory, it became clear from the interviews that a pattern of use narratives was emerging. We found that such narratives slightly reinforced traditional gender roles in which men tend to talk about technologies in highly technical terms of reference, while women portray themselves as tech-

nologically helpless or ignorant (Gill & Grint, 1995; Gray, 1992; Lie, 1995). Although we did not look for or find stable gender categories, the emergent gender narratives seem to renew the existing gender roles that link masculinity and technology (Vehviläinen, 2002).

With the development of computer technologies, we have witnessed a shift from IT to ICTs. This has resulted in a redefinition of the computer as an artefact: from a mere computational device to the newly emergent multimedia-enhanced computers, or what Paul Mayer (1999, p. 1) calls a "meta-medium." Today, the conceptualisation of the computer is more problematic. It may be thought of as the Web or Internet, computer games, CD-ROMs (compact disc read-only memory), reference works, e-mail, and a diverse range of applications for displaying and manipulating text, images, graphics, music, databases, and the like. Spilker and Sørenson (2000, p. 270) argue that computers are no longer "primarily about programming, systems, control and calculation," but instead "a gateway to communication and cultural activities." The shift in identity has opened up or unlocked the conceptualisation of the computer. Therefore, it is possible for wider audiences and previously excluded groups (such as the elderly and women) to translate the computer into something meaningful in their everyday lives. As a result, we were not solely focused on the computer as a separate technology, but instead on the wide range of information and communication technologies that are available in the domestic setting.

BACKGROUND

While the concepts of objectivity and subjectivity are not novel terms to describe contrasting positions, we have used the concepts to facilitate the understanding of how our respondents talk about their experiences and uses of ICTs. Orlikowski and Robey (1991) have employed this approach to address the relationship between information technology and the structuring of organisations. The authors argue that the essence of both social reality and ITs can be described by using objective and subjective perspectives. In Orlikowski and Robey's approach, the objectivist relationship to technology underlines the importance of the material characteristics of the artefact, while the subjectivist approach focuses on the importance of the subjective human experience in the interpretation, creation, and modification of the social world.

Although Giddens' (1976) theory of structuration bridged the gap between the objective and subjective social reality in academic circles, and in particular technology studies, the emphasis lies firmly in the objective approach (Orlikowski, 2000). We argue that one must consider both subjective and objective approaches to ICT discourse. The division is maintained in this article as it is constructive and valuable in the ways it enables us to discuss how and why the objective approach to articulating ICT use is publicised, overvalued, and hyperbolised. On the other hand, the subjective approach is often neglected and confined to private, domestic, and unofficial realms. The aim of this article is not to merely point to the existence of both discourses of ICT use, but instead to argue that it is important to locate the common ground between the discourses in order to provide a grounded and holistic picture of the ways people talk about their ICT use.

NARRATIVES OF ICT USE

The data for this article are drawn from a larger study of Finnish families looking at ICTs in everyday life and the use of electronic services.[3] The objective-subjective theme discussed here emerged while analysing the ways family members talked about their ICT use. For the purpose of this article, we draw on selective excerpts from the interviews to illustrate the contrasting narratives.

Pure Objective Lens

The dominant narrative of information-society discourse presents ICT use in a normative way, for example, by urging universal access and consumption, which is mirrored through official discourse in the ways everyday users express their personal experiences. This way of describing ICT use was also reproduced by several respondents, as can be observed in the following quote.

Ville: We had our first computer ... [it] was 2-8-6 ... quite interesting. We have it actually still somewhere; I don't know where.
Interviewer: Was it about when ... [W]ere you still in school?
Ville: Well, it was when [it] cost thirty grant[s] of old money.

Here, Ville was asked about his early memories of the family's first computer, and he replied listing only the technical particulars and the price of the machine. The quote gives an interesting insight into how male respondents often shied away from using personalised or subjective narratives to articulate their everyday use of or relationship with the artefact. Instead, they preferred to employ objective or dominant information-society narratives to describe their relationships with ICTs. We found male respondents would employ such narratives even when discussing Internet use.

Information-society discourse, as we stated earlier, adopts the classic determinist position whereby technical advances are celebrated using hyperbolic expressions (Preston, 2001). This technical enthusiasm is picked up by ordinary users (mostly male) who tend to reproduce these official narratives to describe their own use.

Pure Subjective Lens

We also identified another narrative used by the respondents to describe their use in a more personal or subjective fashion. To illustrate this alternative narrative, we present one example of a female respondent who expresses her use and consumption of the Internet by relating its use to her everyday routines and habits. Here we notice a shift in the respondents' narratives from objective discourses of use to narratives of personal and individual ways of describing how the artefact fits into everyday life.

[On the Internet] there is lot of instructions, people's gardens, advice. Then there is from these willow works. You find really those instructions, real illustrated, and they talk [on Web pages]. I just devour those. (Helena)

When talking about her use of the Internet, she gives very practical (or subjective) descriptions of her Internet habits, incorporating emotive and expressive language to articulate her use patterns: "and then I can manage without [the] machine [computer], but it is nice to visit [Web pages] if I just can."

