Media Sociography on Weblogs[1]

Abstract

Weblogs are not only one of the newest technical media for communication, but also one of the most difficult to understand. Are weblogs a kind of mass medium, a personal medium like an online diary, or a medium that gives space for communities to grow? Or are weblogs a medium that enable all these possibilities depended on the actual use? This paper throws some light on what weblogs are by using the methodology of *Media Sociography* (Tække 2003, 2004a, 2004b and 2004c). Media Sociography is a strategy for analysing mediated social systems or in other words a strategy for describing the social in relation to the media it is based on. Theoretically seen it is inspired of two theoretical paradigms the Sociological Systems Theory of Niklas Luhmann and the Media Theory (also called the Toronto school). Empirically the paper primary draws on the literature about weblogs, which could be framed as CMC-studies, but uses also firsthand observations. The purpose of this paper is to describe the communicative space of weblogs and the social processes within that space and by that answering the mentioned questions. The paper concludes that the remediation of social interaction in blogs provide the same good basis for distributing identity and identification of persons as the traditional website, but because of the many interactivity features they also make a good basis for turntaking in conversations and therefore also make space for self-organizing interaction systems. Weblogs are an extension of the social space as symbolically generalised cyberspace avatars that combine communicability and personification. Blogs transform the WWW to one big newsgroup where homepages as representations of persons, perform a medium by which people can stay in contact with many different social contexts, introduce themselves in new contexts and even make their own press, using the blog as a mass medium.

Introduction

This paper is one in a series where I try to show that an ecological understanding of the interplay between humans and media must both have a sociological, a media theoretical and an empirical approach. Tække (2003) is about the influence of media in the social evolution, Tække (2004a, c) is about Usenet Newsgroups, and Tække (2004b) is about chat. In my Ph.D.-dissertation I am going to gather it all in one framework with more space for both the theory and the empirical studies.

There are three schools of research of interest in relation to a media sociographic analysis: Media Theory, Sociology and Computer Mediated Communication (CMC). The schools are qualifying each other, but none of them can stand alone, for instance, the media theoretical questions that I use to capture the communicative space of weblogs are questions that are important for the sociological analysis coming afterwards. In the same way the sociological theoretical explanations only draw in, what are necessary for an understanding of what is going on in the weblog medium. Also the use of the CMC-literature is selectively including only what is relevant for the media theoretical and the sociological approach. Where The Media Theory and Luhmann's sociology are the theoretical basic for the Media Sociography, the CMC

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field provides the empirical horizon for what weblogs are in regard to both quantitative and qualitative findings and in regard to technically and social findings. The first part, right after this introduction, outlines the communicative space of weblogs, going through all the technical attributes for mediation that are of relevance according to classic media theoretical questions. The second part of the paper outlines the social possibility space provided by the communicative space of weblogs, describing the social activity that become visible observed through the sociological theory of Niklas Luhmann.

Weblogs as a Technical Medium for Communication

In this section the Media Theory is introduced and used to analyse the communicative space of weblogs.

The Media Theory

The Media Theory goes back to Herold Innis who was the first to analyse the surrounding reality and the social evolution through the concept of media. For Innis the structure and order of a given society is always based on and depended on a medium.[2] For me the most central and still useful contribution from Innis is the idea that a medium has a bias either towards time or space (Innis 1951). The medium either stabilises the society so it will extend in time (e.g. the medium of rock carving) or it will destabilise society but make the society extend in space (e.g. ink on papyrus). It was a student of Innis who made the Media Theory famous or infamous, namely Marshall McLuhan (1967) and his punch lines: "The Medium is the message", "The global Village" and "Technology as extensions of the human body and senses". McLuhan had many interesting ideas but both him and Innis were more literates than researchers in a modern sense, their premises do not convincingly point to their conclusions[3]. McLuhan and Innis, anyhow, managed to set the idea of non-content media analysis on the agenda and inspired the forming of a new research paradigm (Meyrowitz 1985). Within this paradigm the influence of new media on society and the human mind has been described: Walter Ong (1982) and the upcoming of the chirographic media, Elisabeth Eisenstein (1983) and the print media, and Joshua Meyrowitz (1985) and the analogue electronic media. Latest the digital media have been flamed and in this regard I mention Niels Ole Finnemann (1997, 1999, 2001) who has succeeded in describing the invariant traits of digital media.

