Gifting Technologies – Ethnographic Studies of End-users and Social Media Sharing

by

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Linköping 2008
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Acknowledgements

Many people, events and technologies have shaped this thesis. Over the course of this work I have had the pleasure of receiving plenty and good advice from many superior researchers. Kevin McGee is responsible for helping me deconstruct and reconstruct many things scientific, in particular the thesis topic. Sture Hägglund has asked some tough questions, and also given me the time to answer them. The topical expertise of Daniel Pargman has been truly inspirational. The recurring critique from Magnus Bergquist gave excellent new directions to the ongoing work. Kjell Ohlsson provided original ideas in the very beginning of the thesis effort. Vivian Vimarlund and Roland Hjerppe bestowed much of the conclusive feedback, needed to finalize this academic journey. At the very end, the detailed reading by Natascha Korolića shaped not only syntax and semantics, but also much of the text’s very subject matter. Thank you, all.

There are also other people and events that had a more subtle, but still important, part in the completion of this thesis. The ubiquitous work of the Administrative Services Unit and the TUS group turned potential issues into non-issues. I also wish to highlight the PhD courses given by Kevin McGee, Daniel Pargman and Erik Hollnagel. To me, their intellectual exercises really stood out in terms of educational ambition. Many fellow doctoral candidates have also been important – Andreas Björklind, David Dinka and Fredrik Arvidsson deserves special mentioning.

Most importantly, without the continuous love and support from my family – Lina, Viljo, Tua and Ava – I would never have had the energy to keep on keeping on. I also owe gratitude to my parents, and parents-in-law, without whose baby-sitting services many deadlines would not have been met.
**Introduction**

The home-computer boom in the mid-1980s brought new possibilities for end-users to recreationally produce and interact with multimedia. However, to the extent content was shared between users, it usually happened in so called ‘sneakernets’.

Sneakernet is a term used to describe the transfer of electronic information, especially computer files, by physically carrying removable media such as magnetic tape, floppy disks, compact discs, USB flash drives or external drives from one computer to another. Sneaker refers to the shoes of the person carrying the media. This is usually in lieu of transferring the information over a computer network. (Sneakernet, 2008)

At the time, many home-computers used tape recorders, with ordinary cassette tapes, as storage devices. The general idea of this was as simple as it was smart: to make use of an available, well-known and cheap technology with a fairly large storage capacity. Interestingly, the use of the cassette also provided one of the main technical incentives for an early attempt to support end-user sharing. In Sweden, and probably also many other countries, end-users and hobbyist programmers could send programs they had written on their home computers to a dedicated radio show (via cassettes and diskettes in the ordinary mail). The radio show would then select and broadcast some of these submitted computer programs, for other end-users to record on their home receivers, and later use in the tape recorders connected to their computers. This effort can be said to constitute an early attempt at public file-sharing. Unfortunately, the broadcasts relied on too many analogue technologies to be completely successful (e.g. recording levels, uninterrupted and clean broadcast and reception conditions, recording head angle alignments etc). Nevertheless, these broadcasts, in many ways, highlight the technical differences compared to how end-user content sharing is happening today. Then: centralized broadcast, content selected by editorial boards, mix of digital and analogue technologies. Now: more decentralized (each user is a broad- or narrowcaster), distributed editorial control (there is still what can be
argued to be quality assurance in certain online venues, although it is often collectively emergent), pure digital storage and communication. For end-users, this technological evolution has brought certain sociotechnical characteristics to content sharing that may impact on their concerns and intentions to contribute. For example: digital replicability – digital content is easy and theoretically flawless to reproduce; digitalism adds a tension between the persistence and ephemerality of content in online networks; and global networks add a mix and multiplicity of strong and weak ties.

**Problem area and aim of thesis**

The concept of sharing has been subject to a revitalization in the Internet age, particularly with the recent emphasis on user-generated and user-contributed content in systems such as wikis, media-sharing services, blogs and social networking sites. The possibilities to find, access, retrieve and filter digital content are ubiquitous. While access and retrieve issues certainly create a compelling array of research problems, the possibilities for end-users to make content available, contribute, donate and give digital goods to others present another. Today, large-scale end-user contribution of publicly available content, or social media sharing, exists in a dynamic intersection between end-users, communities, business models and technology. In this intersection, the combined ambition of the papers in this thesis is to provide empirically derived cognitive tools, grounded in studies of end-user perceptions of how, what, to whom and why they provide multimedia content. These tools are intended to increase our understanding (i.e. analysis, description and comparison) of social media sharing from an end-user perspective. Hopefully they can also assist in the craft of designing actual technology that intends to empower end-users who want to contribute content.

The theoretical framework of this thesis is centered on gift-giving (see the chapter entitled Gift-giving: a social phenomenon, where the reasons for choosing this framework also are presented). The studies have focused on end-user concerns and intentions in what is commonly seen as recreational domains, where people share material ‘for fun’ or for more communicative reasons - as opposed to ‘work-related’ reasons although, as this thesis will
also show, this is an increasingly tricky distinction to make (Bakardjieva, 2004).

**Aim of thesis**

This section describes the aim of the thesis and its underpinnings in terms of motives for conducting research on social media sharing.

In addition, despite increased participation in and media coverage of the Internet, online researchers will find that they must explain what it is they study, how they study it, and they may need to justify their reasons for studying online interaction at all. This requires giving some thought to the cultural context of the audience and the meanings that computers and the Internet within that context have. (Kendall, 2004)

The motives for conducting the research covered in this thesis are several. First, to research what digital media sharing services are popular and try to understand the reasons for this. Secondly, to articulate a qualitative end-user perspective. As more complex social activities are mediated by new online services, an end-user perspective will provide case-study grounded knowledge about the interaction between end-users and developing technology. Third, to examine the applicability of an established social theory (gift-giving) in a new context and under new conditions. Finally, to broaden and, to a certain extent, criticize the notion of sharing as a purely selfish download-centric activity only.

Over the past couple of years the popularity of online sharing has increased enormously. The fact that these communities and services attract the time and effort spent of so many users calls for the attention of research because it is in these arenas that people, as a complement to simple web-browsing and e-mail usage, are taking an active part in global, societal and local networks of various kinds (Jones, 2005). For researchers this growing popularity of computer-mediated social activities also means a larger potential to examine a variety of activities ‘in the wild’ (i.e. in its naturally occurring contexts). Arguably, the most central component of end-users’ increasingly active participation is the activity of providing content for others.
Towards gift-giving

To an increasing extent, end-users contribute individually owned and produced digital material in online networks. Digital material is released under public domain licenses (by artists and authors) and technical advancements are making more types of digital goods more easily (re)distributed in general. Two concurrent trends, which are of special relevance to this thesis are that: firstly, we are seeing indications that file-sharing is increasingly ‘going social’ (Shirky, 2003, Mello, 2004, Kaye, 2004), where emerging sub-communities play an increasing part in the sharing ecology. Secondly, social-networking applications are to a higher extent including, what has been referred to as ‘rich media’ (i.e. photos, music, videos etc.) (Roush, 2005). With these tendencies, qualitative concerns of provision are likely to become more important to end-users. However, we know surprisingly little about qualitative concerns and dimensions of digital goods provision. As Jones (1995b) points out (borrowing from (Carey, 1989):

[...] much of our energy has been directed toward understanding the speed and volume with which computers can be used as communication tools. Conspicuously absent is an understanding of how computers are used as tools for connection and community. (p.12)

Even though the quote above is no longer entirely true – there has since 1995 been many research efforts focusing community and social communication – the understanding of qualitative practices of sharing is still immature. This emphasizes the suggestion that further ethnographic understanding of end-user practices is needed to add validity to accounts of larger sociotechnical cultures, (Pfaffenberger, 2003).

Gift-giving (or ‘gifting’) has since long had a central position in the analysis and building of ‘traditional’ social networks and communities (Berking, 1999, Godbout and Caillé, 1992, Maus, 1960 [1925]). With the growing use of mediating technology to give content in online networks, we need to ask ourselves if the practice of this central human activity changes and if so, what dimensions and characteristics are different or new? It is clear that gifting is an activity that permeates many uses and domains of
the Internet. As shall be demonstrated, gifting is much concerned with the qualitative and situational aspects of sharing, many of which depend on end-user perspectives on social bonds, reciprocal expectations or concerns for others. In all, this gives us reason to examine gift-giving’s potential power to explain online social media sharing. A simple, but penetrating and contextually oriented question we can borrow from gifting research is ‘what is given to whom, how and why?’

When the work with this thesis started, the public image of online file-sharing was almost always framed as if it was a way for people to get access to goods and download free material. The corresponding assumption for many was that the only thing that motivates users of sharing applications was the act of getting or receiving digital goods. Thus, the focus of much commercial development of file-sharing technologies was on finding ways to make access to digital media legal, easy and economically viable. In other words, technical development circled around improving downloading (or “getting”) aspects of sharing technologies. Although many applications and services now underscore end-user contributions as central to their functionality, we still see reason to accentuate provision, contribution and gifting as viable and promising approaches in drawing a more complete picture of social media sharing. Another part of the critical perspective of the thesis includes the notion of understanding where current technology fails to meet end-user concerns and intentions (i.e. examining sociotechnical ‘failures’ or mismatches).

**Related work**

The research on online gifting to date can actually be categorized by its emphasis on either getting or giving. The getting-oriented research consists of studies which show that problems of sharing are related to an uneven balance between giving and taking (in the favour of taking) and consequently assumes that the main motivation of most users is to find and retrieve material (and thus not provide it). In general, scholars from a variety of disciplines have analyzed this clash of individual and collective behaviours. Free-riding is a common term for describing the act of selfish over-consumption in sociology and economy. Social dilemmas describe the collision of egotistical short-term interests and group-oriented long-term
goals. The tragedy of the commons is yet another notion used to describe the conflict over common resources between what is good for the individual and what is good for the group. Similarly, sharing networks and communities rely on the continuous provision of material. As a result one common suggested solution is that users need to be more efficiently motivated or even forced to provide material for others. In other words, this body of work is in many ways interested in motivating users to share more (and in certain cases, less). Many authors have in various social, technical and sociotechnical ways addressed this issue (Adar and Huberman, 2000, Feldman, et al., 2004, Golle, et al., 2001, Krishnan, et al., 2004, LaRose, et al., 2005, Ngan, et al., 2003, Premkumar, 2003, Ranganathan, et al., 2004, Sanghavi and Hajek, 2005, Shneidman and Parkes, 2003). Another line of research focuses more on the giving minority of sharing communities and networks, and has largely been devoted to understanding motivations and general objectives for provision (Bergquist and Ljungberg, 2001, Cooper and Harrison, 2001, Giesler and Pohlmann, 2002, Kollock, 1999, Lakhani and Wolf, 2003, Zeitlyn, 2003). These are ranging from completely selfish motivations to motivations that appear to be seemingly altruistic (although this can of course be debated). A variation on the giving approach is more clearly devoted to understanding the other-oriented (pure or sociable) parts of provision (Skågeby and Pargman, 2005, Levine, 2001) and yet others have also tried to include design suggestions based on such an approach (Taylor and Harper, 2002, Brown, et al., 2001, Voida, et al., 2005). There is also recent scholarly work that, while not explicitly using a gifting framework, still identifies social incentives closely related to gifting (i.e. reciprocity, altruism, immaterial rewards and implicit and non-contractual bonds) as potent tracks for further study (Antoniadis and Grand, 2007). In summary, much gifting research has mainly been devoted to understanding motivations (both selfish and other-oriented) for contributing in general to online venues and to a certain extent, drawing design conclusions from such studies. This presents an opportunity to contribute new knowledge not only about specific and situated motivations, but also about related contextual aspects such as to whom, how and what types of digital content users provide.
As shown, studies of social information and media sharing have been conducted within social sciences, information science, computer science and information systems. This indicates that the versatile use of technology to accomplish more complex social activities is relevant to many disciplines concurrently. As such, it also becomes difficult to place the contributions of this thesis in one distinct discipline. One attempt to envelope the increasing importance of social aspects of computing is Social Informatics (SI). SI is a neologism intended to encompass a growing interdisciplinary mix of schools and scholars interested in the social aspects of computerization (Kling, 1999).

SI studies aim to ensure that technical research agendas and system designs are relevant to people’s lives. [...] SI sets agendas for all the technical work in two ways: 1) more superficially, by drawing attention to functionalities that people value, thus setting priorities for design and implementation; and 2) more fundamentally, by articulating those analytical categories that have been found useful in describing social reality, and that which therefore should also define technical work in/for that reality as well. Unfortunately, many technical professionals have viewed social concerns as peripheral. One key role of SI is to stand things back on their feet, so that social concerns are central and define the ground that technical work stands on (Phil Agre, 1996, as cited in (Kling, 2008))

On a larger scale, this thesis contributes to the field of social informatics. It does so because it examines technical impacts of social practices and end-user concerns as well as social impacts and effects of information technology use ‘in the wild’. To paraphrase the quote above, the general objective of the thesis is to articulate the analytical categories and dimensions that can be useful in describing sociotechnical realities, and thus define, at least part of, the ground that technical work can stand on. This objective and contribution has a natural place within studies of information and media systems (e.g. informatics) since it delivers a purposeful precedent for the design, development, analysis and prediction of future media sharing systems and the sociotechnical shaping of them. To further this argument, sociotechnical capital – a notion referring to productive combinations of social relations and information and
communication technology – explicitly includes, so called, frictionless markets (i.e. gifts) as a way to reduce some of the transaction costs of online exchange (Resnick, 2000).

It should also be mentioned that the contributions have much heritage from, and similarities to, research on computer-mediated communication (CMC). CMC has also been researched by scholars from many different disciplines and covers, for example, subtopics as relationship building, identity formation and virtual communities. CMC is also often included as a sub-field within SI. Early studies of CMC many times focused on MUDs (Multi User Dungeons), chats, newsgroups, e-mail and mailing lists (Waern and Pargman, 1996, Jones, 1995a, Hiltz and Turoff, 1993 [1978], Sproull and Kiesler, 1991, Rice and Love, 1987, Reid, 1996). Arguably, these technologies have now developed into converging genres of mediated communication that have reached enormous popularity, mainly in recreational contexts (although the boundaries are sometimes blurred). Social networking, file-sharing, social bookmarking and blogs are recent examples of communication genres where social media sharing driven by end-users is a central aspect. This thesis contributes to the CMC field by conducting studies on the use of media objects (and the metadata, such as comments, tags, and affiliations connected to them) as communicative tools, able to convey social intentions, empower identity formation and structure social relationships in increasingly overlapping recreational, educational and professional online settings.

**Some terminological considerations**

*Gift-giving (or gifting):* this thesis uses the terms gift-giving, gifting and giving somewhat interchangeably. There has, so far, occurred no reason to differentiate between these expressions. A more elaborated discussion on what is included in the notion of gifting, can be found starting on page 10.

*Metadata:* generally defined as data about data. This thesis adheres to that common definition, but also suggests that metadata will take new forms in the researched contexts. That is, in the shape of data about people, data about social activities around media objects and metadata in the form of multimedia content.
Semi-public: the thesis explores a research and design space in between purely public and purely private digital gifts. We refer to this space as semi-public, as it by various sociotechnical means, restricts access and usage according to differentiations between social relationships.

Research problem

How can the sociotechnical practice of digital media gifting in online social networks be characterized?

To repeat, the general objective of the thesis is to articulate the analytical categories and dimensions that can be useful in describing sociotechnical realities, and thus define, at least part of, the ground that technical work can stand on. The main contribution of the research is consequently that it increases our knowledge regarding what characteristics and dimensions of online gifting that are significant to end-users. Importantly, the survey of related work leaves us with the conclusion that quantitatively oriented measures of addressing gifting may not be sufficient (i.e. fuelling users to share more or free-ride less). The qualitative understanding of what actual concerns users have has the potential to discover important details.