She also makes it clear that using the Internet is not an overwhelming activity for her, but one she can do well without. This she explains partly due to the everyday situation in the family, as access to the computer is compromised due to other family members being active users.

Mixed Objective and Subjective Lens

Helena's husband Heikki gives us a very useful insight into the dilemma users face when trying to balance the objective and subjective relationships with the computer. He explains,

I don't really like [to] use it much then ... I don't know if it's character or what, but I feel bad if I'm not working; then when I'm by [the] computer ... I feel I'm wasting my time ... but I do sometimes [on] weekends. (Heikki)

In this quote, we get a sense of how users strive to reconcile the work-related or non-hobby-related uses of the computer and the Internet (objective) with the leisure or entertainment features and functions, and perhaps even communicative elements of ICTs (subjective). Objective discourses tend to focus on "worthy" or beneficial uses of ICTs while perhaps overlooking the everyday uses such as music downloading, game playing, surfing, and e-mailing. It is only through a subjective discourse analysis that we get a sense of the reality of everyday uses of ICTs and accordingly develop an understanding of the meanings and significance users assign to them.

TRADITIONALLY GENDERED OR GENDERED TRADITIONS?

This section will explore whether gender differences between masculine and feminine users are reinforced, reproduced, or challenged. Ostensibly, there existed some gender differences in describing one's own ICT use. It became apparent during the

respondents' narrations that both men and women appeared to adhere to traditional gender stereotypes, in which men are presumed to be technologically oriented and women technologically helpless, or at least not interested in technology (Gill & Grint, 1995). In doing so, they do not just express their own interpretations, but they appear to also confirm and renew the connection between technology and masculinity.

However, on deeper analysis, we found some interesting similarities between the male and female approaches to describing ICT use. We suggest that the presence of such similarities can be argued perhaps as a weak indication that signals the diminishing traditional bond between technology and masculinity (Lie, 1995).

In our interview material, the men, Pekka, Heikki, and Ville, used all three narratives (objective, subjective, and mixed narratives). In spite of this, there also emerged some crucial differences between the men as Ville employed almost exclusively the objective narrative, even as he presented his individual ICT experiences. The other men, Heikki and Pekka, employed mixed narratives when articulating their ICT use. This reinforces the position held by Lie (1995), who argues that "the connection between technology and masculinity does not imply that all men are equally attached to technology, or that one can prove empirically that majority of them are" (p. 382).

Alternatively, the interviewed women, Paula, Helena, and Leena, employed subjective and mixed narratives. Significantly, they did not employ objective narratives at all. It became apparent that Leena was more aware of the objective discourse, but chose instead to articulate her ICT use in more subjective tones. Paula was quite enthusiastic about computer use and the potential benefits of the information society, using objective narratives to express her opinions. But when she described her individual role as an ICT user, she presented herself as "not the good and legitimate user," which can be seen as reverting back to subjective narratives. In essence, the female respondents knew of the dominant narrative of information-society discourse, but they used it as a mirror to present their own subjective experiences.

FUTURE TRENDS AND CONCLUSION

Although the objective lens continues to be used as the dominant narrative, we believe the subjective lens will become increasingly pervasive with more user- and consumer-focused research (such as Hartmann, 2003; Miller & Slater, 2000; Ward, 2003). This type of research mirrors the changing faces of ICTs from highly technical artefacts (bound up with programming and networking identities) to technologies with everyday uses for domestic users (with communicative and interactive functions). This shift brings about opportunities for ordinary users to articulate their own subjective relationships with ICTs while lessening the need for dedicated technical expertise and skills to operate information technologies. From a cultural- and media-studies perspective, Silverstone, Hirsch, and Morley (1994) view the "double articulation" of ICTs—both technological texts and media texts—as having an influence on relationships with ICTs, and in the case of this article, on the discourses people use to describe those relationships. As a result, ICTs are not solely studied from a technological perspective, as by computer scientists, but also from social and human-centred perspectives (e.g., Castells, 2000; Hine, 1999; Lie & Sørensen, 1996).

Furthermore, the scientific paradigm is recognising this shift as studies become less positivist in nature and instead focus more on areas such as interpretive studies (see Walsham, 1995, 2005). In the information-systems field, interpretive studies provide space to consider alternative explanations of ICT use and practice, in particular in new gender studies where the focus is not typified by the differences between the genders but instead on subjective differences, for example, between women's use of technology. Therefore, we suggest that the subjective analysis of technology use and its discourse should be considered a valuable insight into how users construct individual interpretations of ICTs. In cultural and media studies, the concept of domestication is employed to achieve insights into the experiences of individuals as they tame wild technologies and make them fit into their everyday surroundings,

routines, and patterns. Domestication, as an analytical tool, gives scope to researchers to consider the technological and social characteristics of technology and the social factors that influence its use and identity. This approach to technology and everyday life marks a move away from the understanding that technologies appear in society ready to use, to an understanding of technologies as unfinished artefacts. It provides a very useful way of exploring the social complexity of how people experience ICTs beyond any simple idea of the benefits and uses of technology.