In Media Theory, the concept of media is always about aspects of mediation related to specific technologies and for most theorists also about social implications of a specific medium (e.g. Meyrowitz 1985). Media Theory addresses various attributes of a specific medium and also the influence of, as well the contemporary, as former media matrices (the media matrix is the constellation of all existing media in a specific moment of time, Finnemann 2001). To analyse a specific medium is to look at its mediacy (Brügger 2002) or the communicative space related to it, or to the media matrix it is a part of (Finnemann 1997, 2001). To pinpoint the mediacy or the communicative space of a Technical Medium (TM), the important part is to ask analytical questions that enable an understanding of what part the TM plays in the reproduction of social systems. Two of the classic questions are: Is the TM cool or hot

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[2] In this respect the Marxian inspired thinking of Régis Debray and his Mediology is close Innis.
[3] See for example Meyrowitz (1985: 21).

(McLuhan 1967)? Has the TM a bias towards time or space (Innis 1951)? Brügger (2002) presents a framework with three areas (production, distribution and consumption) and eight variables (matter, space, time, movement, accessibility, hardiness, symbolic format and ability to change). This gives a very rich analytical framework, but it is constructed only for what could be called hardcore media studies. This framework outlines only the medium is in itself and is explicitly not constructed for the study of the interplay between the social and the TM. Brügger asks questions like: *"What is the substratum of the medium, how does it make the production of material content possible, and what is this material content?"* (ibid.: 51). The material content must not be confused with the meaning content, it is, for example, ink, a substance that is put on, or printed on the medium substratum, e.g. paper. Another thing is, that it is dangerous to put up a fixed list of parameters, because the potentiality of TM is a dynamic entity that is variant in relation to the social, which loosely couples[4] the TM to new social functions that can only be initiated because of the social experiments within the scope of the TM (Baecker 2000, Tække 2003, 2004a). Because of these considerations, I won't set up a universal model for the technical part of the analysis, but state that communication is a universal kind of process and that a technical medium provides a special communicative space for that process. In addition, the social (what is produced by communication) and the TM are in a process of co-evolution where TM are loosely coupled by the social for new social possibilities. What we can do as researchers is to describe how social systems actually process in a given TM by putting forward questions that seems relevant, and not try to predict the future or behave as if old epistemic parameters provide a secure description. In Media Theory, however, there are many findings that inductively can be used as parameters in a more intuitively formed spectrum of questions for social analysis of TM.

Digital Media

Weblogs are based on digital technology. Digital media, i.e. computer based technology, have as its potentiality that it can simulate all former kinds of TM. Furthermore digital media are the first ones that can both make messages perceptible outside of natural speaking distance immediately and also storable in the same form (Aarseth 1993). Also they give some first-time-in-history features: because we in the one and same TM are able to produce, edit, process, store, copy, distribute and retrieve knowledge (Finnemann 1999: 147). This is possible because of the special architecture of the computer that works as a mechanization of the combinatory attributes of the alphabet as a double articulation system consisting of three levels: semantic/syntax/alphabet (see Tække 2003, Finnemann 2001:32). Through satellites and wires, servers and client, computers are linked into a network where what is on one computer can be shared by others (Andersen 1998). This happens through interplay between request and response where client-computers ask server-computers for websites that then are showed on the client-screen. This process is regulated by protocols that are conventions about the way clients and servers should react when they receive requests and responses. The World Wide Web is part of the Internet and uses the TCP/IP protocols. The protocol defining WWW is called HTTP, *HyperText*

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[4] Here I use Heider (1959) terminology where a *medium* is a loosely coupling of elements while a *thing* is a rigid coupling of elements. In Luhmann's interpretation the concept of *thing* is changed with Brown (1969)'s concept of *form*. This theoretical move enables the form/medium analysis that Luhmann, for instance, uses in *Die Gesellschaft der Gesellschaft* and that have inspired many, for example, the articles in Baecker's anthology: Problems of form (see Tække 2004a).

*Transport Protoco*l (ibid.). Weblogs also use HTTP and are a kind of website but have some features that makes them distinct from traditional websites, e.g. that they are easy technically to create and quick to update.