Initial guidance in the breaking down of the research problem can be found in a classical research question, which has been used to probe the circumstances of gifts, namely: what is given to whom, how and why? The strong emphasis on motivations in prior research, leaves potentially important questions to be answered regarding what (the properties of digital goods) is given to whom (what relationships) and how (the means) in online sharing venues.

Even if this is not so much a thesis on social networks and communities in themselves (virtual or not), but rather on one activity, which happens to be central to communities and to the formation of structures, it will still address aspects of community, such as the relation between the individual and the larger group, since it is a circumstance which is deeply interwoven with gifting practices. To further this thesis, a first step is to more thoroughly review what is meant by gifting.
Gifting: a social phenomenon

The purpose of this section is to provide an extended background to the use of gift-giving as a concept addressing sharing and contribution. This revisit is necessary in order to know ‘what is new’ in the context of mediated activities and to get a better understanding of the impact the migration of an age-old social activity to a new context brings.

In a wide sense, the rules of gift-giving are socialized and tacit:

> Gift-giving belongs to the sphere of ‘practical knowledge’ in Anthony Giddens’s terms: without being conscious of the exact rules, we know how to play the game. And precisely because it belongs to this sphere, gift exchange may be considered an extremely powerful means to reproduce, or transform (disturb, or end) social relationships. (Komter, 1996, p.313)

This means that gifts carry a lot of flexibility, uncertainty and indetermination, which indicates that they cannot be reduced to a mechanical law or a closed system. Consequently, the gift-giving literature consistently highlights the division between the rationales of the market and the rationales of personal relations (as upheld by gifts). It is often suggested that the ‘simple’ models of profit, trade and exchange are insufficient for explaining the gift (Berking, 1999, Godbout and Caillé, 1992, Kolm, 2000, Bell, 1991, Klamer, 2003). This has spurred a turn to other models of explanation when dealing with gifting behavior. This thesis turns to bodies of work in anthropology, sociology, social psychology, and to some extent economy, in order to provide a background on ‘traditional’ gift-giving. However, what we are starting to witness in online contexts is the meddling of market and gift logic. This makes it particularly interesting to see how online gifting differs from its offline antecedent. The survey has no claims of being complete – gift-giving has been extensively covered and a comprehensive walk-through of the entire works would require more space than this thesis can provide. Nevertheless, the included attempts at definitions are important for two reasons: first, since they make up a body of comparison between
traditional (non-mediated) and technology-mediated (digital) gifting; and second, since they provide a way to initially define online gift-giving.

What actually constitutes a gift has been much debated. Gifts have been suggested to be relationship signals (Goffman, 1971) and expressing love, caring and trust (Cheal, 1987). They have also been described as normative ideas, judgments and expressions of taste (Berking, 1999) as well as supporters of transactive memories (Wegner, et al., 1991).

Economic theory has differentiated between four major modes of transfer: coercion, exchange, reciprocity and pure gift-giving (Kolm, 2000). The gifting literature is generally concerned with reciprocity and ‘pure’ gift-giving. Reciprocity refers to the motivation or process of returning gifts – to treat others as you have been, or wish to be, treated yourself (for more detail on reciprocity, see the section on “reciprocal ambiguity”), while pure gift-giving refers to the disinterested gift, in which you give without an expectation of a return. As the survey will show there is no real consensus regarding the existence or non-existence of pure gifts and altruism, and consequently there is a ‘scale of rigour’ regarding the definitions of gifting.

In this brief summary of gift-giving, three characteristics of gifts and gift-giving are considered: other-orientation, bonding value and reciprocal ambiguity. These themes are recurring in the gift-giving literature, although stressed to various degrees depending on scholar.

<table>
<thead>
<tr>
<th>Coercion</th>
<th>Exchange</th>
<th>Reciprocity</th>
<th>Pure gift-giving</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unilateral one-way transfer</td>
<td>Interrelated two-way transfer</td>
<td>Unilateral one-way transfer</td>
<td></td>
</tr>
<tr>
<td>Self-oriented motivation</td>
<td>Other-oriented motivation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Exchange value is central</td>
<td>Bonding value is central, concerns social relationships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Immediate, specified, explicit, contractual</td>
<td>Vague, non-contractual, uncertain, ambiguous, implicit</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 1. Four modes of economic transfer and their relation to the central themes of the gift-giving literature
Other-orientation

One way to approach the gift is through other-orientation, which has been suggested to constitute the ‘deepest’ property of the gift (Kolm, 2000). In the words of Kolm:

The motivations considered will have to be much more varied, complex and subtle (and interesting) than only strict self-interest. (Kolm, p.3)

As seen in this quote, other oriented motivations are often naturally contrasted against self-centered motivations, and seen as the opposite of such. Typical examples of specific other-oriented motivations are the will to contribute to others’ welfare without thoughts of a return and a ‘moral obligation’ to help those who are in need (of something specific) (Komter, 1996). As previously hinted at, the existence of pure other-orientation is debated (for an overview of this discussion see (Osteen, 2003). Cynics and neoclassical economists would consider any type of altruism as covert pure selfishness, i.e. there’s always a strict and measurable selfish motive backgrounding apparently altruistic acts – “there’s no such thing as a free lunch”. Others consider self-interest to be a part of the gift, but expanding the notion of self-centeredness (Bollier, 2001):

It is a mistake, also, to regard the gift economy simply as a high-minded preserve for altruism. It is rather, a different way of pursuing self-interest. In a gift economy one’s ‘self-interest’ has a much broader, more humanistic feel than the utilitarian rationalism of economic theory. Furthermore, the positive externalities can feed on each other and expand. (Bollier, 2001)

Yet others broaden the notion of altruism, considering intrinsic rewards as parts of altruism, but an ‘impure’ such (Andreoni, 1990, Andreoni, 1989). Hardin also presents a similar account:

Pure altruism is so rare and unstable that policy need make little allowance for it, but impure forms of altruism – discriminating altruisms – are the very stuff of social life.
(Hardin, 1982)
What these instances show is that it is not a simple task to draw the line between what is considered to be pure self-centered and pure other-oriented motivations and behaviour. Not only are there philosophical issues concerning about where to put altruism, but there are also practical situations where, for example, self-centered motivations result in other-oriented actions (and vice versa, of course). These in-the-end altruistic outcomes can be a result of the setting of the gift act. All this underscores the effort of trying to establish ways of describing the, in the case of this thesis, sociotechnical setting and circumstances of the gift in order to understand what makes certain motivations and acts result in certain outcomes.

**Bonding value**

Social relationships and bonds are important and common elements in the gift-giving literature (Camerer, 1988, Carrier, 1991, Cheal, 1986). Consider for example this quote:

> [...] giving and taking are also the elementary activities through which sociability became rich in evolutionary chances, and upon which any community-building process still rests. (Berking, 1999, p. 31)

This quote also underscores the interaction between giving and taking. A giving act requires a receiving party. This thesis mainly focuses on the giving act, and while giving and taking can be a cyclic activity, the online context does add elements of consideration regarding the reception of gifts. Paper V begins to consider some of these characteristics.

The more objective characteristics of things and the more intimate qualities of personal relationships often come together in gifts. This is also illustrated by Godbout & Caillé (1992) who reason about the different values of gifts:

- *Exchange value* – the quantitative value used for measuring interchange ratios
- Use value – refers to the strict material use or “the way things work”
- Bonding value – the gift’s value in the world of ties and their reinforcement

Notably, Godbout & Caillé state that if a transfer of goods is not primarily of bonding value it should not be defined as a gift. This position has interesting consequences in online contexts, where just making media objects available would not be considered gifts. However, as has been observed by popular media, there is a continuous addition of functionality to the social layers of media sharing (Kaye, 2004, Mello, 2004, Roush, 2005, Shirky, 2003), arguably creating more potential for socially bonding media sharing (i.e. online gifting). Godbout & Caillé reason further that the same object with the same exchange value has different bonding value depending on the sorts of relationships in which it occurs.

The transformation from resource to gift occurs through the vehicles of social relationships and giving occasions (Sherry, 1983, p. 160)

The currency in gifting situations is therefore not quantitative, but qualitative. From this we can argue that, gifts are more than simple transfers of possessions and could be seen as concerned with the manifestation of social ties. Indeed, almost all literature on gifting includes the importance of social relationships, as the central vector of bonding value, in some form or shape.

**Reciprocal ambiguity**

Reciprocity is a central term when examining the gift and its circumstances. It refers to the informal ‘circulation’ of goods and services – something that is a part of almost all societies and communities. Three types of reciprocity can be generally considered:

- Generalized reciprocity (sometimes also referred to as positive reciprocity)
- Balanced reciprocity
Negative reciprocity

Notably, there is a slight disagreement in the literature on the use of the term generalized reciprocity. Some state that generalized reciprocity is when one gives without any expectation of a return, while most of the literature refers to it as a temporal and personal ambiguity. What is argued to make the interaction 'reciprocal' in the first case is the intrinsic rewards (to the gifter), and the social bonds that the gift promotes. The latter perspective assumes that the giver expects something in return, but that from whom, what it consists of or the time of the return is left unspecified. In any case, generalized reciprocity is said to mostly occur within a group of closely related people (i.e. small village, clan, family or other kin group) where interpersonal trust is high.

Balanced reciprocity occurs when the terms and amount of exchange is judged as equal and fair. It is not necessary immediate, but there’s an expectation of an equivalent some time in the future. The social ties between gifters and recipients are weaker compared to generalized reciprocity, and in case of an absent reciprocation the relation grows even weaker. Someone who only accepts gifts without compensating them in any form or at any time, will be increasingly overlooked for succeeding gifts. This is common with such social groups as co-workers, friends, neighbours and relatives.

Negative reciprocity, as the term implies, is arguably not reciprocity at all (it is sometimes referred to as 'barter'), and it occurs where the prototypical relationship is to be a stranger and there is little or no trust established. The reciprocal return is expected immediately and each party tries to maximize their own benefit.

Yet another form of reciprocity, which is visible in the literature, is moral reciprocity. This suggests that humans often tend to balance the return of both caring and harming reciprocations according to their idea of this caring or harming as being moral or immoral. This is suggested to explain situations where individuals go to extreme lengths to prove a point to someone, to teach somebody a lesson or even to punish others, which they feel have acted morally wrong.
In relation to pure gift-giving, the most liberal definition of gift-giving relates to the uncertainty of (generalized and balanced) reciprocity. While pure gifting is a disinterested one-way mode of transfer, reciprocity, as exchange, is a two-way interrelated mode of transfer. But in contrary to exchange, reciprocity is vague, non-contractual, serendipitous, ambiguous, open and implicit.

A generous interpretation of the gift considers a gift any ‘good’, including money, that is transferred, conveyed or transmitted from one party to another when the nature, the value and the timing of the return of an equivalent is left undetermined.

(Klamer, 2003, p. 243)

Undoubtedly, this way of defining the gift comprises many phenomena. Nevertheless, it also provides a starting point for reasoning about returns and values of gifts, without reducing the transfer to strict exchange or trade. It grants an operationalization of gifting which allows for a continual refinement in terms of interrelated returns, explicit other orientation and strong social ties when these appear as prominent. Without necessarily reducing to cost-benefit analysis, we can also see that many sharings (and sharing acts) are seriously invested in – physically, cognitively, emotionally, socially or economically – compared to the certainty of when or what returns it possibly generates. This arguably turns them into gifts. Again, this brings up the point of setting in technology-mediated gifting. Many times it is hard for sharing users to calculate, in neoclassical terms, the expected returns of certain acts. This is certainly the case with many socially reinforced values, such as reputation. This inherent uncertainty will likely have effects on the patterns of transfers.

A small note on the terms pseudo-reciprocity and pseudo-gifting is also in order. There are of course obviously selfish forms of reciprocity and giving, which are often referred to in the literature as pseudo-reciprocities and pseudo-giving since they more clearly imitate the exchange mode where gifting is performed with the deliberate and intentional goal of generating self-beneficial returns or 'by-products' (Connor, 1986). Even so, pseudo-
reciprocity (and of course reciprocity in general) is argued to entail more than the incidental or deliberate coordination of selfish interests:

Reciprocity is often the means and vector of mutual self-interest, but it is much more than this, as it also commonly implies positive sentiments and attitudes towards others, which are intrinsically valuable and valued by all, such as gratitude, consideration, empathy, liking, fairness and a sense of community. (Kolm, 2000, p.2)

The argument here is that a gifting norm can add to the overall spirit and social well-being of the context in which it is performed, regardless of the individual motivations of the participants. In this sense, it may be an essential part of that which forms (sub-) communities from larger societies.

Another account of reciprocity is presented by Bell (1991). In his work, the gift is discussed in quite abstract terms of ‘utility equivalence’, which refers to an exchange relation in which each side is expected to experience a balance of value. The definition of value is indistinct in this case (‘somehow defined’). Bell starts out by stating that the value of utility is subjective – it may be hard to make interpersonally valid comparisons of utility values. In other words, people value gifts differently. However, Bell argues that in practice, the value of the gift to the receiver can be measured by reference to the reciprocal response the initial gift generates. A problem with this approach is that, in order to distinguish reciprocity from pure exchange, the nature of reciprocity needs to be temporally and pragmatically vague, ambiguous and non-contractual. As soon as an explicit contract, with clear statements of exchange terms, is established we are by definition no longer gifting. So, to actually define or conclude which specific gift generates a specific reciprocal return is consequentially problematic, to say the least. Let’s say that in return for helping my neighbour mow his or her lawn, I (after some time) receive advice in relation to a difficult personal situation. First, the reduction of this process into two interrelated instances might prove hard. Second, even if we could do this, the subjective value of the utility certainly depends on the relation these two persons have (i.e. the advice, in this case, certainly has different utility value depending on who gives it), which again suggests that to actually say something more meaningful about the value, we have to
address its social context. Utility value as such is certainly part of the gift, but we need to examine the specifics of the relation to properly understand and make use of it. This further advocates the importance of examining actual gifting needs, objectives and other circumstances in the authentic contexts from which they arise.

Another conclusion that can be drawn from the application of utility equivalence value is that altruism and pseudo-reciprocities become hard to distinguish from each other. This is due to two assumptions about gift-giving. The first assumption is that altruists are ‘other-oriented’ and thus interested in maximizing the benefit for others (i.e. present gifts to those who are likely to appreciate them the most). The second assumption is that by gifting to persons who need it the most, the utility value for the receiver would be judged as higher with the consequence that the estimated reciprocal return should also be higher in order to meet the utility equivalence value. Therefore, a person interested in pseudo-reciprocities (i.e. situations where gifts are presented in order to maximize the return one gets from it) would, like altruists, have to present gifts to those who are likely to appreciate them the most, since this is where the probability of receiving the most is higher. As an indication of the complexity of gift-giving, Komter (1996) and Kolm (2000) present contradictory results which state that if I have plenty resources to give (which I also give), I'm more likely to receive. A conclusion that can be drawn from this is that gifts are often not given or reciprocated to those who would appreciate them the most (in Komters’ interpretation ‘those who have very little’), but rather those who already have – a so called ‘St Matthew effect’ (Merton, 1968). So, what these theoretical comparisons are meant to illustrate is that when trying to distinguish between seemingly altruistic motives and pseudo-reciprocities or other motivations, only considering use value, exchange value or utility value can be misleading. We need to examine the specific characteristics and dimensions of situations of gifting, not only as abstract concepts or quantitative surface, but also as parts of everyday practice.
Gifting Technologies

Gifting is a customary everyday concept. However, if we, as laymen, start to think about how we define gifts and gifting we are likely to enter into arguments about it. Do gifts need to be gift-wrapped? Can money be a gift? When? Why not? What is a ‘good’ gift? In relation to mediating technology these questions may be even more laden with controversy.