In conclusion, as ICTs become more a part of everyday life, we believe the stereotypical connection between technology and masculinity will focus less on male users and female nonusers, but will focus more accurately on the kinds of uses there are and how those uses are articulated. We posit the technology-orientated male will be replaced, for example, by the sophisticated image and narrative of the open-source programmer, with all the superfluities of high technical expertise. Meanwhile, the technologically helpless female is interchangeable with representations of unsophisticated use or everyday uses of information and communication technologies.

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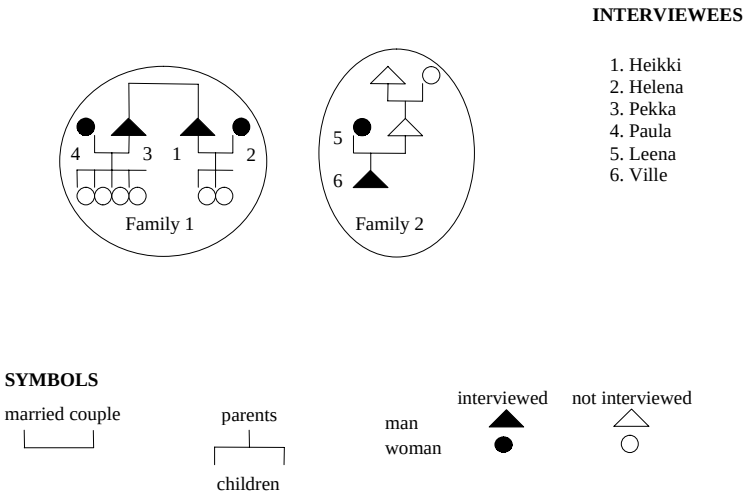
Figure 1. The interviewees and their family relations



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APPENDIX

Two of the project members, researchers Koivunen and Paakki, collected the empirical material and interviewed the respondents in the summer of 2003. The interviews were conducted in a South Ostrobothian village in Finland. In the village, there are 400 inhabitants, a school, a shop, a bank, and a church. The interviewees are members of two extended families (see Figure 1).

Family 1 is comprised of the households of two bothers and their families living next to each other. The brothers, for whom we use the pseudonyms Heikki and Pekka, are both married and have young children. Heikki and Helena have two daughters, while Pekka and Paula have four daughters. In these families, all members use the computer and the Internet. We interviewed the brothers and their wives. These interviews took place at their homes.

Family 2 includes a grandmother, grandfather, father, mother Leena, and a 20-year-old son, Ville. They all live on the family farm. From this family, we interviewed only the mother and the son, who are both known in the village as active and innovative users of ICTs. The other members of the family do not use the computer or Internet. Leena was interviewed at her workplace, which she called her second home, while Ville was interviewed at home.

KEY TERMS

Domestication: Domestication refers to the process whereby technological artefacts are fitted into the routines and practices of the everyday lives of users. It is a process whereby technologies are

consumed within specific and localised contexts and become inscribed with meanings, while reproducing values and transforming relations.

Dominant Narratives: Dominant narratives are part of our shared cultural knowledge about standards, which we refer to in explaining our acting, knowing, and thinking, and they are produced and reproduced in the discourses of everyday life.

Double Articulation: Double articulation refers to the concept that media lead double lives as both communication media and artefacts. Technologies are doubly articulated in the ways we need to address responses to particular texts or genres brought to us by the media and, on the other hand, the significance of media technologies themselves.

ICTs: Information and communication technologies such as televisions, telephones, the Internet, computers, and so forth.

Information Society: This concept is characterised by a new kind of information-led, service-oriented society that will replace the industrial-based model that had been dominant in the West in the 19th and 20th centuries. Information, and those who know how to create, assemble, and disperse it, is deemed more valued than labour.

Objective: The objective is nonsituated, impersonal, and not dependent on or influenced by personal opinions or prejudices.

Subjective: The subjective is based on thoughts or feelings derived from individual experiences and personal interpretations.

ENDNOTES

1 Those female commentators are Sherry Turkle, Esther Dyson, and Robin Mansell.

2 Domestication here refers to the process of rendering new technologies as tame as they enter the domestic setting.

3 See Appendix for an extended account of the empirical data sample.

[1]Triangulation in Ethnography – The Case of Collaborative Research

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Abstract

We focus on two principles of interpretive field studies in information system science and how they can be reached with multiple triangulation. Multiple triangulation refers to the use of multiple methods in data gathering, multiple theoretical frames, multiple disciplines and several researchers. We focus on one kind of interpretive field studies namely ethnography. This is an in-depth research method in which the researcher's role is pivotal. In this paper, we describe a solution of multiple triangulation in ethnography; doing multidisciplinary research in a collaborative research team.

INTRODUCTION

Klein and Myers (1999) describe principles for conducting and evaluating interpretive field studies, as in-depth case studies and ethnographies. They defined seven principles, which are 1. The Fundamental Principle of the Hermeneutic Circle, 2. The Principle of Contextualization, 3. The Principle of Interaction between the Researchers and the Subjects, 4. The Principle of Abstraction and Generalization, 5. The Principle of Dialogical Reasoning, 6. The Principle of Multiple Interpretations, and 7. The Principle of Suspicion (Klein & Myers 1999). We find that multiple triangulation is a solution for fulfilling these, especially the principle of multiple interpretations and the principle of suspicion, which requires sensitivity to possible 'biases' in informants' narratives. Multiple triangulation refers to variation in data, investigators, theories and methodologies (Denzin 1975: 301). In this paper we describe the benefits of multiple triangulation in fulfilling these two principles and how this can be done in practice.