The CMC definition of Weblogs

A *weblog,* also called a *blog,* is defined as: frequently modified (updated) web pages in which dated entries are listed in reverse chronological sequence (Herring et al. in press, Nilsson 2004, Blood 2003), most often with links to other sites and commentary on various things (Gurak et al. 2004) and cross-referencing to other weblogs as a collection of links coupled with a personal interpretation (Jarrett 2004). Blood put forward a functional and idealistic passage to the definitions of blogs: "*if you are not linking to your primary material when you refer to it – especially when in disagreement – no matter what the format or update frequency of your websits, you are not keeping a weblog.*" (Blood 2002: 19). For Blood it is the credibility that comes from the transparency created by systematically linking to primary sources that defines blogs. In the following we again and again build on our understanding of what blogs are circling around a selection of what appear as the most important media theoretical questions.

Media theoretical questions and weblogs

Accessibility of the media code

One media theoretical question that is always important is *how difficult is it to learn to code and decode* the TM (Meyrowitz 1994). This aspect addresses the selectivity of the TM, which describes who can handle it, think for instance of the difference of learning 28 phonetic letters or 40.000 Chinese characters (Ong 1982). Blogs are described as relatively easy to construct and update technically seen (Gillmore 2004, Boese, 2004). This is right in comparison to a traditional homepage on the web, but still you must have the ability to read and write, and to use a weblog platform. This means that you either must have a personal network that can help you, or being able to read and understand the manual yourself, or find information on the web. What is new is not that you can make a web page without the knowledge of programming in HTML, but that the weblog software has enabled creation of homepages with advanced features for updating, commenting, trackback, calendar, archive, and a layout with both static and dynamic areas. According to Meyrowitz (1985) it takes much more to handle the *code* of reading and writing than to use analogue electronic media (e.g. television). It is not only the basic code (how to spell) but also the complexity in the literary grammatical constructions that takes years of training to decode, which according to Meyrowitz (1985), means that you can direct communication exclusively to people on a certain educational level. The traditional boundaries produced by differences in educational level are reproduced within the communicative space of the weblog. Also cultural codes are important because it is one thing to learn, technically to construct and run a blog, another to hit a proper genre within what is called the *blogosphere,* which is a must if anybody is going to actuary read, link and comment on the blog.

The digital divide

The *expenses* in regard to TM are also central, for instance, who can afford a computer with network connection (e.g. Castells 2003 and the digital divide). Most of the weblog-software is free so if you have a computer with web-access and the

required knowledge anyone, as Gillmor (2004) writes, can own a press. Many have pointed at weblogs as a TM that is good for democratisation of the world (ibid.) and in fact they first appeared for the sight of the majority following the 9/11, the wars against Afghanistan and Iraq and the resignation of US senate majority leader Trent Lott (Boese 2004). Even though there is no doubt that the patriotic news media in the USA were challenged by some bloggers, weblogs do not fill the gap in the digital divide. Most of the world population has no access to computers, and most of those who have cannot code messages that can grab the attention of a wide audience. Still, in two ways the digital divide has been reduced: Now more people that can formulate a statement who have only little technical training, and who cannot get his or her statement in a traditional medium because of, for example, a patriotic attitude of the editor, now can do that through a weblog. Second, people in the rich part of the world now can make their own news medium telling about their own life, hobbies or political conviction and become part of clusters of interlinking weblogs in a community of equal minded bloggers. Where Usenet Newsgroups, Mailing Lists and especially Chat Rooms are very suited for interaction, but not really suited for the communication of personal identity, Weblogs combines the traditional homepage's high qualities for communicating identity with a range of possibilities for interaction, which the traditional homepage lacks.

Interactivity features for interaction

To study the *directionality* of the TM is vital for describing its communicative space. The question is if the TM is single-, bi-, or uni-directional (Meyrowitz 1994). Framed in another way we can ask if the *interactivity* provided by the TM is: transmission (in the meaning that there is no possibility for response), registration, consultation or conversation (Jensen 1999). These questions offer an idea about: how many people are able to attend to the same message, if everybody can reply, etc. To answer the question is to describe the TM's interactively features for interaction.[5]
Within the domain of weblogs there are many differences in this matter; therefore blogs as a whole are best seen as an interactivity continuum going from transmission to conversation. The potentiality of the communicative space linked to this TM is actualised very different within different concrete blogs. In one end of the continuum we have blogs that are so close to the traditional web-page, that it is only because of the use of the basic software that makes it easy to update quickly, and the writing genre, with short messages including many links that define them as blogs. These blogs would only provide a single-directional communication space, if it had not been for the links to other blogs. To claim that the blogs with no reply possibility only gives space for transmission is therefore too much, since if they have links, they also provide some kind of consultation, which means that you can go to a blog only with the purpose of using one of its links and not to read the content of the blog.