It [computer-mediated communication] not only structures social relations, it is the space within which the relations occur and the tools that individuals use to enter that space. (Jones, 1995b, p. 16)

To reach a definition of gifting useful to this thesis, we have examined a number of studies and theories of gifting and focused on the three most recurring notions. It may be argued that the economic function of the gift is redundant in a post-industrial society marked by abundance (not to mention in the ‘hyper-abundance’ of digital networks). Notwithstanding, this thesis claims that the importance of gifts as symbolic vehicles of social intention and other-orientation, actually become highlighted in networked distribution of digital goods.

A complex gift economy has a well-developed technology, but its most important technology is a technology of social relations. The relationships of a group with other groups, as well as intra-group relations, are critical to the well-being of the social unit. (Bell, 1991, p. 166)

As seen, the gift is much defined by the situations and relationships in which it occurs. Thus, rather than trying to define ‘the digital gift’, it becomes more relevant to examine what characteristics and dimensions that distinguish the practice of gifting in digital networks. From our survey of offline gifting, which focused on social bonding, other-orientation and reciprocal ambiguity, it becomes relevant to ask questions such as:

- How is social bonding value realized online?
- How is other-orientation acted out by end-users?
- How do reciprocal patterns manifest themselves?
While not stepping ahead and getting into results at this point in the thesis, it is nevertheless relevant to relate the studies of gifting in this thesis to the survey of gifting theory and give some preliminary answers to the questions raised above. From the studies it can be shortly concluded that, social bonding values are many times conveyed via sociocontextual metadata attached to media objects and collections of media objects (such as comments, tags, public friends lists and notifications). It becomes interesting to see how the possibility to contribute and receive such metadata, bears impact on overall sharing behaviours and practices. The effect of this impact is described in more detail in Papers IV and V. The enactment of other-orientation depends on the available interaction repertoire, the sociotechnical norms of the network in question, as well as the intentions of the end-user. Other-orientation can take the form of conflicting interests, as described in Paper II, where users perceive conflicts regarding which ‘others’ to address with a specific gift. Further, Paper III is suggesting a number of analytical dimensions useful for describing the enactment of other-orientation in specific cases. Regarding reciprocity, the reciprocal patterns are more distributed than is often the case in traditional theory, where general reciprocity is mostly said to occur in close relationships (Offer, 1997, Sahlins, 1972). In social media sharing, reciprocal patterns seem almost reversed (i.e. generalized reciprocity occurs many times with strangers), or at least more distributed over different types of relationships, as seen in Paper II.

Knowing more about the activity of online gifting (i.e. answering the questions posted above), allows us to make an attempt at a comprehensive definition that includes the activity of gifting as well as the technology used to perform it. Here, it is thus suggested that:

Gifting Technologies acknowledge gifting concerns and intentions. They enable people to find, socialize around, give and profile the content they most care about to designated others. As such, they support the concurrent management of digital media and social relationships.

Because gifts can be defined more idiosyncratically in relationships between givers and receivers, as well as be a product of sociocultural
context and rules, this definition is deliberately kept open regarding what ‘gifting concerns and intentions’ that are acknowledged. It is our claim that the papers of the thesis are starting to outline these very concerns and intentions. Further, it is our ambition that the coining of the term gifting technologies does not to single out specific services as being gifting technologies or not, but rather emphasizing the elements, functionality and benefits that comes from looking at the world from a gifter’s point of view. Thus, gifting technologies can be incorporated in larger technical services, as is for example the case with BitTorrent (Ripeanu, et al., 2006), LiveJournal (Pearson, 2006) or mobile music sharing (Håkansson, et al., 2007). As we know, and as shall be even more demonstrated in the papers of this thesis, (a) any technology can be used in a multiplicity of ways, including ways it was not ‘intended’ and (b) there are many technologies that can be used to accomplish one specific task (Ihde, 1993). This is perhaps especially true in sociotechnical settings where social structure, functionality and end-user activities co-emerge, as is often the case in rapidly evolving social media sharing services. As such, we do not define gifting technologies as tools, but more like cultures.

Readers may at this point ask what is the purpose or benefit of using gifting instead of, for example, sharing as the main concept. We argue that gifting, as a theoretical construct, is a sharper notion than ‘sharing’, which is general and imprecise. Gifting, through its rich history, allows for the identification, separation, analysis and comparison of important sub-concepts (such as the ones covered in this theoretical survey). It is the conclusion of this thesis that technology helps to turn gifts from the notion of occasion-centric and gift-wrapped physical objects towards a ubiquitous everyday practice, where instrumental and social economies increasingly mix. Another way of discussing this phenomenon is to say that users seem to compensate for the increased quantification, rationalization and explicitness of social relationship management by invoking a social economy of regard where they more actively convey qualitative concerns and intentions.
Methodology

This section presents the research perspective, the chosen methodological framework and its strengths and limitations.

Research Perspective

This section provides a more personal reflection on the chosen topic of research. This is by many accounts a necessary part of interpretative research:

This hermeneutic process entails the reflection by researchers on their prior interpretations and personal experiences with the dilemmas they study, acknowledging that objective, value-free inquiry is impossible. Researchers navigate between their own and participants' self stories, seeking points where those circles converge. (Walstrom, 2004)

This thesis, and much of the literature on interpretative methods, mentions the methodological importance of declaring the research perspective on several occasions. Steve Jones emphasizes the importance of this activity in Internet studies:

One action to be undertaken is questioning by us how we come to the knowledge we have. That is to say that, if an interpretative turn consists at least in part of self-reflection, of knowing how we know others, then we must as part of the development of our research and scholarship unpack the complicities and complications of our own positions as Internet users. (Jones, 2005)

This ‘unpacking’ demands of us to ask ourselves, and people in our close surroundings, the following questions (Goldkuhl, 1993):

- What phenomena do I/we initially see in the problem area and why?
Are there other ways to delimit/categorize phenomena in the problem area?

What are my experiences of the problem area?

What are my preconceptions about relationships between phenomena in the problem area?

What are my values regarding phenomena in the problem area?

Before attempting to answer these questions, a short personal vignette. My initial contact with recreational communication through computers was around 1985, when friends would connect to BBS’s (bulletin board systems) via their low baud modems. I was fascinated. “The demo scene”, where mainly young male, artists and programmers would cooperate to outrank each other, was inspiring, to say the least. This user-generated multimedia sharing culture was to me a precedent of the now increasingly ubiquitous social media sharing. Later, in 1992, I began studying systems development at a university, which meant an initial contact with Internet, spurring a renewed awareness of networked connectivity effects.

The reason I am describing these two personal events is largely because I believe they were quite influential to my personal perspective. That is to say that these two events have probably predisposed me to see technology-mediated sharing as something socially and culturally significant, and in a large sense, positive.

When starting to research online gifting, I had certain experiences and preconceptions. From participation in sharing communities and networks, I had personal experience of people giving away stuff to me, without any obvious demand for a return. However, I knew only rudimentary about their intentions or possible concerns when doing so. Further I did not know much about the sociotechnical relationships between various parts of the gifting activity (the links between how, why, to whom and what for example). Initially, I also had a theoretical and pragmatic idea that anonymity would be a central factor in the analysis of gifting. But again, I did not know much about how people would utilize anonymity as a facilitator for certain intentions, or see it as a barrier for other. In many
ways, we are what can be described as ‘outsiders with certain inside experience’ – arguably a favourable research stance (Forsythe, 1999).

**Online methods**

What are the most purposeful methods for addressing the research question (i.e. how can the sociotechnical practice of digital media gifting in online social networks be characterized)?

**Motivating online research methods**

It was early realized that the research question would give an opportunity to consider online methods as viable means of data-collection. Not only had the body of research on Internet studies grown rapidly over the last years, giving certain academic foundation to “honor the field in which the participants are working – the online environment” (Crichton and Kinash, 2003), but the research question also addresses a perspective and a practice that takes place in large online social networks. The literature on online research confirmed the presumption that the digital resources used by people, in particular domains of action, could provide rewarding and contextually relevant targets of analysis and data collection (Hine, 2005, Maczewski, et al., 2004, Svenningsson, et al., 2003, Wakeford, 2000, Jones, 1999, Johns, et al., 2004, Nentwitch, 2003, Clarke, 2000, Granello and Wheaton, 2004, Kinnevey and Enosh, 2002, Murray and Fischer, 2004, Nancarrow, et al., 2001). Currently applied online methods include both quantitative methods (e.g. e-mail and pop-up surveys, click-stream analysis and lab studies) and qualitative methods (e.g. online focus groups, mediated interviews, online observation and document analysis) (Krishnamurthy, 2004). Notably there is of course also research applying triangulations, utilizing more than one method to answer the same research question. The main focus hereafter will be on qualitative methods, since they are most purposeful for answering the research question and deliver the details of a much-emphasized larger (quantitative) picture. By the same token, it is also possible to argue that quantitative approaches may rely on the qualitative decision of what counts as an instance of a specific phenomenon to precede any quantitative coding and counting of the same phenomenon (Herring, 2004).
While qualitative online methods may not be the only available methods to address the research question in this thesis, their application can be seen as a recognition of the importance of conducting naturalistic and, in a sense, ‘ecologically valid research’ (Monk, et al., 1993, Bronfenbrenner, 1979).

If one is simply using the Internet to expand one’s reach to participants and interviewing them online is merely a convenience, one may want seriously to consider the extent to which people can and do express themselves well, truly or fully in text. But, if one is studying Internet contexts as cultural formations or social interaction in computer-mediated communication contexts, the inclusion of embodied ways of knowing may be unwarranted and even counterproductive. (Markham, 2004b, p. 367)

Regardless of its growing body of work, online data collection and analysis methodology is, compared to many other methods still quite a young and dynamic field. This brings both opportunities and possibilities for pioneering and challenging of golden standards as well as a lack of established ‘best practices’. This chapter will highlight problematizations, how they reflected the choice of methods for the included papers and what specific adaptations were made. Having said that, there was still a need to examine the practical possibilities to answer the specific research question with such methods. This issue will be expanded upon in the following section.

**Forum and function – studying end-user discussions of sociotechnology**

From personal experience it is known that many social media sharing applications and services have discussion forums connected to them. Further, these are a rewarding, and sometimes also exclusive, way for users to discuss and share opinions about features and uses with temporally and geographically distributed peer users of the same network.

An Internet forum is a web application for holding discussions and posting user generated content. Internet forums are also
commonly referred to as Web forums, message boards, discussion boards, (electronic) discussion groups, discussion forums, bulletin boards, fora (the Latin plural) or simply forums. The terms "forum" and "board" may refer to the entire community or to a specific sub-forum dealing with a distinct topic. Messages within these sub-forums are then displayed either in chronological order or as threaded discussions. (Internet Forums, 2008)

A brief number of pilot studies were performed to examine what levels of discussions and quality of data that could be extracted. The conclusion reached was that discussion forums provided rich sources of data on end-user problems and solutions, intentions and concerns, experiences and stories, likes and dislikes. It was noted that the data was particularly well suited to reveal aspects and dimensions central to these end-user practices. Many times end-users would be very specific about what they were trying to accomplish, what features they used (or desired to use) and what, if anything, had gone wrong, and not only on a technical level, but also in more social terms. These documentary evidence provide an opportunity to observe ‘verbal behaviour’ that reflect underlying practices as they naturally occur in the studied contexts (Kassarjian, 1977). This insight, and the previous literature on similar approaches, gave the incentive to apply online ethnographic methods to collect data for further analysis. To that point, a viable and, to some extent, innovative source of data had been established. However, a procedure that could transform the data into descriptions, patterns and eventually purposeful insights, answers and interpretations also needed to be defined. After some initial research, a promising and comprehensively illustrated approach was found (Romano, et al., 2003). This approach fitted well with the ambitions and aims of the research. Below an overview of the generic research process, in the shape of a model of data collection and analysis, is presented:

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1 This conclusion has been partly supported by the growing number of dedicated forum search engines (e.g. Omgili, Boardtracker, AskSutra, Boardreader WaveMetrix) and companies delivering decision support and analysis based on forum and blog data (e.g. Biz360, BuzzLogic, Radian, MotiveQuest, Nielsen BuzzMetrics, Converseon)
As it is of initial importance to understand what particular networks the data actually comes from and relates to (i.e. the ‘Internet users comments’ in the upper left corner of the model above), the chosen networks are presented next. The three steps elicitation, reduction and visualization will be expanded upon thereafter.

Figure 1. A methodology to analyze Internet-based qualitative data (adopted from (Romano, et al., 2003))
The studied networks

This section describes the three networks of choice, although it mainly expands the description of the music file-sharing network since this was not exhaustively covered in the papers.

Music file-sharing: Soulseek (Paper I, II and III)

The background of the music file-sharing network is not elaborated in the papers. Therefore, it will benefit from a more thorough sketch. Even though the papers have used a pseudonym in reference to the file-sharing network, it was for this thesis decided that a richer description of the music-sharing network was necessary. In addition to this, the network is publicly available and is often included in enumerations of popular P2P and file-sharing networks. The network is called Soulseek (slsk) and it is one of the more popular, although it has kept an ‘underground spirit’ to it. Some members are annoyed that Soulseek is appearing in the media, something that has become more common. Listening to these users was one part of the incentive not to reveal the identity of the network in the papers. Now (and arguably before as well), however, the slsk network is quite well-known. Then again, it is not a large-scale business endeavour, which makes the official descriptions and ‘biographical accounts’ of it stem from Wikipedia (Soulseek, 2006) or published interviews with the main programmer (Mennecke, 2003), rather than press releases or white-papers.

Soulseek is a file-sharing application and tightly knit network used mostly to exchange music, although able to share a variety of files. It was created by Nir Arbel, a former Napster\(^2\) programmer. Like Napster, it relies on a central server. Soulseek is free of spyware and other malicious code. Soulseek

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\(^2\) Napster was arguably the first file-sharing application to reach wide popularity. Used mainly for music files in the mp3 format, it triggered much development, discussion and disruptive changes in Internet use. For more detail, see Clay Shirky, "Listening to Napster," in Peer-to-Peer: Harnessing the Power of Disruptive Technologies, ed. Andy Oram (Sebastopol: O'Reilly, 2001).
is different from other file sharing programs as it allows users the option of downloading full folders instead of just single files.

The original Soulseek userbase was composed mostly of members of the IDM [Intelligent Dance Music] Mailing List, and most of the music first found on Soulseek was underground electronic music or music created by the users themselves. After Audiogalaxy [another popular music-sharing service] was shut down, however, many former Audiogalaxy users migrated to Soulseek and brought copyrighted music owned by record labels belonging to the RIAA [Recording Industry of America Association]. Nevertheless, Soulseek remains a favorite of fans of underground and independent music, and a large portion of file-sharing on Soulseek is legal sharing of music that is distributed under a free license.

The userbase has grown rapidly since its beginnings, and there are now some 120,000 users at any given time, with more than one million total registered user in early 2004. (Wikipedia, Soulseek, 2006)

In terms of interaction, both Paper I and Paper II give some descriptions of the available features and their functions. Below is a picture, which shows the overall interaction categories. Within each category there are additional, more specific features.

Figure 2. A structural overview of the interaction repertoire in Nicotine (one of the applications used to access and interact with the Soulseek network).