Although ethnography has been used in the information systems (IS) field for over a decade (starting from Orlikowski 1991 and Wynn 1991), it is not a widely known research method. We therefore start by describing its features. Ethnography studies the production and reproduction of everyday life by often 'othered' people analysed at the level of meaning, social structure, power relations and history (Lather 2001: 481). Ethnography is an in-depth research method in which an essential part is that researcher spends a long time at a research site and gathers data from many sources. In the analysis process the researcher makes a distinction between presentational data (what informants say they are doing) and operational data (what the informants are actually doing), and explains the situation by using some conceptional understanding (van Maanen 1979).

In ethnography researchers make decisions about what is worth analysing. However the informants' own interpretations and narrations are important and are what constitutes the bases for formulating the exact research focus. According to Deetz's (1996) categorization ethnography is useful in studies whose orientation is to draw concepts and problems from local situation instead of taking them a priori, as in theory-testing studies. However, there is always a relationship between theory and empirical material. When the researchers interpret informants' narrations, the researchers use their theoretical concepts and knowledge in choosing the interesting parts of narrations and in rewriting them (Emerson et al. 2001; Eriksen 2001). The researcher focuses on informants' narration, on the ways they describe their lives. The researcher does not evaluate the truth, as it is not assumed that an objective truth exists, instead knowledge is understood to be situated. There are two alternative possible targets in knowledge construction. First, reaching a consensus, in which the target is to describe a dominant set of

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structuring of knowledge, social relations, and identities. Second, presenting alternative interpretations which challenge the dominant set. (Deetz 1996.) Ethnography is useful in both of these.

As the origin in ethnography is local narrations and practices, data is gathered by fieldwork in which participant observation is paramount. Participant observation refers to the informal field method in which the aim is to gain access to a new social world and produce written accounts and descriptions that bring versions of these worlds to others in fieldnotes and final research papers. Participant observation is a double process of textual production and reproduction. Fieldnotes are a form of representation, that is, a way of reducing recently observed events, persons and places to written accounts. Fieldnotes are inevitably selective. The ethnographer writes about certain things that seem 'significant', ignoring and hence omitting other matters that so not seem significant. In this sense, fieldnotes never provide a 'complete' record. Fieldnotes are also selective in what they include, since they inevitably present or frame the events and objects written about in particular ways, hence neglecting other ways that events might have been presented or framed. This also involves an active process of interpretation and sense-making. (Emerson et al. 2001.)

Besides participant observation and fieldnotes, ethnographic interviews are an essential part of ethnography. In them the interviewer empowers the informants by listening carefully and respectfully, allowing the informants to 'name' the world in their own terms. An ethnographic interview assumes respectful listening which means listening for respondents' hesitations, contradictions, topics about which little is said, and shifts in verbal positioning. Furthermore, researchers should also attend to a broader context than that of the interview itself; qualitative researchers should have extensive knowledge of the social conditions within which people live. (Heyl 2001.) Although participant observation and ethnographic interviews are generally accepted as a part of ethnography, variation exists in what is seen as the essential part in ethnography. The opposite views are (1) researcher's staying in the field long enough for his or her presence to be considered more or less 'natural' by the permanent residents, the informants (e.g. Eriksen 2001) and (2) the centrality of ethnographical interviews (e.g. Heyl 2001).

This paper focuses on multiple triangulation in ethnography. The traditional way to understand triangulation is the use of multiple sources in data gathering (Denzin 1975), which is an essential part of ethnography; in it data is gathered by participant observations, fieldnotes, interviews and possibly also other ways. As this is a common view, we will describe it in the case of collaborative ethnography in the next section. Klein and Myers (1999) states that gathering data from multiple sources helps to fulfil the principle of multiple interpretation. However, multiple triangulation has more aspects; besides data gathering from multiple sources, the use of multiple theories and investigators (Denzin 1975) and we claim that other aspects of multiple triangulation give more powerful answers to the principles of multiple interpretation and of suspicion. We will deal with these in later sections of this paper by using both literature and our own experiences of multidisciplinary ethnography in the eHAT[2] research group. At then end of the paper, we describe the lessons we have learned, to enable others to derive benefit form multidiscipline ethnography more easily.

DATA GATHERING FROM MULTIPLE SOURCES

In ethnography the knowledge and the one who knows cannot be separated – the informant or researcher who knows is important. The process of scientific knowledge creation - the research process – is important. To evaluate it, the validity and reliability of the research cannot be ignored. In this section, we discuss the general views of validity and reliability of information sources, which affects our way of gathering data, as we demonstrate at the end of this section.