The next question is if these blogs with no reply possibility are just a kind of mass medium. Also, for example, many online newspapers have outgoing links and it is the modus of mass media frequently to refer to other mass media, e.g. one newspaper to another (Luhmann 2000). A difference is that a mass medium has an editorial board that decides the selection criteria for links and content providing these media with a

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[5] I am using the classic distinction between *interactivity*, as a feature of the medium allowing users to experience a series of exchanges with the technology, and *interaction* as the reciprocal influence of individuals upon one another's actions (Jensen 1999, Wagner 1994).

trust value, where blogs exhibit a personal style gaining trust from the claimed
transparency coming from linking, also if in disagreement. But some blogs, for
instance, *MetaFilter*[6] are run by a community of contributors, so maybe the most
important argument, for blogs not to be the same as the mass media is that they have
no economic dependencies (Blood 2002: 15). I would not be as sure as Blood on this
one, for example, a range of politicians run blogs. Anyhow, this question cannot be
answered in this part of the paper since the same TM can be used for more than one
purpose. In the sociological part of the analysis I discuss the question about a possible
distinction between blogs and mass media again.[7] Here I want to pinpoint that a blog
with no in built features for comments, communicates that the owner does not want to
have direct interactions with the readers of the blog. That is, some blogs create a
communicative space with possibilities for interaction and some do not, which
provides two very different kinds of TM. Now let's turn to the different technical
features that build into a weblog create a bi- and uni-directional communication
space. There are four different possibilities for a weblog to create a space for
interaction (for enabling the processing of what we in the sociological part of the
analysis defines as self-organizing interaction systems or just communities): blogrolls,
permalinks, comments and backtracking, that are explained in the following.

A *blogroll* is a list placed in the margin of the blog that displays the blogs that the
blogger visits frequently, or the list means to demonstrate that the blogger reads the
blogs on the list on a daily basis. As the name shows it is a kind of logrolling in the
blogosphere (Marlow 2004) and typically all the blogs on the list will have a reference
back in their blogroll (Blanchard 2004). The blogroll creates a space for the
emergence of clusters of blogs and the comments on one blog almost always comes
from one of the *members* of the blogroll. The blogrolls have varying functions, which
describe a continuum of interactivity in itself. On many blogs it is only a list of links
to other blogs, but newer weblog-software and services make able to see if the blog
have been added to another's blogroll and to identify who added it (Blanchard 2004).
It is also possible to see when the blogs in the blogroll were last updated, to add a new
blog on the list with only one click, to search the listings of blogrolls to see who is
linking to your blog, and to create a blogroll of all the blogs that link back to you.[8]
Using LiveJurnal or Xanga, the blogroll allows users to be automatically notified
when one of the other blogs is updated. It is also possible to create a group dialog
represented by the sum of the blogroll's links (Marlow 2004). Some of the new
features provided by the blogroll-technology, can also be gained by the web-ring-
technology, known from classic websites that when coupled to weblogs makes
clusters of blogs linked by an interaction field, enabling surfing around in a ring,
consisting of all the blogs subscribed to the particularly web-ring. In web-rings it is
common to have conditions for membership, which also is the case for weblog-rings
(Wei 2004). The blogroll adds a new dimension to the hyperlink, because they
indicate a communication in themselves, at the first place suggesting a relation and if
replied positively to, with a blogroll link the other way, creating a more permanent
link between two bloggers. When bloggers are linked to they often link back
(Blanchard 2004), the reciprocal link can be seen as a gesture of thanks (Packwood

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[6] http://www.metafilter.com/about.mefi
[7] The sociological point of view gives an understanding of the TM in regard to the actual use and point
out distinctions that are invisible to a media theoretical analysis.
[8] Cf.: http://www.blogrolling.com/

2004) but also as the beginning of a relationship, or an introduction to a cluster or community.