While sharing and gifting technology in general can differ in terms of features, the applications used to interact with a certain network are often quite similar. Still, it is important to remember to what degree certain applications include certain gifting dimensions (see Paper III).
**Photo-sharing: Flickr (Paper IV)**

As described in Paper IV, Flickr is a photo/picture-sharing service on the web. It is one of the most popular and well-known photo sharing services and was in February 2005 reported to have 270,000 registered users, four million uploaded photos, a 30 percent monthly growth in users, and 50 percent monthly growth in photos. 82 percent of these photos was reported to be public (i.e. could be seen by anyone) (Koman, 2005). Information dating from June 2005 suggests that Flickr had 775,000 registered users and hosted 19.5 million digital images (Kuchinskas, 2005). The service can be used as a free service, where only a membership registration is necessary or as a 'pro-service' where a monthly fee is charged in return for more advanced functionality. The advanced functionality mainly consists of improved storage and uploading capabilities. This thesis makes no difference between 'pro-users' and 'regular users', mainly because of the difficulty to tell what this distinction actually says about the user’s expertise, experience, intentions or concerns. Indeed, a recent study on Flickr shows results similar to Paper IV for pro-users (Cox, et al., 2008). The interface to Flickr is largely web-based, but there are desktop applications for uploading. Also, the Flickr API (Application Program Interface) is available for download from the site, which means that anyone can develop applications that interact with Flickr in various ways. For a more detailed account of Flickr we refer to Paper IV.

![Figure 3. A structural overview of the interaction repertoire on the Flickr website](image)

**Social networking: Facebook (Paper V)**

Facebook is a large and popular social networking site. Social network sites have been defined as:
 [...] web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system. The nature and nomenclature of these connections may vary from site to site. (boyd and Ellison, 2007)

Initially started as a student directory, Facebook has grown to incorporate a wide variety of users. It is estimated to have received more than 60 million membership sign-ups since the launch in 2004. The basic component of Facebook is the profile – a personal webpage with various levels of individual detail. This profile can then be connected to other profiles, creating a social network. In addition to this, there are conversational features, such as messaging and profile commenting, as well as support for media uploads and add-on applications. Although the definition above underscores the importance of profiles and lists of friends, the purpose of Paper V is to explore social metadata usage in a wider sense. Consequently, the paper proposes that (1) social metadata can be attached to both profiles and media objects and (2) social metadata comes in more forms than friends lists. A tentative examination of the Facebook interaction repertoire suggested a number of social metadata related features:

- Photo comments – users can upload photos and these can receive comment by other users
- Tags – users can also tag friend’s photos (i.e. add descriptive keywords)
- Friends lists – users can display their network of friends (contacts) to others. This is arguably the main purpose of social media networks and perhaps also the most commonly used form of social metadata in social network analysis.
- Applications – users can add a number of applications to their Facebook account and invite other to join. The applications have varied support for social metadata, but many are directly designed to make social comparisons or convey social information (such as movie taste, globetrotter qualities, priorities, top friends)
Wall comments (including media object link sharing) – users can add public comments to the profile pages of their friends. This includes linking to media objects such as video and music content from other sites (YouTube, Google Video et c.) for inclusion in the user profile.

Groups – user can join various interest groups. The names of these groups are then displayed on the profile page.

Notifications – Facebook defaults to sending notifications of various kinds to connected friends. Users have certain control over these.

Facebook’s suitability as a network to study is discussed in Paper V. For a more general description of Facebook and its uses we refer to (Bumgarner, 2007).

Elicitation of data: online ethnography

This section will describe the procedures for bringing forth empirical data. The data was elicited from three specific contexts.

Internet studies can [...] describe and intervene in the life and values of the people who use the internet, and these can be best understood, no matter our temporal distance, through close observation and analysis of specific people and technologies, in specific places and times. (Jones, 2005)

Three online ethnographical studies were conducted:

- One music-oriented (chosen case: Soulseek)
- One photo-oriented (chosen case: Flickr)
- One oriented towards social metadata (chosen case: Facebook)

The three studies were conducted in a similar fashion, why we will not present the methodology used in every study separately as that would result in too much repetition. However, the studies had a few minor differences. The music study generated three papers (I, II and III, this volume), based on the same dataset, collected from one dedicated forum,
interviews and application use. The photo study collected user comments from one dedicated forum as well as interview material, generating one paper (IV, this volume). For the social metadata study a different approach was tested – data was collected from a multitude of general forums. The study generated one paper (V, this volume). From these minor differences, we will now turn to describe the general procedure of online data collection through ethnographical methods and the specific methodological decisions common to the three performed studies.

Online ethnography draws much on the procedures and considerations of traditional ethnography (Hine, 2000, Jakobsson, 2006). Online ethnography is “[traditional] ethnography adapted to the study of online communities” (Kozinets, 2002, Guimarães, 2003). In order to elaborate on what this means, it becomes equally relevant to describe central aspects of traditional, as online, ethnography.

Ethnography has become an encompassing term, largely due to its rich history and multidisciplinary background. Anthropology, and studies of foreign cultures, sociology and the studies of local subcultures and ethnomethodology are all part of what can be referred to as ethnography. Put simply, ethnography is a description of individuals, groups or cultures in their own environment over a (long) period of time. The data collection methods for accomplishing this description may vary, but are generally qualitative in nature, for example interviews and observations. A central characteristic is that the researcher conducts field work (with accompanying field notes) in order to reach a perspective from within. The first-hand witnessing and discovering of native methods (ways of reaching an objective) is seen as central to the proper understanding and interpretation of a specific context of action and subsequent actions. The reason for taking these methodological steps is grounded in several assumptions about the methodological necessity of understanding things from the inside. Direct observations and participation helps the researcher

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3 A sociological term coined by Harold Garfinkel. Very briefly, ethnomethodology aims to research the practices, procedures and methods by which individuals make sense and order of an everyday social world.
to assimilate practices, hierarchies, tacit knowledge, relationship structures etc., while concurrently debriefing, that is, systematically describing them and their interpreted meanings. The understanding of the studied culture is changed when actually witnessing first-hand and to an even larger extent by also taking part in practices and ‘doing the job’. The bottom-up ethnographical approach lets the researcher see different points of view regarding practice, methods, specific actions, expertise, implicit knowledge and conflicts of interest.

What can be discovered through ethnography?

- The uncovering of hidden aspects of the activity – what is previously known and, perhaps even documented might not be good descriptions of ‘what actually is performed’. Local circumstances might render indispensable non-documented practices, which are only observable once within the context of action.

- Public knowledge or descriptions of the activity, which are often based on a generic theory (or media reports and folk models), is frequently in contrast to the unofficial aspects of the same. Thus, there is a need to complement the picture of the activity with more internal aspects, which are based on studied practice.

- Ethnography can capture categories and expressions used naturally within an area of research, emphasizing that local and situated expertise is important.

- By putting the light on seemingly insignificant details of the activity, ethnography can reveal specific mechanisms, which make the activity meaningful and worthwhile.

- Concrete needs, objectives and methods that are described in ways that are recognizable to those who have and perform them.

- Learning about relationships and connections between individuals and groups and explicating what the context is made up of and how the division of labour looks in this context,

- Finding conflicts between individuals, activity details, groups, technology etc.
Examine what the specifics of conflicts are, what/who is causing them, how are they dealt with socially/technically. Asking if there might be different magnitudes of problems et c

On the ground of the empirical work in the papers in this thesis, that forum data has a potential to address each and every one of the points made above. In summary, potential opportunities of both traditional and online ethnography includes the discovery of: practice-grounded information flows with possible hubs and hindrances; mismatches between user needs, desires and objectives and the technology used to address them; and what makes an activity good/work from within. The drawback of traditional ethnography is that it is resource intensive. This means that it requires attention to details of conduct and that it does not have many established representations for informing design.

Online ethnography commonly makes use of three types of data collection methods:

- Document collection
- Online observation
- Online interviews

Document collection refers to the gathering of, for example, archived interaction (e.g. mailing list archives, forum discussion archives). Online observation refers to the researcher’s concurrent use of, and data collection through, the services or applications utilized in the studied online practice. For example, the use of chat services (Svenningson, 2001), or virtual world systems (Jakobsson, 2006) as means to observe practices. Compared to document collection, online observation is real-time, which has certain implications on the observation type and researcher role (see Table 2, p.40). Online interviews refer to using synchronous, micro-synchronous or asynchronous communication technology as a mediator of an interview. The papers in this thesis mainly rely on document collection as their primary method, but online observation and online interviews were used as supplementary methods.
**Document collection**

Kozinets (2002) makes an account of the differences and similarities between a traditional ethnographic procedure and its counterparts when studying online communities and cultures. A common procedure consists of making a cultural entrée, gathering and analyzing data, ensuring trustworthy interpretations, conducting ethical research and providing for cultural member feedback. Regarding the entrée, Kozinets limits it to identifying the community appropriate to study, on the basis of the level of activity in it (i.e. number of active members, amount and richness of postings). However, if one intends to not only collect information available in archives, but also actually engage or participate in the community, the notion of entrée has other important aspects, such as covert/overt observation, participation and data collection and their methodological consequences (again see Table 2, p.40).

Data collection consists of recording, logging or copying transcripts of the computer-mediated communications that are taking place and field notes taken by the ethnographer regarding community members, interactions and its meanings. In general, the collected data from online studies is made up of textual material (although audio and video are to an increasing extent included). Certain structural and contextual information can also be collected from, for example, screenshots. As indicated, discussion forums make up the primary source of data. Data collection in that case, implied first, identifying relevant discussion threads and then relevant posts within that thread. For the first two studies, this was manually and systematically done by working chronologically backwards from a pre-decided moment in time. This moment was, when possible, decided to correlate with the introduction of technical features relating to the research question. The third study (on social metadata) utilized four dedicated forum search engines to identify relevant discussion threads. Posts were then elicited manually. In all three studies posts were elicited

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4 Online forum discussion is often organized in so called threads, where individual posts are grouped, regularly according to the topic of discussion.
on the basis of their relevance and potential to answer the specific research question.

The selection and amount of data collected is usually at the discretion of the ethnographer and should, naturally, be guided by the research question. Since a lot of communities are highly social arenas with its benefits and drawbacks, data can be cluttered with ‘off-topic’ material. In a strict sense, ethnography is highly interested in all activities carried out, but depending on the research question a preliminary sorting can be resource-saving. A risk is that it can be hard to predict what to save and pursue and what to discard and ignore, even with a narrow topic of research. On the one hand, this depends on the relevance of answering the research question and is up to the skills of the researcher. On the other hand, the technical cost of saving additional material from online ethnographic studies is usually low, so while a preliminary sorting can save time and effort, there is always a possibility to re-include material previously disregarded. For the research conducted here, the data from the online milieu was consecutively analyzed with help of the framework presented in Figure 1 (p.27). The analysis followed three major steps, in which the data was collected, selected, coded and clustered with regards to emergent themes. The application theory in all three studies was gifting. The sample size was not decided in advance. Rather the reduction process guided elicitation. Once we did not see any new classes of phenomena we stopped elicitation of data. So, from a pragmatic view the final sample seemed to reflect the variance of the population.

A benefit that has been suggested to come from the social and revealing nature of online communication and community mechanisms, combined with the fact that ethnography focuses on specifics and details, is that, in terms of data, ‘a little goes a long way’. That is to say, providing that each individual data post is rich, the amount needed of them are not so large in order for the researcher to be able to draw purposeful conclusions from them. As regards online ethnographic data collection it is important to consider the balance of collecting data to the level where no additional or new information emerges and the risk of collecting too much data. Due to the availability and ease of data collection, huge amounts of data can be accumulated, increasing the risk of having an insurmountable records and
spending too little time actually classifying and analyzing them. Again, this shows the importance of ‘living the life’ and becoming aware of communal memberships, rituals, language and behaviours in order to bring depth and quality to the analysis. As a combined effort to address the grounding of interpretations as well as to estimate the sufficiency of collection, some tentative analysis results were fed back to the network forum to generate discussion. The goal was to instigate discussion and use this as a recurring source of data (which could challenge the analysis or be incorporated as further proof of trustworthiness). The feedback did generate some debate and discussion that was enriching both to analysis, as well as to picking up on keywords and in-vivo-expressions as Internet slang is common in forums. Apart from that, the feedback also has the function of meeting informants on their ground. This can help to make a more situated and grounded judgment about the appropriateness of including quotes and applying certain analytical reasoning. However, there is a risk connected to this procedure, why after two general forum feedback sessions it was decided to attempt more personal feedback through interviews with users. The reason results were not fed back to the macro-level forums more extensively or continuously was the risk of cluttering or biasing the naturally occurring discussions. Fortunately, these were very rich and inspired and consequently, the grounding of interpretations was mainly done via individual informants.

So, one way to describe what online ethnographers are trying to do is to state that they are recontextualizing the recorded conversational acts with a systematically organized way of describing the setting (e.g. with certain uses of technology, community norms, motivations etc). In our case this meant a combination of gifting theory, sociotechnical contexts and themes emerging from the data. As such, the theoretical position of this thesis is a contextualist one – it retains focus on the perspective of end-users, while also acknowledging the impacts of broader social contexts and social technologies. This is also reflected in the choice of a ‘unit of analysis’ in online ethnography. In the words of Kozinets:

However, netnography seems perfectly suited to Mead’s (1938) approach, in which the ultimate unit of analysis is not the person, but the behavior or the act. (Kozinets, 2002, p. 64)
As echoed in the research question, the unit of analysis for this thesis, is the practice of online gifting in large sharing networks. Practices are defined as behaviours or acts that become, or has the potential to become, customary ways of operating. As such, the analysis of user statements is not to be seen as an attempt to research internal psychological functions, but rather external expressions about the performance or perception of a certain activity or the results thereof.

As mentioned, forum message elicitation was the main method of data collection. Still, several complementary techniques were used, such as online observations and online interviews.

**Online observation**

In this line of research the co-evolvement of social activities, groupings and technical tools and development has become a central theme. What is interesting is of course to understand how digital gifting works, mainly from the gifter’s perspective. However, the gifter does not act in a sociotechnical vacuum: the motivations, technology, netiquette, and conflicts of interest etc. emerge during the social interaction.

Internet use is often distributed over different techniques (such as discussion groups, IM conversations, file sharing and display, member profiles etc.) and is capable of leaving many manifest traces. The combination of different sources of data in the collection and eventually analysis of social practices can be very rewarding for scientists with an interest in social activities on the net. Consequently, this approach was also tried out in this research. First, the use of the application over a long period of time (including spontaneous interviews, communication and interaction) helped to develop a sense of what is relevant, important and significant to end-users. Also, to actually engage in the common activities of a network or community is beneficial in reducing the potential gap between what people say and what people do.

Moreover, this approach obliges researchers to not only participate in the [online] groups that they study but also to have experienced the dilemma central to the participants’ discussions. (Walstrom, 2004)
The role of field notes has been thoroughly discussed in traditional literature (Emerson, et al., 1995), but as regards online ethnography it has not been well covered. However, the importance of these, and the process of collecting them, is not to be underrated. Several authors have, on the contrary, reported on the high value of field notes (Baym, 2000, Jakobsson, 2006).

<table>
<thead>
<tr>
<th>Observation Type</th>
<th>Participant Role</th>
<th>Only Observing Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Observation</td>
<td>(Participant observer)</td>
<td>(Reporter)</td>
</tr>
<tr>
<td>Partly Open Observation</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Hidden Observation</td>
<td>(Wallraff/undercover researcher)</td>
<td>X (Spy)</td>
</tr>
</tbody>
</table>

*Table 2. Observation types and researcher roles (adopted from (Svenningson, 2001))*

The X:es in the table above mark the types of observation that were conducted for this research. The reasons the X:es are skewing low and right are several. In sharing applications it is hard to ‘be open’ in the same sense as in a physical environment. Rather, the observer is part of an invisible audience for certain purposes. Another reason to defend the research role is that the observation was conducted as a supplementary method only. It did not deal with individuals or sensitive data, but ways of conduct in a general sense (i.e. practices). As such it was conducted mostly to gain theoretical sensitivity and support analysis.