It is generally recommended to use triangulation in data gathering, which means that a combination of various data gathering techniques is used (Denzin 1975). Triangulation means checking everything, getting multiple documentation, getting multiple kinds of documentation, so that evidence does not rely on a single voice, but data can become embedded in their context and data can be compared. The ideal situation is that the researchers observe as many parts of the social setting and as many participants as possible. (Rock 2001: 34.) One reason for using triangulation is to ensure that the informants tell the truth. For example, Järvinen (2004) based on van Maanen (1979) underlines that informants may lie, evade, and otherwise deceive the researcher, and that it is important that the researchers recognize which information is false and misleading (Järvinen 2004: 87-93).

Focusing on the informants' will and skill to be honest and the truth of their description is based on the view that the target in ethnography is to present a picture of the whole, unanimous situation in the field studied, as it is in interpretive studies according to Deetz (1996). However, it does not fit with the dialectic studies in which the target is to make alternative views visible without evaluating their truth or accuracy. In that case, triangulation can be used to improve the comprehensiveness of empirical material. As Rock (2001: 34) says:

[2] eHAT = e-Business; Human Aspect to Technology

> The informant cannot offer more than a single, embedded perspective on the complexities of the world, his or her account will be situated limited and motivated, and it will always have to be qualified by conditions as yet unimagined. (…) One must search out others for qualifying perspective.

Using ethnography in dialectic studies, interviews are done to investigate the ways people make sense and explain about their live. It is not relevant to ponder if they are telling the whole truth, as some things are not open for discussion. In describing their life stories, people also reconstruct them; some parts of telling are stable but other parts are new every time (Siikala 1984). Furthermore, the interview situation affects what people say and how they say it. The influence comes partly from the expectations of what an interview situation is and what one is expected to describe in it, and partly from the relationship between the interviewee and the informant. Once again we come to the perception that research is not independent of people – both researchers and informants affect the process and the results.

We use our own fieldwork experiences in the eHAT group in a Finnish rural area as an example. In our projects the data was collected from several sources. The researchers collected background information about the area, for example official statistics and municipal annual reports were collected and read. Furthermore, the specialty of the studied locality is its religiousness and its history was learned. The other ways in which the eHAT researchers became aware of local discussions were reading local newspapers and local Internet discussions. Besides gathering the background information, there were also fieldwork with participant observation and ethnographical interviews (about 60 interviews) in 2003 and 2004. Gathering data from many sources yielded versatile, interesting empirical material with many contradictory views.

Klein and Myers (1999) state that gathering data from multiple sources (such as interviewing various stakeholders) helps fulfil principle of multiple interpretation. Furthermore, they state that the researcher needs to examine the influences exercised by the social context on the actions studied by seeking out and documenting multiple viewpoints along with the reasons for them. The analysis of reasons may include seeking to understand conflicts related to power, economics, or values. (Klein & Myers 1999: 77.) The aim of studies in Klein and Myers is to reach a consensus. Another possible aim is to make alternative interpretations visible, as Deetz's (1996) categorization shows. For this purpose our data with contradictory views is very useful. Its possibility for fulfilling the principle of multiple interpretations is not reaching one consensus view but making alternative interpretations, partially truths, visible.

COLLABORATIVE WORK AS A PART OF TRIANGULATION

As described above, the researcher affects the narrations and interpretations given in interviews. Besides this, the researcher's role is very important in ethnography, as there are no formal data gathering and analysis methods. The importance of the researcher is presented by Järvinen and Eriksen as follows:

> The ethnographer's own taken-for-granted understandings of the social world are tied closely to the nature and quality of the data produced. (Järvinen 2004: 91.)

> The anthropologist him- or herself is the most important 'scientific instrument' used, investing a great deal of his or her own personality in the process. (Eriksen 2001: 26.)

As triangulation is one way to improve the quality and validation in data gathering, it can also be used to improve the quality and validation of the whole study by reducing the sole view of one individual researcher. This can also be further emphasized by using multiple theoretical frames, multiple disciplines and several researchers (Denzin 1975). Collaboration and multiple views help to deal with concerns of professional bias caused by personal biography, which again may lead ethnographers to see only those parts of social reality that make sense in terms of their earlier experiences (Eriksen 2001: 28). As it is thought that several informants from different stand points describe the situation better than just one (e.g. Rock 2001: 34), we think the same also works for researchers: several researchers from different perspectives reach a better understanding of the field situation. Although ethnography is described as a method for individual researchers (e.g. Myers 1999), our solution to undertake collaborative fieldwork is not unique (see, Belgrave & Smith 1995). One of the pioneers in using ethnography in the IS field, is Barley (1996). He had several researchers (mainly students), who all studied an own occupation. However, the group had collaborative tasks, as team meetings in which they discussed the fieldwork, analysis methods and the occupations under study. (Barley 1996.) Another remarkable precursor is the team of O´Connor, Rice, Peters, and Veryzer. They had a multidisciplinary research team studying collaboratively organizational work practices (O'Connor et al. 2003).

We find that multiple triangulation, especially the use of multiple researchers and multiple theoretical frameworks, helps to implement the principle of multiple interpretation and the principle of suspicious. Klein and Myers (1999) state that multiple interpretations are a problem in fieldwork and that the researcher's task is to make a consensus view. Besides of that view of reaching consensus we state, based on Deetz (1996), that alternative interpretations may be a good thing and researchers should work for finding them. We find that seeing and presenting alternative views (or partial truths) is the solution to the principle of multiple interpretations, as the same situation looks different from different standpoints, as Smith (1990) proves. Denzin describes the same idea by saying (Denzin 1975: 298-299):

> Methods are like the kaleidoscope – depending on how they are approached, held, and acted toward, different observations will be revealed. This is not to imply that reality has the shifting qualities of the colored prism, but that is too is an object that moves and that will not permit one interpretation to be stamped upon it.