A *permalink* is a feature that enables linking to an individual bit of writing, or in other words, the permalink directs you to a page and a position within it, where the entry that you want to refer to is present. Because a weblog consists of many different entries each about a new thing, it is important that other weblogs can specify a link to a specific entry and not to an entire weblog. Also it is important that comments and trackbacks are directed precisely to the entry that they comment on. The permalink enables a meaningful form of interaction through the TM of blogs, because, without this functionality it would be unclear what exactly a comment is commenting on. If comments every time should referrer what exactly they were referring to, for example, by copying it, or try to describe where on the weblog it were present, the spontaneity, the coherence and the filing of synchrony in the interaction would be lost (Blood 2002). Also the permalinks give identity to the single entries, making the weblog a kind of database consisting of a calendar-organized entries defined by their permalink.

Comments are written by people other than the blog owner and refer to a specific entry. They are placed under the entry that they comment on, in some systems you can read them there where as in others there is a link to a popup window containing the comments and responses from the author. This is the most basic and direct way that weblogs provide a communicative space for uni-directional interaction, or perform conversational interactivity. According to Marlow (2004), on extreme popular blogs, the amount of responses makes the list of comments so long that it is unreadable, while on smaller blogs a lack of any response provides the impression that the blog is generally unread. Inbetween the two extremes the comment serves as an effective medium for interaction (ibid.).

A *trackback* is when an entry links to an entry on another weblog that supports trackback. The function is that the one blog can ping the other blog to notify it that it has been referred to. In other words, if X want to comment on Y's blog, but do it on X's own blog, X can write the comment on X's own blog and make a trackback to Y's blog. Now the referring weblog automatically updates a field under the referred entry on the referred blog. A notification of the trackback now is showed on the referred blog right under the referred entry, so Y can see that X has commented on Y's blog on X's blog.[9] The communicative space that trackback creates is one that let the blogger (and her readers) know that one of her entries is discussed on another blog. This means that trackback makes it possible that different blogs are employed to directly communicative turn-taking. This was already the case before trackback was introduced, but with trackback you are notified when another blogger, also an unknown one, are talking to you through her own blog. Trackback helps this form of dialog with a direct link to the entry on the other blog. The function is partly equivalent to the one given by the blogroll's services that notifies you when one of the blogs on it is updated, but then you do not know if a new entry on another blog is a reference specific to your utterance, also, the trackback is not only for the blogs on the blogroll but for every possible blogs in the world. Trackback, too, enable the possibility that you on your own initiative can get your own blog mentioned on a blog where you want it to be mentioned, drawing attention to your own blog. In this way

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[9] Sorry this is very difficult to elaborate supplement with Winer (2003) and Marlow (2004).

trackback makes the communicative space of the hyperlink bi-directional (Halavais 2004: 5).

In sum, there are four different possibilities for a weblog to create a space for interaction in a wider sense than traditionally websites: blogrolls, permalinks, comments and backtrack. The more of these features that are integrated in a weblog, the more the blog technically seen gives space for interaction. The blogroll in itself describes an interactivity continuum with more or les functions that make space for dialog and facilitates possible blog-communities. The quick update feature and the different interactivity features are a result of the social loosely coupling of the Web enabling new ways for the social to extent in cyberspace.

Storage and retrieving

Another vital media theoretical question is about the *durability* of messages in a TM (e.g. Ong (1982) about the consequences of the temporary and transitory nature of utterances in oral language). In relation to this question, the question of *retrieving* must also be considered, for instance, if the TM provides possibility for making index and reference pointers, or for desequencing and resequencing messages (Foulger 2003).