**Online interviews.**

Interestingly, they also direct attention towards the benefits and drawbacks of conventional or offline methods.

It is now possible to engage in "virtual interviewing", in which Internet connections are used synchronously or asynchronously to obtain information. The advantages include low cost, as the result of no telephone or interviewer charges, and speed of returns. Of course, face-to-face interaction is eliminated, as is the possibility, for both interviewer and respondent, of reading nonverbal behavior or of cuing from gender, race, age, class, and other personal characteristics is difficult, if not impossible. Internet surveys make it easy for respondents to manufacture fictional social realities without anyone knowing the difference... Of course, interviewers can also deceive respondents by claiming experiences or characteristics they do not have in hopes of establishing better rapport. They can feign responses for the same purpose by "false nonverbals," such as telling respondents that they "laughed" or "were pained" by particular comments. Markham (1998), in her autoethnography of Internet interviewing, reports that electronic interviews take longer than their traditional counterparts and that responses are more cryptic and less in depth, but the interviewer has more time to phrase follow-up questions or probes properly. (Fontana and Frey, 2000)

Online interviews can be performed synchronously or asynchronously. The main 'genres' (Barnes, 2003) of computer-mediated communication which are used for performing online interviews are either instant messaging (Davis, et al., 2004, Voida, et al., 2004, Lawson, 2004) or e-mail (Bampton and Cowton, 2002, Meho, in press). The big initial difference between these two genres is that instant messaging (IM) is synchronous and e-mail is asynchronous. This has certain implications on the type of interaction that can take place. While both these genres rely on certain technological skills and resources, IM is more time-dependent/intensive and thus sensitive to technical problems, creating lags and delays in responses. IM conversations also have the potential of being concurrent, for example an interviewee can sometimes manage as many as 20 conversations at the same time (Crystal, 2001).
In this research, mainly asynchronous, but some synchronous, interviews were conducted to shed more light on specific issues or to ground interpretations. In total, 27 interviews were performed in different session sets, sometimes with random users and sometimes with users who had expressed concerns that needed clarification.

It is necessary to highlight the strengths and limitations of online interviews, since they indirectly reveal what is good and bad about traditional interviews. As stated, several authors have addressed the benefits and drawbacks of online interviews. To summarize, they can be described as:

Strengths:

- Online conversations allow participants to reconsider, research, recognize and reflect on words and expressions prior to posting them, allowing the conversation to be mutually negotiated
- Interviewees with textual skills are able to create more refined accounts of their experience
- The aim with the interview becomes more clear due to the absence of visual and bodily cues
- No non-verbal cues that discourage or distract participants
- Goes beyond geographical and economical limitations in term of reaching participants and interviewees otherwise not accessible

Limitations:

- Limited non-verbal cues for encouragement
- Empathic and emotional communication is not obviously manifested
- Covert/constructed identities or characteristics, as well as temporary nature of participation, can make follow ups difficult
- Potentially skewed population (predominantly young European or American male)
• Asynchronous: can be stretched out over time due to flexibility in response time – respondents can answer in their own time
• Requires careful development of research relationships and knowledge of studied venue, and thus, time
• Potential strategic self-presentation

It is imperative to remember that, when considering the benefits and drawbacks, depending on which perspective is taken, the pluses and minuses can be interpreted reversely. For example, the interviewee has a possibility to, at any time, increase the latency of, or even ‘withdraw without a trace’ from the interview. While this is on the one hand not a desired outcome for the interviewer, it is on the other a ‘safety vent’, increasing a sense of security for the interviewee. Likewise, the careful development of a trusting research relationship is not merely time-consuming, but also essential and rewarding in terms of generating high quality data.

Email communication is then constructed as a continuous alternation between an informal and formal style in answering the question, between interviewing and conversing. (Kivits, 2005)

Olivero and Lunt (2004), as well as Kivits (2005), stress the importance of upholding a trustful, sensitive and linguistically adaptive relationship. Since e-mail interviews rely on textual communication, the linguistic and paralinguistic methods of strengthening the relationship is central. As such, the researcher’s sensitivity to issues of fostering trust, reciprocal conversation and questioning, equal partaking, authentic disclosure, cooperation and reflexivity becomes important. As regards the research here, most respondents were interested in telling more about certain statements or to engage in discussions about tentative analysis results. A minority of users were surprised, not so much by the results, but by the fact that one, as a researcher, can earn a living by examining these practices. While few users had thought about their activities and behaviours in terms of gifting, many were enthusiastic about the theory and results and only had minor comments. Perhaps this is due to a view of gifting as a pro-social behaviour, that is, a behaviour that is viewed as
beneficial to and by society. Nevertheless, the feedback provided some support for our analysis. All the supplementary interviews were relatively short. No interview lasted more than 10 communicative turns. However the amount of discussed information per turn varied widely as it was dependent on the complexity of the issues lifted by the respondent.

Amount

The undeniably larger part of the data was present without prompting (e.g. researcher involvement/participation/interaction). We did post one question in the music-study forum, fed back tentative analysis results to forums on two occasions and we performed 27 unstructured e-mail interviews (10 with music-sharing users and 17 with photo-sharing users). However, these were mainly conducted as verification of tentative analysis results and the main part of the data was such that it had appeared more or less spontaneously. Data from discussion fora can be quite cluttered with nonsense messages, flaming outbursts etc. Although these messages have been of interest to certain research on computer-mediated communication, they were only occasionally relevant to the research question in this thesis. As described in the upcoming section on analysis, theoretical code categories, developed from backgrounding literature and the research question, guided the elicitation of data. As a result, the data set was, in a sense, cleaned from much irrelevant material by the way it was sampled. Consequently, the subsequent use of the terms the data and the messages refers to the cleaned set, that is, the messages that were seen as relevant and having a bearing on answering the research question. The total number of relevant and analytically included messages was 1655 (580 from the music-sharing study, 760 from the photo-sharing study and 315 from the social metadata study). The data includes comments from hundreds of various user names. Apart from this there is also supplementary data in the form of 27 interview logs, user profile examples, individual sharing policies and field notes.

Reduction and visualization: analyzing online data

The reduction step aims to condense the data into use- and purposeful insights. Reduction involves three substeps: selection, coding and
clustering. Selection means identifying central categories from the application theory as well as “remaining open to adding new categories from the data” (Romano, et al., 2003, p. 222). Overall theoretical categories derived from theory were what (characteristics of digital goods), to whom (relationships), how (sociotechnical means) and why (motivations). Other-orientation, social bonding and reciprocity, also derived from theory, became initial parts of the why category. Coding is, in the model of Romano et al, described as the identification of initial data-derived categories. The selection and coding steps are interrelated as the continuous analysis of the data feeds back into the selection phase. This process is similar to a so called thematic analysis, where the analyst looks to identify recurrent themes across the data by careful reading and re-reading of the data (Freeday and Muir-Cochrane, 2006). Thematic analysis can be seen as a generic and flexible method found in many different methodological and analytical traditions (Braun and Clarke, 2006, Emerson, et al., 1995). It is also open in terms of application theory:

Thematic analysis is not wedded to any pre-existing theoretical framework, and therefore it can be used within different theoretical frameworks (Braun and Clarke, 2006, p. 81)

As the aims of the papers were to identify and explore dimensions and characteristics of online gifting, a thematic approach seemed reasonable. Inductive categories were continuously identified, and eventually combined with deductive categories and grouped into a generic thematic coding scheme (see below). A helpful tool in this process is the visualization of coded data in the shape of tables, models and graphics that can support analysts in the recognition of patterns and gaining of wider insight. As a natural part of the process, several such tentative representations were developed throughout these analyses.

<table>
<thead>
<tr>
<th>WHY</th>
<th>HOW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Altruistic</td>
<td>Feature</td>
</tr>
<tr>
<td>Ideological</td>
<td>Direction</td>
</tr>
<tr>
<td>Pseudo-gifting</td>
<td>Initiative</td>
</tr>
<tr>
<td>Social</td>
<td>Incentive</td>
</tr>
<tr>
<td>Fear-based</td>
<td>Identification</td>
</tr>
<tr>
<td>Reciprocal</td>
<td>Limitation</td>
</tr>
</tbody>
</table>
WHAT | Artefacts | To WHOM | Friends
---|---|---|---
Storage & Bandwidth | Expertise | Family | Acquaintances
Social metadata

*Table 3. General thematic coding scheme*

This table depicts the *general* thematic coding scheme. Depending on the specific research question of the paper, different sub-categories and sub-themes would emerge. A dedicated computer program was used for coding and clustering of the data (i.e. TAMS analyzer). The selection of what constitutes a central theme can follow explicit rules regarding prevalence and quantitative distribution, but it can also be at the discretion of the researcher. As such, themes that highlighted sociotechnical issues, dilemmas or characteristics were seen as key. For the research reported here, a key theme does not necessarily have to be the most prevalent or quantitatively largest in the data, but it has to “capture something important in relation to the research question” (Braun and Clarke, 2006). Naturally, a hermeneutic turn-taking between the overall picture and specific instances was central to the analysis, and as such themes were never developed out of an isolated data unit. Rather, themes emerged from the very act of shifting between the specific and the general, in the light of the research question. Thus, since qualitative research forms the ground of the thesis, reporting on numerical distributions or statistical significance would be misleading and even impossible.

**Methodological discussion**

As indicated, finding the absolute scientific truth (in a positivistic sense) is not the overall ambition of qualitative analysis, nor is it the basis for evaluation of qualitative studies (Seale, 2004). What is important is a well-founded methodological framework, a properly represented researcher perspective and trustworthy interpretations and representations of data (Markham, 2004a). Another account of how to treat validity and reliability
in qualitative research presents the criteria credibility, transferability, dependability and confirmability (Guba and Lincoln, 1989). According to the authors, these criteria correspond to criteria used in quantitative research in the following way:

<table>
<thead>
<tr>
<th>Qualitative evaluation criteria</th>
<th>Corresponding quantitative evaluation criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credibility</td>
<td>Internal validity</td>
</tr>
<tr>
<td>Transferability</td>
<td>External validity</td>
</tr>
<tr>
<td>Dependability</td>
<td>Reliability</td>
</tr>
<tr>
<td>Confirmability</td>
<td>Objectivity</td>
</tr>
</tbody>
</table>

Table 4. Comparison of qualitative and quantitative evaluation criteria

As we shall see, there is a certain overlap between the qualitative evaluation criteria in the contexts of the papers. So, before discussing them in more detail, it is important to repeat the special characteristics that have further impact on online qualitative research.

Challenging characteristics of online data collection

From a methodological point of view it is interesting to discuss which qualitative methodological issues that need consideration in a technology-mediated context, such as online venues. The Internet, at large, holds certain characteristics, which are supported more or less by the various applications utilizing it. Internet is, in a certain sense, global, it is, in a certain sense, anonymous, it is, in a certain sense, interactive and it supports digital manipulation (material can be digitized, transferred, stored, cross-referenced and reproduced with certain flexibility and efficiency) (Weckert, 2000). These characteristics bring some fundamental differences with regards to researching online gifting and offline gifting:

- The population online may be heterogeneous and almost ubiquitous to researchers, which raises questions about the
validity and reliability of the data. There may be, for example, potential misrepresentative attractions, that is, that the people responding to calls for participation or people who post to forums etc. are only a minor extrovert part of the actual population

- Not only are the users dissimilar, but the specific technologies used to gift can be quite diverse and consequently influence the sociotechnical setting
- Identity, anonymity and pseudonymity give rise to methodological issues
- All statements above raise issues concerning research ethics

Credibility and transferability

Validity is commonly defined as the extent to which an instrument adequately and accurately captures the theoretical construct it seeks to measure. The research question is important as it often formulates the theoretical constructions. In this thesis, the theoretical construct is, in a large sense, practices. Practices are commonly defined as customary ways of operating or behaving. From this perspective, the papers of this thesis do certainly address practices.

Further, it has been suggested (and in some research communities taken for granted) that for qualitative studies, the concept of validity is non-relevant. What is important is to establish refined reflexivity (Delamont, 2004) and trustworthy interpretations of data (Golafshani, 2003).

As seen from Table 2, it is possible to make a comparison of internal and external validity to the concepts of credibility and transferability. Credibility refers to the degree by which the results are recognizable and valid from the perspective of the participants. Transferability refers to the degree to which the results can be transferred or generalized to other settings and contexts. Regarding the credibility of data and transferability of the findings, it needs to be said that this thesis consists of ethnographically informed case-studies. Nevertheless, we have reason to discuss and even try to defend the presence of such scientific concepts as credibility and transferability. Seeing that the large networks of study in
this thesis consist of several thousands of potentially includable individuals, a complete coverage of the population is impractical, not to say impossible. Consequently, because of practical and material constraints, we need to sample the population. The sampling was motivated both by theories and data as the research question and the data urged the subsequent data collection. This implies that the subset is pragmatically defined by the data collection method. Online ethnography can only address individuals who speak up or ‘write up’ or somehow participate, in this case, in sharing activities. Further, the presence (in numbers) of gifters or individuals with certain concerns in a massive online sharing network is hard to predict. What this statement is meant to illustrate is that it is equally hard to generate a statistically representative sample based on this criteria. As Gobo (2004) puts it:

The significance of this argument is even greater when we think of other more dynamic units: as we do not know how characteristics concerning emotions, attitudes, opinions and behavior are distributed in the population, aiming at statistical representativeness of samples is technically groundless. Is there a population list on authorative or unselfish behaviour? (Gobo, 2004, p. 440)

Gifting as well as gifting concerns are certainly ‘dynamic units’ as they are complex in their nature and consisting of several variables. Nevertheless, the chosen networks have a high significance and relevance for the research question. A more specific way to put it is to say that when looking at practices of online gifting, we need to look at online settings where gifting of content is likely to occur.

While the specific concerns reported in this thesis are unique, they also represent a class of concerns and intentions, which have been identified or alluded to in many other contexts. In other words, the results are not transferable as to what specific concerns users in other large sharing networks do actually have, but what concerns users in these networks can have. Thus, the studies describe the social significance of dimensions and the relations between them, rather than statistically logic populations, and how many individuals who has a certain concern.
Regarding the ‘authenticity’ of the data there are many epistemological issues to elaborate on. This thesis has little room to examine all of them in detail, but to simply presume that textual online communication is less representative than, say, interviewing face-to-face, could be impetuous (Markham, 2004b). Several attempts were taken to address the issue of authenticity and trustworthiness of the data. Once the initial data was collected and analyzed, some tentative results were presented to parts of the studied community (except in the case of Paper V) and the pursuing discussion and comments were included as means to strengthen the anchoring of the results. Another part was to consecutively and for a long period of time use the applications and participate in the various aspects of the everyday life of the online networkers. In practice, this reveals a perspective on and description of what people do and with whom they interact. This, in turn, created a continuously enriched perspective on the forum data, which arguably strengthened the analytical sensitivity. This thesis also suggests that this is a fruitful way to come to grips with the relation between specific details in parts and (abstracted) overall ‘wholes’.

All three studies forming the ground for this thesis can be described as ethnographically informed case-studies. As such they constitute thorough examinations of an instance of a particular class of phenomena. This leads to an advantage in terms of depth, but a weakness in terms of breadth. The three chosen cases for the studies complement each other, since the second (Paper IV) builds on the findings from the first (Paper I, II and III), and the third study (Paper V) builds on results from the second, but still represents different networks. The cases thus indicate that the phenomenon of gifting exists in three somewhat contrasting contexts and can thus be described as having the force of examples. Case studies are thus generalizable because they contribute to a growing body of scientific research, which forms a system of cases. But hey also constitute tests of hypotheses and methods, which may supplement the overall understanding of a phenomena (Flyvbjerg, 2004).