We found two views on the principle of multiple interpretations based on different standpoints – those of informants and those of researchers. We also find two alternative views – the focus on informants and on researchers. Klein and Myers focus on the possibility that an informant's view is biased, thus we, too, focus on the possibility that researchers' view may be biased. The use of multiple researchers and multiple theoretical frameworks questions the basis of the researcher's interpretation and the basis of biased views does not withstand testing. Next we describe our own experience of multiple triangulation in practice.

Multiple Disciplines

The base of triangulation in the eHAT group is multidisciplinary. In the eHAT group e-commerce is studied from the consumers' point of view, which means that we study how new e-services are incorporated into consumers' daily practices. This research objective is at the crossroads of information systems? and consumers studies. Furthermore, as we focus on daily practices, ethnography is a useful method, therefore we wanted to have an anthropologist in the eHAT group.

The group includes researchers from three disciplines. Most of the researchers come from information systems (namely Tarja Tiainen, Minna-Kristiina Paakki (formerly Ojavainio), Tero Saarenpää and Taina Kaapu). The eHAT group also includes one researcher from consumer studies (Kyösti Pennanen) and one from social and cultural anthropology (Emma-Reetta Koivunen). The selection of the research sites was guided by Paakki, who had lived in the area for several years. The fieldwork was done in two periods. The first in spring and summer 2003 and the second in summer 2004. Paakki, Saarenpää and Pennanen participated to the both fieldwork periods. In the first fieldwork period, Koivunen spent the longest time in the field and participated in many local activities. In the second fieldwork period, Kaapu assisted the others. In addition to the researchers working in the field, Tiainen worked as a project leader and Deirdre Hynes improved the knowledge about domestication (she joined to the research group during the autumn 2004).

The three disciplines involved view the objective of people and their practices in e-commerce in different ways. The discipline of information systems is focused on the organizational use of ICT and information systems, in this human beings are of marginal interest[3] and limitedly understood (e.g. Isomäki 2002). However, very human related issues, such as trust in e-commerce (e.g. McKnight et al. 2002; Gefen et al 2003), are discussed to some extent in the IS journals. We searched for a better understanding of the human being in consumer studies, as it is close to the IS field, by focusing on human beings in relation to the organization (as consuming some products). Consumer studies give a better (or different) understanding of human beings than studying the e-commerce user, focusing on their experience, motivation factors, behavior and attitudes (e.g. Joines et al. 2003; Kau et al. 2003). In social and cultural anthropology the main focus is on the human being. Social anthropology is concerned with knowledge about human in societies and the main focus in anthropology is the diversity of social life (Eriksen 2001: 2-5). Technology is one part of human life and technology (also the Internet) has been studied by anthropologists (e.g. Hine 2000; Miller & Slater 2000).

The human being is seen in a different context in the three disciplines: in IS the human being is seen in relation to ICT; in consumer studies the human being is a consumer and buyer of products; in social anthropology the human being is a member of a social group, which affects the ways people make sense of the world. Having three perspectives on the human being – i.e. the informants in the field – the members of the eHAT group had to question their own views which might have been limited and biased. Multidisciplinary cooperation gives an answer to the problem which comes from researchers' own taken-for-granted views.

Multiple Theoretical Frameworks

Collaboration inside the research group was enabled by bringing researchers from different disciplines together in seminars where the researchers read scientific papers from all three fields. This seminar, which convened throughout research process, was an important part for the researchers to become familiar with the discussions and the scientific language of each other's disciplines. This also helped the researchers to see more clearly that the ways in which their own discipline conceptualizes things is not the only option, and because of that they had to learn to explain their research and their field in terms that people not familiar with disciplinary jargon could understand.

Furthermore, we tried several theoretical concepts as a practical lens (compare to Orlikowski 2000) to better understand the situation in the field. We used concepts of two themes: (1) shaping technology and (2) gender and ICT. In the theme of shaping technology we participated in the scientific discussions of social shaping of

[3] As the IS field is technology-centered and human beings are also viewed through technology (calling them users of technology), and as the social structure of human communities is not discussed, as gender has not been dealt with in the IS research (e.g. Adam et al. 2004).

technology (e.g. Bijker 1995), diffusion of innovations (e.g. Rogers 1995), and ICT domestication (e.g. Silverstone & Hirsch 1992; Lie & Sorenson 1996). The different theoretical concepts helped the researchers to understand the situation in the field and to study it from several perspectives.

The second theme from which we took theoretical concepts was gender and ICT. We used the cultural approach, which sees both gender and technology as processes which are not only understood to be continuously under construction through practices and negotiations, but also influencing each other (Gill & Grint 1995; Lie 1995). The discussion of gender perspective made it explicit that the underlying assumptions varied between eHAT group members: there were feminists in the group and also some who ignored the gender aspect. We discussed different views, their scientific argumentation and practical appearances. For those in the group who thought they found gender issues in their empirical material these discussions forced them to question if they really had some evidence of these findings. If after rethinking and reanalyzing the empirical material they still found some evidence the basis for these findings is stronger.