Theoretically seen the weblogs are archived forever. According to Nilsson (2004) Google.com, the search engine, also stores blogs, even if a blogger deletes an entry, it is still possible to find the original entry in the Google-cache. This makes the communicative space created by blogs a space where utterances are stored and can be retrieved. In relation to retrieving, blogs is a kind of archive, a database of utterances systematised after a calendar system. You can log on to a blog and see what the author wrote two years back. Using search engines it is possible to find blog-entries on special topics and, also, many blogs have a search-engine coupled that can search only inside one special blog, enabling a topic related search in that blog without confusing the search with millions of hits from other blogs. There are also many links spread over the Internet to special entries on blogs, and also the trackback function helps retrieving utterances in the blogosphere. Because blogs are stored and have the permalinks and can be retrieved, they can be used as historical archives about persons and also happenings. In regard to persons, most blogs are written by one person that through his or her style and personal opinions and comments gets visible in the communication as a person. Also, many blogs are a kind of diaries telling the experiences, thoughts and emotions of the author. In relation to events, many blogs are made to tell the story of just one event like a war, a catastrophe, a fire, or a wedding, and can therefore be a document for later historical research.[10] Because the TM is digital it is possible to desequence and following to resequence the content within the same medium. To resequence is, for instance, through a new blog to present entries from another blog together with entries from other blogs creating a new context for the content, and thereby creating a new meaning within the entries. It is also possible to build a new linearity into a blog providing a new order for presenting the content for the readers, for instance, through a new order in the archive or through a new link-structure. In clusters or communities the storage and retrieving features make possible to create an interaction history for what to thematize, for who belongs to the community and for what tone the communication has to follow.

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[10] For example, The Station Fire Weblog, about a fire in a nightclub in 2003 where 100 people died in the flames (Lennon 2003).

Synchronicity

The time aspect of the communicative space associated to a TM is not only about
storage and retrieving but also about the question of *synchrony*. Does the TM give
synchronous, a-synchronous, near-synchronous, or super-synchronous interaction
(Foulger 2003)?

Weblogs are asynchronous like Usenet Newsgroups and mailing lists, contrary to
Internet Relayed Chat (IRC) and ordinary Browser Based Chat that both are near-
synchronous, and split-screen chat that is synchronous like face-to-face interaction.
While weblogs are principally asynchronous the many interaction features that, for
instance, immediately notice the blogger that some in the blogroll has made an entry
provide a feeling of near-synchronic interaction. The reverse chronological
organization of the blog, also, provides a sense of immediacy reinforcing the
impression that the content is true and real (Miller and Shepherd 2004, Blood 2002).
The feeling of interaction is also a result of comments and trackbacks that directly
referrers to the bloggers entries. In comparison to IRC there is the big difference that
the bloggers do not have to be situated with their computers at the same moment of
time. In weblog-communication you can stay in the conversation with just one visit to
the blog per day. In contrast to Usenet there is a convention among bloggers that you
must make a new entry every day (Blood 2002).

Remediation

The last issue to put forward regarding Media Theory concerns the concept of
remediation (Bolter & Grusin 1999). The question could be framed like what does it
mean that social interaction is remediated in weblogs, or what does weblogs, as a
remediation of writing, imply for social interaction?

Regarding this question, we must consider the argument again that by the weblog,
everybody with a computer with web access now has her or his own press (Gillmor
2004). Technically seen it is right that it is a feature of the communicative space of
weblogs that people online can document for everybody else online what they think.
This TM, also, enables use of sound, pictures and film when reporting events, for
example as reported by Andrews (2003) who took photos and posted a written report
on his blog of an incident, where an 11-year-old girl was roughly grabbed, thrown to
the ground, and handcuffed by the police during a demonstration. If such an entry on
a blog gets many links from other blogs, and the story is mentioned on many other
blogs, and especially on some of the very popular ones, then it means a difference, i.e.
the story is printed in the mass media and might have political consequences. In
regard to communities blogs provide a new scope for interaction where all
participants have their own platform in their personal blog for utter their
contributions. In face-to-face interactions it is easy to localize the participants by their
body, but this is a problem in many online communities because of deception (Donath
1999), or just because the signs of identity is few in digital TM (Tække 2002, 2004b).
On this background the remediation of social interaction in blogs provide the same
good basis for identification as the traditional website, but because of the mentioned
interactivity features also a good basis for turn taking in conversations. Moreover
blogs can mediate pictures (etc.), which can be an important thing in a blog-
community, e.g. to show your new knitting in the *Knitting Bloggers NetRing* (Wei
2004). If it were a mailing list about knitting properly only a few would go to a
website to se the new knitting or the new motorcycle, in a weblog the text go along
with (in a tight coupling to) the pictures, movies etc. In comparison to talking face to
face the weblog let people make an entry that they have been working on as a

consistent statement including links, photos, etc. As a globally distributed digital medium weblogs provides a communicative space, where people with special interest can meet, which often is a problem in the geographical space, where long distances rules out the possibility for communication.