Although the application theory in this thesis has been gifting, the potential applicability of other models of explanation is recognized. Other theories and methods could naturally be applied to the same data set. However, without the gifting theory, the same dimensions and
characteristics would not have been discovered. Gifting is repeatedly present in many communities and societies and the theoretical application of gifting concepts is then arguably relevant to the further development of theory (i.e. a ‘theoretical transferability’). Another way to put it is to say that, because of the wide recognition of gifting, the application of gifting concepts is theoretically meaningful. The use of an application theory also holds back the overwhelming idea of trying to draw a complete picture of all social interaction occurring in a sharing network (LeBesco, 2004). A benefit of this model is that it aims to generate models, tables and graphics as units of presentation, and ultimately patterns (themes) and relationships as analytical outcomes. Usually, ethnographies produce thick descriptions as the result of research. This as a methodological and desirable necessity in ethnographical work (see Paper IV for the closest thing to a ‘thick description’ in this thesis). However, we also want to support less challenging comparisons and applications of the results, particularly in the light of the current rapid sociotechnical development.

There needs to be a balance between experimenter expectancy through overreliance on a priory theory and total dependence on data-derived meaning that may not provide any generalizability of the results. (Romano, et al., 2003)

The themes, dimensions and patterns that emerge from analysis envelop the richness of the data, but also allow for comparisons over different contexts. This discussion ties nicely into further elaboration of the concepts dependability and confirmability.

**Dependability and confirmability**

Dependability refers to the obligation of the researcher to provide accurate descriptions of the context, as the assumption of situated qualitative research is that we cannot measure the exact same thing twice. We have aimed to describe the sociotechnical context to the best of our ability (for comparative purposes), while at the same time presenting results that are also in the shape of models illustrating patterns and relationships (also for comparative purposes). In order to answer the research question - how can the sociotechnical practice of digital media gifting in online social networks be characterized? – we (and arguably future scholars) need results that
can be compared over different sharing networks. While thick descriptions would have accomplished this as well, we wanted to provide our best guesses as to how to make the data more theoretically and easily comparable. However, as there are obvious risks with this approach, such as over-reduction and constraining future interpretations of data (Diggins and Tolmie, 2003), we wish to stress that we do not see the models presented in this thesis as complete or generic theories. To retain the view of the models as interfaces through which the data can be understood, we have throughout the papers used conceptual dimensions intended to envelope and reflect the variety of the data.

Regarding the heterogeneity of the user group, this is a circumstance, which adds to the difficulty of generalizing results. The thesis has not emphasized the question of who gives (what to whom, how and why). The practice has been the focus of the research, rather than the individuals who are part of it. This, however, does not necessarily mean that the results do not carry any application power in other domains or for other user groups. Arguably, that is still open to further research. Models, patterns and dimensions derived from a specific user group may still be relevant in the research concerning structurally similar objects of study. The difficulty in accurately concluding a representative population stresses an even greater importance in representing the social and technological structures surrounding, emerging and co-evolving with it. By sensitively describing these circumstances and mechanisms the potential transferability of the results becomes more highlighted, and thus of more use to fellow researchers and practioners.

The problem of accessing individuals who do not speak up in online forums etc. is of course prevalent. These ‘lurkers’ (Preece, et al., 2004) can naturally be important informants in a study of online cultures. Therefore, when researching online gifting, it is not only the textual communication that is of importance. The gifted goods itself is central. In Internet jargon, it is important to differ between lurking (only reading messages, and never posting – mainly used in discussion forums) and leeching (only downloading files, and never upload – mainly used in file-sharing). While lurking can be hard to detect both for researchers and forum visitors, leeching is more easily observed and it can also be indirectly observed in
the many reactions towards leeching in forum conversations. This indicates the importance of participating in sharing acts, and concurrently writing ethnographic fieldnotes, when researching the online gifting phenomenon. So while leeches may be forum lurkers as well, for obvious reasons, they may still be reached through communication features of the sharing application(s) in question. With participatory use, there is an opportunity of improved informant access and increased possibilities to reach so called hard-to-involve-users.

The anonymity and potential white-washing (Feldman, et al., 2004) of terminal identities’(i.e. changing or signing up again with a nickname, but with a clean interaction history) is also an interesting dimension of online populations. While much gifting is suggested to happen for public reputation, the anonymity factor seems to partly contradict this. Also, even though goods might be gifted as public goods, the reward cycle in terms of reputation and/or appreciation can be on an interpersonal level and thus not generate much ‘reputation’ as such. Anonymity, whitewashing receivers and fluent relations are interesting because they function both as supporters and contradictrors of self-centered pseudo-gifting motivations. For receivers these are surely mechanisms, which can be used to fulfil self-centered receiving needs, but for gifter these mechanisms suggest that returns (such as reputation, feedback, direct reciprocity etc.) are difficult to ascribe any certainty to. If there is need to get something external in return it still has to be very open to uncertainty and ambiguity. No doubt, the issue of identification is central in the analysis of online gifting. However, the specific meanings and importance of it needs to be examined within the borders of a certain online venue.

Confirmability refers to the degree by which the results can be confirmed by others. We have actively tried to engage the participants, to get ‘confirmation’ from them. Papers I and II have also been co-authored, adding an extra pair of critical eyes on the data, resulting in some collaboration around identification of themes. However, the main author has performed most of the coding single-handedly (something which is also regarded as a methodological strength by some, e.g. (Emerson, et al., 1995). This was mainly a pragmatic resource issue, partly dependent on the nature of doctoral work. Supplementary efforts would have added
further interrater reliability to the collection of papers (Conway, et al., 1995).

Ethics

Research ethics come particularly in focus when conducting online ethnographies (Sharf, 1999). Online material can be quite dynamic and ephemeral. At the same time, one benefit from collecting textual material online is that it is automatically transcribed without particular efforts. The transcripts can easily be copied or saved for future use and reuse. At times they are also publicly available online for quite some time. This can of course also be a problem, why the issue of informed consent is important (Spinello, 1995). Scholars who intend to engage in discussion and post questions to the forum usually introduce themselves and their goals prior to the study (Walstrom, 2004). With researchers who lurk in concurrent discussion or access archival data, the choice of obtaining consent or not is divided (Chen, et al., 2004, Bruckman, 2002). For large public forums there is an issue regarding from whom to seek permission as well as who has the mandate to deny access since they are public (Clegg Smith, 2004). Researchers must themselves make contextually informed judgments regarding how to deal with these issues. If researchers present themselves and their study they must be sensitive to the response this generates. Similarly they must acknowledge the level of sensitivity of data present in the forums and make sure they do not compromise the integrity of users. While the research in this thesis has not collected informed consent from all users posting in the studied public discussion forums, it has collected permissions for all quotes used in the papers from their creators. It has also taken hard measures to protect the identities and integrity of the studied users (for an example, see Paper V).

Many other ethical concerns, as several researchers have noted, also comes into new consideration due to online studies (Thomsen, et al., 1998, Paccagnella, 1997, Kozinets, 2002, Hine, 2000, Dholakia and Zhang, 2004, Davis and Brewer, 1997, Bakardjieva, et al., 2004, Ess and Jones, 2004, Svenningsson, 2004). There are several guidelines and advice regarding how to conduct online studies. The papers in this study mostly refer to the ethical instructions provided by Sharf (1999), since these were the first to
be included in the work and because there occurred to be no reasons to refute them.

**Delimitations of the studies and the thesis**

There are methodological issues regarding the validity of these types of studies. The relation between what people say and what people actually do has received much previous attention in qualitative research (Markham, 2004b) and particularly in such fields as social network analysis. The thesis to this point does not include a comprehensive discussion on such issues. As described, we have attempted to remedy this by utilizing both application usage and forum data analysis as methods for data collection.

While we have argued that representative sampling is difficult and that we are mainly interested in the practice of gifting, we also acknowledge that we know very little about the demographics of the users examined in this thesis. Further, we also acknowledge that the overall understanding of an online phenomenon many times benefits from examining the offline production of it (Wakeford, 2000). We have taken one step in this direction by using traditional gifting as a comparative theory. Furthermore, it is inevitably so that informants discuss and compare offline aspects, such as relationships, laws or social rules. We have noted these as impacting aspects and interesting comparisons from the perspective of end-users and the sociotechnical context of the specific service used, but not performed any detailed analyses of society-level sociocultural contexts or structural conditions.

Gifting is an activity that includes both the activity of giving, but also the activity of receiving. This thesis has only begun to examine the characteristics and dimensions of online gift reception (in Paper V, mainly). However, as giving and receiving are so interlinked in the very process of gifting, we did make some preliminary observations:

- Gifters sometimes predicted the reception of certain gifted content and based on their prediction chose to provide it accordingly. For example, users would predict the reception of 100 photos from the same wedding as boring for the receiver and thus tried to
circumvent this from appearing in the potential receivers' photo stream.

- Potential receivers of active (e.g. transfers initiated by giver to receiver) gifting, preferred/required a strong and trustworthy social bond before accepting gifts from a certain gifter.

While this thesis cannot claim to be a study of various concepts addressing the interaction between communication technology and people, it is also hard to not notice that there is a variety in the terms used by scholars. Networked, digital, mediated, online and virtual are some of the more commonly used notions to point at this relationship. In hindsight, it would probably have made sense to distinguish these concepts in the papers to see if and what differences they may envelope and convey. As it is now, this thesis is a bit careless in the interchangeable use of these terms. However, this is also a result of the acknowledgement of the co-influence between end-users, large networks of others and specific technology. A naïve distinction could be showed by the emphasis that these terms convey to the author of this thesis:

- Networked – emphasis on the system of interconnected nodes
- Mediated – emphasis on the tool or technology used
- Digital – emphasis on the nature of the goods and transmissions
- Online – emphasis on the nature of being remotely connected to a network
- Virtual – emphasis on a representation, rather than the ‘real’

**Results**

This chapter summarizes and relates the results from the five papers in this thesis.

The Internet helps us test whether our theories are theories of social organization, or just social organization as we have known it to date. (Baym, 2005)
At this point in time, it is interesting to follow how deeply rooted offline activities are mediated by technology. One part of the result is the demonstrated application power of the gifting framework. It provides a theoretical lens or magnifying glass that allows us to frame, highlight and discuss significant parts of the sharing phenomenon. We do not suggest that gifting explains all sharing that takes place – online or otherwise. Theories of public goods, distributed collaboration and game theory, including the well-known prisoner’s dilemma, would probably also have generated interesting results applied to the collected data. The papers in this volume have, to a certain extent, discussed these alternative approaches (and their limitations) and also combined other social theories with gifting (e.g. social dilemmas) with promising effect. Notably, the question that spurred the research in this thesis included the concept of gifting, asking “can gifting be a part of what drives the popularity of sharing applications and services?” The same question formed the initial idea that the importance of gifting would be interesting to explore. Nevertheless, our more thorough studies of the gifting perspective gave us reason to question presuppositions about the interplay between motivations, means, relationships and the characteristics of digital goods on a micro-social level. Also, on a larger scale, how we gift says much about the balance between self-centeredness and altruism, anonymity and impression management, free culture and digital rights etc. in a specific network. Gifting has an established and solid body of work devoted to the (social) transfer of goods. Ignoring the highly relevant collection of gifting theories and models just because the context has changed seems irresponsible. In fact, it may be argued that it is a scientific duty to examine the applicability of offline social theory to online contexts. Gifting also helps us to emphasize and discuss the giving side of sharing with greater accuracy. Its emphasis on context and relations adds a theoretical sensitivity regarding these notions in the study of the social media sharing. It also provides a vocabulary that does not presuppose the existence of explicit and fixed motives for contributing. Notably, only a minority of social media users used the gifting vocabulary. Mostly, they referred to their actions as sharing regardless of how their actions differed in motivation or policy with those of their peers. Some users would embrace the gifting notion, when confronted with tentative analysis results, while others would claim that gifting was something different to
them. The reasons they gave for this were that gifting to them is more occasion-centric and not so much an everyday, ubiquitous activity. Gifting is also a more deliberately intended and actively planned conscious action. While this may add some critique to the idea that results from ethnographic studies should be recognizable by the studied culture, we believe that this may also be indicative of a difference between the folk model of gifting and its academic counterpart.

We studied recreational online media sharing from a gifting perspective in three different types of sharing networks. By using the analytical dimensions presented in Paper III, we can make an attempt to distinguish the case networks:

<table>
<thead>
<tr>
<th></th>
<th>A. Soulseek</th>
<th>B. Flickr</th>
<th>C. Facebook</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direction</td>
<td>Public and semi-public, ideology towards public</td>
<td>Public and semi-public</td>
<td>Private to meso-public (friend or no-friend)</td>
</tr>
<tr>
<td>Incentive</td>
<td>Voluntary (socially enforced)</td>
<td>Voluntary</td>
<td>Voluntary (socially enforced)</td>
</tr>
<tr>
<td>Identification</td>
<td>Pseudonymous-anonymous</td>
<td>Identified-pseudonymous</td>
<td>Identified</td>
</tr>
<tr>
<td>Initiative</td>
<td>Passive</td>
<td>Some active aspects, but mostly passive</td>
<td>Passive-active combination</td>
</tr>
<tr>
<td>Limitation</td>
<td>Open-mixed</td>
<td>Open-mixed</td>
<td>Mixed-restricted (limited profiles)</td>
</tr>
</tbody>
</table>

Table 5. Comparison of the studied networks

The categorization above is in some instances simplified. A more detailed analysis of each dimension for each service would create a more refined
classification. Nevertheless, in summary, we can say that when looking at the studies from a chronological perspective (from A to C), the difference between the studied networks can be categorized by:

- Increased levels of identification
- Increased levels of active initiative (although still mixed)
- Increased levels of restriction
- A move towards private and semi-public direction

Of course, this trend only relates to the studies carried out in this particular thesis and is not quantitatively verified, but as a way of comparing the networks it gives an idea of where the structural differences can be found. The comparison above suggests the applicability and, to a certain extent, necessity of conducting case-studies of sharing technologies. The differences between certain technologies can generate insights relating to how social structures and technical features interact.

It is important to note that this research did not presuppose the existence of gifting behaviours or activities in online sharing services. The first question was “can gifting be a part of what drives the popularity of sharing services?” (Paper I). While this may seem to be a trivial question, in the sense that it can be answered with a simple “yes” or “no”, it also directed research to the underlying, more complex and interesting question of “what is given to whom, how and why?”

**What**

We conducted studies in three different sharing networks, supporting various types of goods: Soulseek, while being a generic file-sharing protocol, is mostly used for music, Flickr is a photo-sharing service and Facebook is a converging service supportive of several forms of multimedia and personal information. Paper I presents a tentative typology of digital gifts:

**Expertise.** The most common example of online gifting is perhaps in the form of expertise, broadly defined. This has also been the subject of discussion since the earliest days of the Internet. The giving of expertise is
even more significant if it is acknowledged that posting or contributing something to online forums is non-trivial. There are often many social and technical conventions, requirements, and restrictions. People who volunteer to moderate discussions often do so while facing great hostility, constant criticism, and very little gratitude. In addition to expertise which is directly responsive to individual requests, there is a great number of web sites with free medical advice, consumer reports, technical support, travel updates, and the like.