Besides discussion, writing is an essential part in research work, because in it researchers construct knowledge. Writing also makes the researchers' interpretations visible and they can be discussed and evaluated. The writing in eHAT group is an iterative process. The first phase is that the eHAT group members write working papers on their material alone (see, e.g. project reports Tiainen 2004; Tiainen et al. 2004). The second phase is writing papers together for working conferences (e.g. Ojavainio & Pennanen (2004) to eBRF; Saarenpää & Ojavainio (2004) to Iris27 conference). The two preliminary phases – and in general, these are repeated several times – are needed before any final results can be achieved. They are presented in final papers (e.g. Tiainen et al. 2005) and there will be more final papers as the work continues.

DISCUSSION ON COLLABORATIVE ETHNOGRAPHY

The researchers' role is essential in ethnography, as it is not a formal method with set phases on how to proceed with data gathering and analysis. The use of triangulation – not just in gathering the data, but also in having several researchers, disciplines and theoretical concepts – improves the quality of ethnographical studies. However, there are problems in collaborative research work. In this section, we describe some solutions for overcoming them.

The Importance of Writing

One important problem in using ethnography is that ethnography is time-intensive (Eriksen 2001: 27), even without triangulation (of several researchers and disciplines). When this aspect is taken as a part of the ethnographic research the process consumes even more time. Different disciplines have their own underlying assumptions and learning to understand the others' point of view takes time. (O'Connor et al. 2003.) The time-intensiveness is always problematic with getting research financing for a longer period. However, it is even more problematic in the IS field, as it has an image of a constantly-changing field. An example of this image is the concept of 'Internet decades', which means that talking about changes in the Internet, people do not remember things that happened a decade ago, although in reality they may have happened three years ago. We found two solutions for the time-intensive problem: dividing the process into subprojects and writing as many working papers as possible. These solutions work only partially, as the triangulated ethnographic process is time-consuming as in it participants learn new things; especially to think in new way, which is a slow process.

Fieldnotes and working papers are the concrete results of a research (sub) project; they show that something has been done and some results have been achieved. Writing papers is essential on a research project, as Järvinen (2004: 169) puts it:

> Science, or more widely, academic research, does not exists outside writing. We cannot, however, present it, or realize it, without being influenced by variation in writing (and reading) cultures that carry it.

However, writing is not only needed for presenting the research results, but it is also needed for constructing them. When an individual researcher writes, during the writing process s/he develops and shapes his/her own interpretations and constructs the analysis of the empirical material. At the first stage in writing working papers, every researcher writes an analysis by using concepts which s/he knows well; probably they are the concepts of his/her own discipline. This is perspective making, which is a process whereby a community member develops and strengthen community members' own knowledge domain and practices (Boland & Tenkasi 1995). When the ideas and interpretations are in written form, it is possible to give them to others for comment, which makes the progress of the analysis possible.

In this paper, we discuss collaborative research work. Collaboration means working together, which is sharing targets, ideas and knowledge. They can be shared by discussing but as writing is fundamental in research work, it is common to share at least some parts of the ideas in written form. One part of sharing is presenting everyone's own knowledge (perspective making, according to Boland and Tenkasi (1995)), the other part is perspective taking, which is a process in which individuals with different expertise better recognize and accept the different ways of knowing (Boland & Tenkasi 1995).

In research work writing is needed for presenting the results of a project. Written papers are also needed during the research process for cooperation and knowledge sharing. Furthermore, written papers are a memory of the research process. This makes itself felt if a group member leaves the group – even temporarily - as happened in our case, because of sickness.

Team Members' Personality

In all research researchers define how the researcher process is implemented. However, in ethnography the researcher's personality is even more essential than in some other more formal methods, since ethnography does not include strict guidelines on how the fieldwork should be done. The researchers' role is fundamental in the research process; during the fieldwork – for example, the interviewing situation is rendered dissimilar by different interviewees – and in the analysis – for example, through which concepts (or theoretical lens) the empirical data is observed and analysed. (Eriksen 2001: 26.) The aim of triangulation using several researchers in fieldwork is to reduce the dependence of an individual researcher. However, we can only mitigate the dependence, not totally eliminate it. Furthermore, it can be valued as a good point that researchers have their personal ways of doing research work, interviewing informants and discovering unusual events during observation. When there are multiple researchers with different academic backgrounds, it improves the opportunities to encounter various interpretations among both informants and researchers. In the case of informants, the personality of the interviewee affects what kind of issues are described and how.