Sum up: The communicative space of Weblogs

Weblogs are *asynchronous*, with a span from near-synchronous use to retrieving posts back to its start. Weblogs span from single-directionality to uni-directionality, which means that blogs have features for interaction that can be enabled. Blogs are not moderated so the *interactivity* provided by the blogs is broadly seen *conversation*. Weblogs can actualise almost all the potentiality of the digital TM. The possibility to produce, edit, process, store, copy, distribute and retrieve knowledge in other forms, e.g. copy text or music from the Web into your blog. In this TM you can read and write with others connected to the Internet within seconds. This is a *remediation* of social interaction, which implies that geographical separated people from all over the world can make social systems in cyberspace as clusters of interlinked blogs. The meaning part of this TM is that *social complexity* is handled through a technical infrastructure, consisting of links between blogs with varying numbers of readers and links between blogs and other digital media like websites, mass media, downloadable music, etc. creating a hierarchy where messages can be *desequenced* and *resequenced* by *subject pointers* and *indexation* through the use of permalinks.

Weblogs as a social medium

The TM does not define the social activity that it mediates, but only provides the scope for the handling of complexity in the form of meaning.[11] The TM offers possibilities and constraints for communication, but the actual social process that must process within the limits provided by the communicative space of a TM is determined by the social. This section of the paper deals with this determination and describes the social possibility space provided by the communicative space of weblogs, describing the social activity that become visible observed through the sociological theory of Niklas Luhmann.

First we look into the social macro level looking at society as consisting of a number of *function systems* each based on a Symbolic Generalized Communication Media (SGCM). Mass media is seen as one of the *function systems*, which makes possible to distinguish between weblogs used for personal purposes and as a mass media. After the introduction to the social macro level, we turn to the micro level and look into communication, as the process that produce and reproduce the social, and discuss weblog communities as communication systems. Except *communication,* the key concepts are *meaning*, *complexity* and *connectivity* or *linkage* (it is the case when one utterance links meaningfully to a former utterance). These concepts makes it possible to describe social activities connected to weblogs as communities that through communication emerge with a border of meaning determining the ongoing communication process.

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[11] Spoken language, for instance, can be used both for many kind of private conversations and in many ways in the mass media, e.g. in the radio. Another example is that I can print out a personal letter to a friend but printing is also used for newspapers

Weblogs, society and mass media

Luhmann describes a number of function systems, for example: politic, economy, love relations, science, mass media and the legal system. SGCM makes acceptance of the premises of communication probable, i.e. describe how communication has effect in a complex and differentiated society (Luhmann 1995: 161). To do this SGCM has to solve problems with combining selection and motivation, which they do by employing a semantic matrix intimately connected with reality, e.g. truth, money, power, love, etc. (1986: 19). The SGCM provides possibilities inside the border of a function system as social semantics separating the function systems from each other, organising the selections of meaning proposals in them. The SGCM is binary coded for example the SGCM of the political system is position/opposition (= power +/-); notice that this code is self-referential because there can be a re-entry on both sides, i.e. the position has its own internal opposition (position /opposition /opposition) and the opposition its own position (for further explanations see Tække 2004a: 2.4, 2.5). The link to the micro level is that interactions and organisations are centred on the semantics of the function systems. Not only are organizations built around the semantics of the function systems but also the SGCM are used in interactions reducing complexity making it probable; that the participants communicates about the same, and that the communication has an effect. For example, power relations functions both on the macro level in the government deciding going to war, and on the micro level in the family deciding not to see drunk aunt Nadia to Christmas. In online communities, like Usenet Newsgroups, the code of one SGCM in some groups creates the horizon for communicative selections and determines the selection between alternative meaning proposals. This is the case in groups discussing computer related topics; they are bound to the SGCM of technology with the code effective/not effective, giving the premises for acceptance or rejection of a meaning proposal. The acceptance or rejection is conditioned by programs developed over time in the single groups giving them a border of meaning, as an interpretation scheme that determine what is appropriate. In such a group it does not help to say; that with regard to the price, this solution would be the best. But many other groups have their own code, which can be understood as historical given pre-selections of one of the values in a couple of SGCM (Tække 2004a, c).