**Artefacts.** The current file-sharing phenomenon centers largely on digital artefacts, such as music, books, movies, and software. Although this is the focus of current controversy, it is important to remember that the exchange of many digital goods does not violate any existing copyright law. Many goods are no longer under copyright and/or were created or subsequently released from traditional copyright restrictions specifically with the intent of being freely available. There are a number of services appearing to facilitate the gifting of physical artefacts. Book Crossing, for example, is a free online service that combines the Web and messaging to allow participants to notify other participants that they have finished reading a good book and left it in a specific public location. At the same time, information is provided about the nature and location of the book.

**Storage and Bandwidth.** There are a number of projects based on users’ donations of unused resources from their networked machines. To mention just two examples of projects that make use of spare bandwidth or cpu cycles, the SETI@Home project provides a screen-saver that allows the host computer to devote processing cycles to the analysis of data. Similarly, Radio Free Virgin, a streaming music service, uses a technology to allow participants to redistribute/re-stream the music-stream to other computers connected to the Internet. As an example of gifting storage, many universities, foundations, and individuals donate space on their servers to make publicly and freely available resources.

While the types of gifts above do present certain gifting-related differences, mainly discussed in Paper III, the subsequent Papers IV and V spurred a need to make an addition to this typology, as it had been noted that the studied networks have been increasingly supportive of identified
gifting. Photos and movies were used to convey more personally revealing information (than music), but also the inclusion of qualitative social metadata had increased. In the music-oriented study, we discovered that many users made use of metadata relating to the technical capabilities of the resource (e.g. bandwidth, download slots, amount of shared files). With increasingly personal and socially networked gifting however (like in photo-sharing or versatile social networking), metadata about people emerge or are deliberately added and used. Consequently, the most important result, in relation to what is being given, is that media gifting in online networks is rarely a case of providing ‘just a file’. Rather a media file is connected to various social metadata, and this generates an entire new set of concerns and possibilities for end-users. These concerns relate to more detailed knowledge of gifters biography, which may increase social expectations regarding gifts; anonymity, which can help users seek ‘protection’ behind convention or even defect and free-ride. At the same time, third parties may observe the exchange of personal and social information. As stated in Paper IV:

A large concern for users was the issue of being able, not only to direct files towards public or private levels, but also to direct tags (i.e. metadata describing the goods and its content) towards different levels. As one user summarizes it: “I don’t like people who visit my profile can view the tags of my photos.” So, for example while the photo itself was publicly provided, the tags, which described it, was wished to be kept private or only directed to certain groups. [...] To summarize, we can argue that the notion of end-user content on the Internet should entail, not only, traditional content (e.g. files, containing for example photos, music, texts), but also the social metadata (e.g. relationships, indications of other-orientedness and reciprocal patterns) and how these effect the contribution-related intentions and concerns. (Paper IV, this volume)

Paper V specifically addresses perceptions of social metadata usage and discusses:

In gifting terms, social metadata adds bonding value to profiles and media objects. It does this by attaching, often traceable,
social information to profiles and media objects. The posting of a photo can be socially revealing in itself, but it is not until the photo is tagged or commented upon that relationship intentions become manifested. Social metadata is a container of social intention that needs to be communicated to affect personal relationships. (Paper V, this volume)

**To whom**

Relationships form a central unit of analysis to any study of communities and social networks. Relationships are complex and do not really work well with the dichotomous distinction between self-oriented and other-oriented motivations that gifting theory has been keen to make. The relationship model presented in Paper II provides a framework for identifying and understanding current and potential conflicts of interest and social dilemmas. It separates between four structural levels of relationships: ego (myself), micro (close friends/family), meso (acquaintances), macro (anonymous strangers).

<table>
<thead>
<tr>
<th>Level of Relation</th>
<th>Group Structures</th>
<th>Common Incentive structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ego</td>
<td>Me, myself and I</td>
<td>Self-interest, maximizing own benefit</td>
</tr>
<tr>
<td>Micro</td>
<td>Small group of close peers, well-known friends</td>
<td>Social, reciprocity</td>
</tr>
<tr>
<td>Meso</td>
<td>Small networks of peers, recognized acquaintances</td>
<td>Social, individual and general reciprocity</td>
</tr>
<tr>
<td>Macro</td>
<td>Large networks of file-sharing users, anonymous strangers</td>
<td>Ideology, Rationality of Equality</td>
</tr>
</tbody>
</table>

*Table 6. Model of relationships (from Paper II, this volume)*

It is argued that an important focal point for analysis of cooperation and conflict is situated in the relations between these levels. Paper II describes three examples of conflicts from the perspective of the individual (i.e. ego-
micro, ego-meso and ego-macro) and discusses two main functions of the model:

First, it is suitable to describe findings from our empirical studies in actual file-sharing networks. As such, the model has explanatory value as it has helped us to understand tensions and conflicts that were difficult to perceive and identify before. Second, it is a useful tool for inferring potential (not-yet-identified) conflicts between the different levels (ego, friends, acquaintances, strangers). (Paper II, this volume)

The model’s suitability to frame conflicts of interest has been demonstrated in file-sharing networks (Paper II) and in massive multi-player online games (Pargman and Eriksson, 2005).

**How**

Our analysis of the barriers of and facilitators for gifting in music file-sharing resulted in the analytical dimensions presented in Paper III. These dimensions do not only envelope our empirical data, but also provide a vocabulary intended to help analysis and comparison of gifting activities and services.

- Direction – public and private
- Identification – anonymous and identified
- Incentive – enforced and voluntary
- Initiative – passive and active
- Limitation – open and restricted

Direction is concerned with the audiences and the relationships that gifts are directed towards. Identification relates to the options for gifters to reveal, or not reveal, their identity. Incentive refers to the notion of gifting potentially being an enforced requirement for participation in a specific network. Initiative is a dimension describing the tension between, on the one hand, passively providing goods for others to take or, on the other hand, actively pushing goods to others. Limitation addresses ways to keep access open or to restrict certain aspects of it.
Gifting is a central human activity that is arguably at the core of online community management. However, research on the relational and structural embeddedness of gifting in technology-mediated contexts is in its infancy. Consequently, it is suggested that the presented gifting dimensions will support the comparison of similar technologies with dissimilar social effects. The dimensions can help using social practices to simplify, or improve, a technical implementation; and they also provide a clearer picture of the requirements of gifting technologies and the social objectives and needs of gifting individuals. For more details on these dimensions and their application Paper III can be consulted.

**Why**

Much research on online contribution has stressed the necessity to support self-centered end-user motivations and reward efforts in order to sustain ongoing contribution. While partly supporting this, our research also suggests that this is a limited view and instead points to a concurrent set of activities that include the acknowledgement of others’ requests, coordination of social conflicts, emergent communal norms and even activities performed just for the fun of it. These motivations are more connected to ambiguous reciprocity, social bonding and other-orientedness. Paper V thus suggests that the dichotomous separation between self-centered and other-oriented motivations is a bit misleading as many efforts are actually directed at the very connection between these two incentive structures, that is, the relationships between oneself and various groups of others.

<table>
<thead>
<tr>
<th>Self-centered motivations</th>
<th>Relationship-oriented motivations</th>
<th>Other-oriented motivations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impression management</td>
<td>Reciprocity</td>
<td>Pure gift-giving</td>
</tr>
</tbody>
</table>

*Table 7. Model of incentive structures (Paper V, this volume)*

More importantly, the research presented in Paper IV shows that motivations cannot be seen in isolation. Asking, “why do people contribute
to online communities?” ignores many contextual issues. Rather, motivations can only be clearly classified and understood when considered in relation to the specific service and its features as well as in relation to how it is contributed, to whom it is contributed, and what that is contributed.

Discussion

One aim of the papers has been to present results, discussions and analyses on a concrete level that clearly links to our data. The use of gifting as an application theory (as per the analysis model on page 27) has in this way helped to make contributions and developments that are more theoretical in nature. A good qualitative analysis is characterized by a purposeful and fertile encounter between empirical results and theory. This, in turn, allows the new results to be theoretically challenged and developed. Even more so as the body of research on online gifting grows. The abstraction made also helps readers and fellow scholars to transfer the data from these studies.

Online gifting carries a lot of similarity to offline gifting. However, mediated social activities, such as gifting, will become more sophisticated with further and more advanced cultural, social and technical development. As social technology gets more complex, assimilated and embedded in our everyday lives, the more refined our mediated social activities will become. By comparing and contrasting mediated digital gifting to non-mediated analogue gifting, we can start to predict how thing will develop. This chapter discusses potential implications for end-users, companies, society and design.

Potential implications for end-users

Today, mediated communication is versatile. It can include not only textual conversations, but also various forms of multimedia interlinked in quite intricate ways. One question is whether this has any effect on perceived sociotechnical barriers and facilitators when providing content.
The way we do things – such as form friendships or construct social hierarchies – can in fact still be accurately described in terms that has been used by ethnographers since the 1950’s, but since the context is different, we use other means to accomplish the ends (Jakobsson, 2006).

While many social interaction patterns seem to remanifest themselves online, the means available for of end-users are also quite different and capable of transforming communication (see Paper III). To summarize, the perceived benefits of online gifting to end-users relates to the potential to show reciprocal regard and other-oriented intentions to a wide or narrow group of weak or strong social relationships. This flexibility concerning intentions has also created flexibility in the use and development of gifting technologies. End-users can be very innovative when trying to realize their intentions. At the same time, this type of innovation often requires a certain level of experience, skill or knowledge about the range of social and technical options.

End-users are notably part of sociotechnical experiments when participating in new services combining social metadata and media sharing. Our hope is that the models, dimensions and reasoning in this thesis can assist end-users by creating an understanding and prediction of the social impact of these services and by actually allowing empowered end-user control.

**Potential implications for companies**

Collaborative technologies and social dynamics is nothing new to the work-related research domain (Grudin, 1994). Recently we have seen the use of the term ‘wikinomics’ (Tapscott and Williams, 2006) to capture the increasingly large-scale network effects that affect companies. Today, companies utilize communities and social networks both internally and externally to overcome geographic distance, to decrease support costs, to market and brand products and services, or as a source of market knowledge and consumer experience to take some examples. This thesis shows that gifting is certainly a force to be considered in workplace knowledge management and sharing. While the average workplace is often
modelled after well-defined and instrumental purposes, informal and networked ways of conducting work is an innate part of it. An important lesson that can be learned from the recreational domain is that top-down system-wide contracts and regulations will work against the social mechanisms of gifting. While the perspective taken in this thesis is different from a high level evaluation of beneficial network effects that can result from media gifting, it grants a small scale view of the concerns and intentions of the arguably most important stakeholder group: end-users.

Companies need to realize that both social and technical aspects, can be observed while emerging from a bottom-up perspective (i.e. in usage practices). The experimental and open service architectures that we see today are showing us that much developmental work can be done closer to, and even by, end-users. Community maintenance and governance work has today become a huge interactive opportunity to get close to customers, end-users and even clients as they engage in discussions. A service open to versatile end-user configuration, seems likely to support the complexity of gifting activities better, while at the same time resulting in serendipitous and unorthodox approaches to problem-solving. Business operations as well as social science have a common benefit from knowing about the intentions, concerns and resolutions that end-users perceive, experience and invent. Few companies actually consult social scientists in the design or re-design of business-supporting collaborative services.

The results of this thesis show that it is wise to consider the tension between work and non-work. Ignorance of this contrast will create social dilemmas and affect trust, professional and private integrity. Top-down control and surveillance will likely decrease the propensity to be other-oriented and shift the focus more towards selfish impression management. When aiming to support an open and innovative culture through sharing a company must also foresee the potential social conflicts and concerns that can emerge. End-user concerns and intentions also need to be included in problem-solving policies. Requesting users, through open design, to share a potential mix of personal, social and professional information, puts high demands on management to be equally open with privacy, conflict and use policies.
Potential implications for society

There are reasons to debate the role of sharing technologies in society at large, since it is a technology capable of supporting both good and bad behaviours no matter how they are defined. Naturally, the public discussion and opinion regarding online sharing cannot be easily summarized. This thesis provides a somewhat simplified and polarized division of arguments in an attempt to discuss the potential applications. One part of the societal discussion regarding recreational sharing can be seen as polarized between the view of it as largely supporting intellectual freedom or the view seeing it as a threat against intellectual property rights and copyright laws. At large, the supporters of sharing claim that online sharing is responding to basic prosocial human desires.

War on piracy is failing for social reasons. People like to communicate. People like to transform things. And new technology is making it so simple. (Stalder, 2007)

Free music is more than piracy because the freedom in the free digital downloads suddenly allowed music lovers to do all kinds of things with this music that they had longed to do but were unable to do before things were “free.” The “free” in digital music meant the audience could unbundled it from albums, sample it, create their own playlists, embed it, share it with love, bend it, graph it in colours, twist it, mash it, carry it, squeeze it, and enliven it with new ideas. The free-ization made it liquid and ‘free” to interact with other media. In the context of this freedom, the questionable legality of its free-ness was secondary. It didn’t really matter because music had been liberated by the free, almost made into a new media. (Kelly, 2007)

Online sharing detractors, on the other hand, are concerned that the simplicity of copying, distribution and transformation will seriously

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5 Prosocial behavior is, in short, a sociopsychological term referring to ‘a behavior that is viewed as positive by society’.
threaten the possibilities for producers of content to be reimbursed for their work. This has resulted in technical and legal efforts to stop or reduce the sharing of copyrighted material and, at times, also the technology used to distribute it. However, discussing sharing technologies in piracy versus copyright terms alone is arguably diminishing their impact. The main focus of this thesis has been on situations where end-users are recreational prosumers of content. The potential societal benefits of these kinds of user-generated communities and networks have only begun to be examined. Sproull and colleagues (Sproull, et al., 2005) classify the online contribution of social and computational resources as part of the larger structure of prosocial behavior. Prosocial behavior is, in short, a sociopsychological term referring to a behavior that is viewed as positive by society. Few studies of the societal benefits of online prosocial behavior have been conducted. Nevertheless, based on studies of benefits for individuals, Sproull and colleagues speculate on the larger blessings and caveats that can be extrapolated. One area where a lot of research has been focused is self-help communities for patients of various kinds. While the sharing of illness experiences, medications and treatments can provide strong emotional support and quickly distributed knowledge, it can also create so called expert patients, who may demand additional treatments or tests. There are also several examples of citizens donating computing power to volunteer groups such as the NASA clickworkers program, SETI@home, Climateprediction.net or SIMAP. Informational resources are also donated to collaborative projects like Project Gutenberg and Wikipedia. Of course, there is also considerable work and content added to commercial services, such as YouTube, del.icio.us, Flickr and Facebook creating interesting tensions around content ownership and distribution of profit (Tapscott and Williams, 2006).

One of the largest structural societal barriers regarding online social media sharing is that it requires a mediating technology. As such, participation can be obstructed for technical, social, political, cultural, economical or legal reasons (Wresch, 1996).

6 Producers/consumers
Potential implications for design

Many researchers see grounded knowledge of online community life as a necessary precedent in supporting valid information technology design. Gifting of content for the benefit of social relations is an example of a class of activities, where explicit and quantified effectivity is less meaningful.

Design of information technologies for amateur work should be grounded in a thorough understanding of challenges cultivated within the amateur setting and the eventual conflicts between them, which should be carefully balanced during design.”
(Bogdan, 2003)

The conflicts and tensions identified in this thesis are thus examples of dimensions which precisely should be carefully balanced during design. So, identifying conflicts in the shape of concerns and intentions is crucial, not to say essential, for the understanding before actual design work. When designing gifting technologies it is here suggested to leave room for uncertainty, serendipity and implicity. Situations that might, at first glance, appear as problems could very well be uncertainty mechanisms necessary for the social (and material) well-being of sharing networks and communities. One such example is the existence of semi-public gifting. While the conflict between intimate small-scale gifting and wide large-scale gifting was prevalent in all three studies, it seems viable that these practices need to co-exist to provide a sustainable sharing ecology.