When research work is done collaboratively in multidisciplinary teams it poses different kinds of challenges for researchers. Team members should be cooperative. They need to be capable of making their own perspective and taking others' perspectives into account. This is strenuous, as the team is multidisciplinary; the concepts and underlying assumptions vary. The underlying assumptions of collaborative work and knowledge sharing also vary. The opposite views are the codification approach and the personalization approach (Wong & Tiainen 2005). The codification approach focuses on a knowledge warehouse in which objective knowledge is stored and the meaning of knowledge is fixed and universal (following the conduit model of communication, according to Boland & Tenkasi 1995). Instead, the personalization approach focuses on supporting the communication of individuals as knowledge is seen to be situated in a community of knowledge in time and space (following the language game model of communication, according to Boland & Tenkasi 1995). An example of knowledge sharing following the personalization approach is the eHAT group. Despite in the eHAT group writing papers on researchers' own interpretations and having this kind of knowledge warehouse, it is obvious that there is always someone who holds the knowledge. In a small team, as the eHAT group is, all the members know who holds the knowledge. This thought-model strengthens individuals' role and their commitment to the research group. As the group has been established the members hold their places in it, even if the person is physically absent. This was seen when two of the members had long sick leaves, even then their perspectives where not ignored in the group.

Places and Spaces for Collaboration

Besides the importance of individuals, place is also important. The place where the eHAT group is connected is South Ostrobothnia, Finland. The fieldwork was done there and it was the institutional location i.e. the eHAT group's office space, rooms, and books, for example, South Ostrobothnia is a place, a geographical area with a location on the map, but it is also a social and mental space. Wise (1997: 124) has defined the relationship between place and space by saying that space is a practiced place, a place with actors. This view does not draw a sharp distinction between place and space; according to it, activity actualizes potentialities of place and thus creates social space. However, people can also live a space at a physical distance, as immigrants may have a close connection to a physical place which they have left long time ago (see, e.g. Miller & Slater 2000).

Although Wise (1997) connects places and spaces together, many studies of virtual worlds or communities ignore the physical places. In them virtual and physical worlds are seen as opposites; the idea is that in the physical world your physical body makes limitations what you can do and shape who you are, but in virtual world you can change your identity. But when physical and virtual world are seen as connected to each other and when the reality is seen as socially constructed, the two worlds cannot be separated. Also Miller and Slater (2000: 1) criticized seeing virtual and physical worlds as opposites:

> Contrary to the first generation of Internet literature – the Internet is not a monolithic or placeless 'cyberspace'; rather, it is numerous new technologies, used by diverse people, in diverse real-world locations.

The work of the eHAT group is opposite to placeless, instead, it is located in a physical place, which is South Ostrobothnia, Finland. However, the physical place of the eHAT group members may be something else (as Paakki is living in New Zealand for a year). The eHAT group members use computer technology (such as e-mail and the videoconferencing tool Marratech) for cooperation at a distance. Nevertheless, technical tools do not create any cooperation but the cooperation can be continued at a distance through them if it functions otherwise and is useful for participants. The essential part is to generate a social space for cooperation, for team members to share and shape their ideas and develop their knowledge. Team members' personalities, their will and skill to

make their own perspective and take others perspectives into account are essential. Still, it helps a lot, when the team is connected to a geographical place of which everyone has experiences and shared memories.

CONCLUSION

The aim of this paper was to describe how the quality of ethnographical research can be improved by using triangulation. We follow Denzin's (1975) view of triangulation meaning the use of multiple methods and sources in data gathering, having multiple researchers in fieldwork and analysis (also multiple ways and frameworks to analyse), and using of multiple disciplines and theoretical concepts in the research process. We argued in this paper that multiple triangulation gives an answer to two of Klein and Myers' principles: the principle of multiple interpretations and the principle of suspicion (Klein & Myers 1999).

In the principle of multiple interpretations Klein and Myers (1999) focus on informants' different interpretations and on the researcher's task to create a consensus view, especially when they are designing an information system. In ethnographic research consensus is one possible target. In the research case, the cooperation between multiple researchers improves the quality as the basis for the shared view is thoroughly discussed. However, besides reaching a consensus the alternative target of ethnographical studies is to describe the variety of interpretations, make the alternative truths visible from different standpoints.. The use of multiple researchers and multiple theoretical frameworks supports the finding of alternatives. In this solution to the principle of multiple interpretations, the multiplicity is not a problem but it is a strength and a target; the shared interpretation is the dominant one, but the alternatives are held by minority groups, by 'others'. We can find them by shaking the kaleidoscope – which means questioning researchers' assumption and changing the theoretical frameworks used. The same actions are useful in the case of principle of suspicion, which can be seen also from two standpoints, that of the informants and that of the researchers.

In practical ethnographical studies, multiple triangulation means working in multidisciplinary research teams. We suggest the following as important in overcoming problems of efficiency and lack of shared assumptions and knowledge. At first the research group needs to create a shared knowledge base, which means that team members have time for discussions and arguments. Just talking is not enough but researchers should also write a lot. As fieldnotes and working papers are important part of ethnographic work, all research team members should write them. In that way the team can achieve collaborative final papers with multiple views and understandings. In collaborative work, such as idea testing and knowledge creating, the team members' personalities are also important. However, besides choosing cooperative persons, the opportunities for collaboration must be created during a research project and researchers' commitment to the team should be enabled and strengthened. One way to do this is to create physical places for researchers to meet other team members, but it is more important create mental and social spaces for cooperation; spaces in which knowledge sharing and creation is encouraged.

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