We noted earlier that ethnography has no standard ways or representations for informing design. Having said that, the results from ethnographic studies can be represented in different ways depending on the possible readers. Summarizing reports of various kinds usually become quite thick and, even though they provide an overall description of the research or relevant parts thereof, they are rarely used as a basis for design or as collaborative tools in the very design process. The needs for appropriate representations of findings from ethnographical studies are essential for the usefulness for other stakeholders (researchers, business groups, customers, procurers, marketing strategists, design teams etc.). We believe that thematic analyses and the use of dimensions or tensions have a purpose, as they condense the narrative or thick descriptions often
resulting from ethnographic studies. As discussed, this does not imply a universal generalization of results. This process should be undertaken without losing the specific relevance of ethnography, but still attempt at opening up to the possibility of being supported by a wider range of readers, solutions, features or tools. An appropriately condensed representation could possibly also ease the assimilation of new data into the current understanding of the phenomena (or, of course, challenge the current understanding of the same).

The economy of the free and the economy of regard

While there is much to discuss regarding the management of digital rights and intellectual properties, we will focus on two alternative models applicable to networked digital goods. In a series of blog-posts, Masnick (2007) summarizes a discussion that has been maturing for some time (see for example (Kelly, 2007) regarding ‘the economy of the free’. The essential concept of the economy of the free is micro-scarcity, or a growing abundance of (cultural) goods. The economy of the free discusses potential combinations of scarce and non-scarce resources to reach new market viability. Somewhat simplifying the theory, it says to allow non-scarce resources to be free to consumers, while charging for the scarce resources tied to the non-scarce. An example is to consider a specific artist’s digital music to be available for free, while charging for live concerts or merchandise. This approach to the digital economy has naturally been criticized (Iskold, 2008) for creating an illusive concept of the free. The main argument in this critique is that advertising and market-related operations are, and will be, using omnipresent and deceptive methods.

Consumers and end-users should not only consider the economy of the free and its critique. This thesis suggests that the economy of the free will concur with the economy of regard, which adds a different layer on to the economy of the free, namely a social one. Media sharing is becoming increasingly ubiquitous and social. The nature of the relationships between actors is more and more highlighted by social networking services (whether these relationships are anonymous or identified). From an end-user perspective this emphasizes personal interaction, the dynamics of reciprocation and efforts of other-orientation. Regard is a communicated
quality that authenticates a social bond. Regard may sometimes consist of a grant of attention, but also more sophisticated efforts, such as gratefulness, taste, appreciation, love etc. Consequently, the intangible aspect has two applications in this economy: not only are digital goods intangible, regard is also intangible. The explicit terms of exchange and commodity trade may fail to capture these intangible, often socially oriented, terms of trade.

Regard is difficult to measure because the yardstick of price is explicitly rejected. When regard and goods are traded together, ‘revealed preferences’ will therefore not measure accurately the welfare produced. It is consequently necessary to look for other indicators, to decipher the cues and language of regard.

Otherwise, when making policy, there is an inclination to maximize only what is measurable, thus falling short of optimality. (Offer, 1997)

Both the economy of the free and the economy of regard are of high relevance to this thesis and suggest the future importance of acknowledging gifting, ‘the free’ and its risks as part of the sharing ecology.

It [the economy of regard] persists because regard is an abiding need, perhaps ‘wired in’, which impersonal markets are poorly equipped to gratify. (Offer, 1997)

The answers to the questions posed by the digital, can not be found within the digital. They are only to be found in the relation to what is not digital: Time. Space. Relationships between human beings. That’s where digital copies may get a value. But the rhetoric of copyright paranoia, on the other hand, implicitly reduces not only “authorship” but also “culture” to simply the production of even more pure information: Content without context. (Fleischer, 2008)

Probably, we will see cases where the economy of regard and the market economy are mixed up (sic), and it would be naïve to think that there will not be cases where market economies masquerade as economies of regard. There will also be situations when end-users will not know, or agree to, the
embedded instrumental or commercial impacts of inherently social actions. This indicates an interesting paradox in terms of content creation, where sharing-prohibiting efforts from commercial actors stand in contrast to cumulative masses of end-user contributed media, bandwidth, expertise and social metadata. These media contributions and user posts are collected and aggregated, both in commercial services and in research, and even become the property of the aggregator. Companies and, by all means, academic researchers, consequently use the intellectual property of individual users to create patterns, trends, opinion clusters, buzz levels and also to create revenue through increased commercial exposure, that is, in the shape of quantified attention (e.g. hits, page ranks, views etc.). With the combination of the two economies presented here, and the market, combined with the increasing diffusion between consumers and producers (i.e. end-users as producers) it is suggested that the coordination between scarce and non-scarce resources will not only need to be considered on macro-economic levels, but also become a personal issue and concern for every individual end-user.

Conclusions

This section presents the conclusions of the thesis. Many of the conclusions are interrelated. Still, it is relevant to emphasize the relative importance of conclusions in relation to specific areas of the research, namely: theoretical, methodological, empirical, social, practical and end-user related conclusions.

Theoretical conclusions

Gifting, and the concepts of reciprocity, other-orientation and social bonding, are suitable theoretical constructs for addressing media sharing. While gifting may not explain all sharing, the papers in this thesis have provided some theoretical developments in the shape of models and dimensions. The relationship model and the analytical dimensions are induced from everyday practices of end-users. Arguably, they do need to be subjected to more rigorous testing before qualifying as ‘proper’ theories, but for the studied contexts their applicability is supported by the
administered methodological procedure. The relationship model and the analytical dimensions are arguably the core theory developments of this thesis, as they capture the central relationships between the individual and various collectives and how end-users coordinate these relationships. Social metadata usage practices and semi-public contributions are, in a way, emergent consequences from to whom I can give (i.e. who is in my network) and how I can sociotechnically control my giving.

**Methodological conclusions**

Our studies revealed that many users actively considered, argued about and applied control over their gifting. From a methodological perspective, we wish to emphasize the importance of conflicts as a unit of analysis when researching online sharing and gifting. Social media sharing services often need to make decisions regarding what social dimensions to make explicit and support in terms of features (such as friendship connections or level of identity fidelity). These decisions are not always deliberate and rarely able to foresee all sociotechnical consequences, as they are often directed towards “hard” social problems (such as the conflict between individual and collective rationality). In our experience, the introduction of a new feature often result in end-user discussions divided between users who are positive and users who are negative. Consequently, this presents a unique and interesting opportunity for researchers to examine the social impacts of technology in terms of conflicts (Skågeby, in press-a, Skågeby, in press-b). Most visible in online discussion forums are usually the more clear cases of positive or negative users. However, as these are identified, researchers can start to postulate, consider and research users who try to resolve this conflict. These are users who face emerging concerns or whose intentions change. These are also users who have been at one pole of a dimension, but now wish to approach the other (e.g. going from anonymous to identified) or users who have coordinated the conflict by creatively combining or inventing sociotechnical means. In this transition these users reveal the facilitators and barriers that impact on the dimension in question. These users’ solutions are indicative of potential systems development-paths to address those very tensions.
The studies revealed that there were many occasions where users were frustrated by not being able to act on a certain level of control. These mismatches between intended control and actual outcome resulted in a pragmatic and co-evolving combination of reactive actions and overall sharing strategies. This thesis has examined conflicts and tensions between the following:

- The individual and various levels of the collective
- Communicators and instrumentalists
- Work and non-work relationships
- High and low social investment
- Public and private gifting
- Anonymous and identified gifting
- Passive and active gifting
- Voluntary and enforced gifting
- Open and restricted gifting

**Empirical conclusions**

The conclusion drawn from working with empirical data from forums, online interviews and application use is that it is a highly workable source for insights into end-user problems and solutions; verbalized concerns and intentions; experiences and stories; and likes and dislikes. The research domain of this thesis has been closely connected to the use of online discussion forums, but that does not necessarily stop research into other areas from utilizing similar corpuses or sources of data. The fact that online communication and resource sharing can be investigated through online forums seems fairly straightforward. However, there is also great potential in conducting wider user experience research in the fields of human-computer interaction and consumer research, via online ethnographies (potentially combined with quantitatively oriented forum research).
Social conclusions

Media sharing is now a popular and pervasive sociotechnical activity. It has also become an activity affected by many paradoxes and tensions. As a result, we now see many parallel practices that co-exist, sometimes correlate and sometimes clash. One central contribution to the emergence of parallel practices is the fact that online sharing has progressed from being mainly goods-centric to being increasingly goods-and-person-centric. This also amplifies incentive structures and motivations directed towards coordinating relationships between oneself and groups of others. A practical outcome of this shift is that metadata, in these contexts, used to be data mainly about media objects or technical resources. Now, metadata about people and their (social) actions around media objects is the source for much innovation. Moreover, educational, professional and recreational contexts are increasingly jumbled, creating a mix and multiplexity of relationships – that is, a tendency for different type ties to occur in the same context, sometimes with irresolute results. So, online relationships need to be configured. This configuration concerns both people and the resources devoted to them. The granularity of digital relationship and content management is usually not on par with the analogue world. Some users seem to cope with this by not investing as much regard in online relationships as offline. Digital relations, even while possibly also concurrent face-to-face relations, are treated as qualitatively different kinds of relations. For others, digital relationships are protractions of offline relationships, and just as socially significant. For many however, online gifting – the concurrent management of relationships and contributed content – means a mix of strangers, acquaintances and friends and a continuous negotiation between the sociotechnical interaction repertoire available to address this mix and overall sharing strategies/motivations. Consequently, it becomes important to be able to direct regard towards the appropriate relationships. This, in turn, highlights the conclusion that incentives directed towards the coordination between oneself and the various groups of the collective one belongs to, i.e. relationship-oriented motivations, will become more important. Paraphrasing Jean-Paul Sartre, who said that “to give is to enslave”, this thesis stress that to give is also to encode – that is, charging a digital artefact with regard is what generates its online bonding value. Our
studies indicate that one important way in which the charging of regard is enacted, is through the use of social metadata.

**Internet-related conclusions**

The first paper of this thesis argues that Internet was initially characterized by a great deal of volunteer effort and "community spirit": participants shared advice, technical support, and the like. One could even argue that since there was so little to get in the early days of the Web, much of its initial development was driven by people who wanted, for various reasons, to gift. As such, the Internet has always been about giving and receiving (or producing and consuming, uploading and downloading). Nevertheless, new, cheap, versatile and powerful technologies, services and communities are building on each other and on the emerging social structures around them. Technology helps us to structure relationships and content, but social practices also evolve in ways not determined by single technologies or their intended uses. In this process sociotechnology revitalizes the age-old practice that structures relations and goods (i.e. gifting). Gifting mechanisms, such as reciprocity, social bonding and other-orientation are central to sharing practices – but somewhat paradoxically so is also rationalization and profiting off of social activities. So, while the sociotechnical capital resulting from gifting generates trust and lowers transaction costs, it also introduces new social dilemmas for end-users.

**End-user-related conclusions**

General social conclusions should always be made with caution. Still, it seems plausible that concomitant online relationship management and directed media sharing will have end-users facing hard social problems, problems that will be hard to ‘design away’ even by granting increased control. In fact, should they be designed away, it might reduce the joy of usage or even create new social dilemmas. This thesis tentatively argues that automation of sharing will remove much of what is important and fun with it. As argued previously, many coordinative dilemmas will become a concern for individual end-users. For example, the use of social metadata as a vehicle for regard must be authentic, personalized and transparent.
Any suspicion of hidden agendas will lead to mistrust and the recognition of pseudo-regard. As such, autonomous sharing of digital media objects, without communicated regard, can be perceived as intrusive, misdirected, indifferent or even mendacious. Empowering end-users with a variety of ways to communicate regard can, quite literally, add value to online gifting.

**Practical conclusions**

The hopes of the author is that the results of this thesis saves time for designers wishing to understand provision of digital content in sharing communities and networks.

**Future work**

This section briefly identifies potential tracks for future research. From the research presented in this thesis, the author identifies three main tracks of interest:

- Implement and test gifting designs. This is an interesting next step to assess combinations of gifting dimensions and segments of users, and there are many design spaces to explore. For example, not only are individuals important units of study, but increasingly so are also families, health-care and public service, education, and large organizations. How can we transfer insights from popular recreational gifting into these contexts? Another example is how can users new to online sharing, but with a desire or intention to gift, effectively find the appropriate venue to match (i.e. not only what, to whom, how and why, but also where to give). Other viable gifting dimensions to explore include public-private, social-instrumental and anonymous-identified.

- Social metadata usage practices. While much metadata in online sharing contexts has been considered as properties of media objects, we are now seeing an increasing use of metadata that accounts for the ‘properties’ of people or for the social activities around media objects. Conducting deeper studies of how users, in
everyday practices, utilize social metadata to for example guide consumption, enrich communication, establish bonds or empower identity expression will provide insights invaluable to social interaction design.

- Offline digital media production and consumption patterns. The geographical reach, number and strength of ties and exposure of digital media are many times contrasted between online and offline gifting practices. How can we design technologies that not only account for the transition between online and offline gifting, but also adds value to it? In relation to this question it will be especially interesting to make use of the gifting derived concepts use-, exchange- and social bonding values in the investigation of digital artefacts.

Epilogue: the tape and the typewriter

This thesis began with a story about tapes. It shall also end with one. As mentioned in the introduction, the compact cassette tape is a simple, but versatile, technology. Apart from the activities described in the introduction section of this thesis, the creation of the ‘mixtape’ is a particularly interesting practice making use of tapes.

A mixtape is a compilation of songs recorded in a specific order, traditionally onto a compact audio cassette. [...] Many enthusiasts also devote substantial attention to the packaging of a mixtape intended as a gift, sometimes going so far as to create cover art and customized liner notes. (Mixtape, 2008)

The creation of the mixtape is thus a holistic practice, or even artform, where the mixtape becomes larger than the collection of individual songs (Fox, 2002). Much like digital gifts, the mixtape is also affected by the tension between the public and the private: a mixtape might be intended for a single individual, a select group of knowledgable friends or even the general public. Having a mixtape intended for a certain recipient played for another, may prove socially devastating. From the quote above, it also becomes clear how much the context and the added metadata, can mean in
terms of communicated regard. While the tape itself is a cheap technology, a carefully compiled *mixtape* shows that you have taken time, made a substantial (cognitive, emotional or social) effort and, eventually, communicated significant regard. The gifting qualities of the mixtape has persisted in the digital age, with services aiming at recreating the air of the mixtape (i.e. Muxtape⁷).

The typewriter is arguably another regard-communicating piece of machinery. Because it goes against a rationalization of communication (at least in this day and age of e-mail and laser printers), it can encode regard onto paper by its very technology. Today, a letter written on a typewriter communicates reflection, dedication and sincerity, while previously, particularly compared to pen and paper, it was seen as impersonal and formalized. In an attempt to make the typewriter ubiquitous and less rational, the designer Ettore Sottsass, in 1969, called his newly designed Olivetti Valentine portable typewriter an “anti-machine machine”:

> Its designer said it was the "anti-machine machine". He wanted to reinvent the way people used typewriters, bringing them out of the office and onto the street and thereafter into the boutique, the café or the disco. (Bayley, 2008)

The ubiquity of digital media usage is becoming obvious. Perhaps there are also other qualities of the “anti-machine machine” that can be fruitfully addressed by gifting technologies? Anyway, the intention of this epilogue is not to get nostalgic over redundant or obscured technologies, but rather to point at basic human practices that are likely to persist, no matter which technologies that are currently in style.

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⁷ [http://muxtape.com]
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