For Luhmann (2000), the mass media is a function system separated out by the use of copying technologies used to disseminate communication and include all institutions of society doing that. No interaction can take place between sender and receiver; it is ruled out by the interposition of technology.[12] Like the other function systems, it has its own code, which is information +/- and its own historically developed programs for the selection of what is information and for what is not (ibid: 18). Now we can return to blogs, probably most bloggers thinks in the code of information-value[13] when they select an entry, but if they have enabled the comment-function on the blog they are not a kind of mass media as defined by Luhmann (2000). A mass medium would be spoiled if everybody could freely comment in it, think for example of a nazi comment on the front page of New York Times. Besides, the interposition of technology ruling out interaction, also, mass media has an editorial board making decisions for what has information value, which is not the case in personal blogs. The validity of information is a result of the mass medium's editor taking the

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[12] Exceptions are possible but newer include interaction with all participants.

[13] Information about politic, the environment, gastronomy, their pets and themselves etc.

responsibility. The respectability of a mass medium is build up over years, they have a coupling to the legal system deciding what is legal to put forward and a coupling to the economic system, because a mass media has to keep its audience to earn money. On the other hand, technically seen, a blog that disables all interactivity functions for interaction is not so different from the technological tools used by online newspapers. The conclusion is that blogs are a personal TM when they are used for interaction and not edited and a mass medium when they are edited and only exposes single-directionality. An indicator for this is that in many Newsgroups users more frequently respond to a message when they disagree than when they agree. This behaviour is in sharp contrast to the WWW link graph, where linkage is an indicator of agreement or common interest (Rakesh Agrawal et al. 2003). This is properly the same with blogs, those that are acting as a mass media provides no reply possibility and are only read (selected) by people who agree, while blogs with reply possibility are commented on most frequently in cases of disagreement.

Structural couplings between blogs and journalism

Some journalist keep blogs, and some of them are paid for it (Andrews 2003), others has got fired for keeping a blog (Olafson 2003). Blogs are coming into the ecology of the mass media, not primary as a distribution media, but as a source for finding information, doing research on topics, and as Andrews (2003) says, as a corrective mechanism for bad journalism. This process of restructuring of and refunctionalisations in the media matrix (Finnemann 2001) is equal to the refunctionalisations in relation to the upcoming of the Usenet, as described by Aarseth (2003). First there is a kind of war between journalists that do not understand the new medium and the users of the new medium. After a while the journalists learns both to use the medium themselves and to take care not to upset the users of the medium plus not to underestimate the mediacy[14] of the medium. One scenario of the blog provided restructuring of the contemporary media matrix is that journalism will expand from a centralized, top-down, one-way publication process to the many-hands, and perpetual feedback loop of online communities (Andrews 2003). Another one is that blogs can provide an alternative reporting in cases of state manipulation with news media and state control of news media and patriotic self- censorship. Yet another sees weblogs as part of an emerging new media ecosystem – a network of ideas, where the Internet itself acts as the editing mechanism, selecting good stories to become global and bad ones to disappear on a local level (Lasica 2003). It must be up to the future how much of these scenarios that become true, here I just want to pinpoint that blogs in few years have become an important structural coupled medium for many social processes. Not only journalism, but also for science, for people with a hobby (like knitting), for small companies, for diarists, for people with a social need for a community that gives better possibilities for distributing identity than e.g. newsgroups, for politic etc.

Complexity

TM makes it possible to perceive over distances in time and space, also outside the present and the natural interaction sphere. They provide the capability to store, structure, organize, categorize, retrieve, etc. This means that TM provides different

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[14] This is a reference to Meyrowitz (1985) where he explains how electronic media showed aspects of peoples *back stage behaviour* making people that did not take this *side stage view* into account look inconsistent in their *performance*.

capacities for the handling of complexity in the form of meaning. Digital TM older than weblogs, have turned into big hierarchies or infrastructures for topical and socially differentiated communication possibilities. For example, Usenet can be divided into: Usenet, hierarchies, groups, subgroups, subject pointers, threads, posts and cross-posts (Tække 2004c). These categories have evolved through a process of social differentiation where the TM has been loosely coupled. The actual situation is that this technical infrastructure provides the scope for the social process of communicative selections within Usenet. The blogosphere still works more like one big web of co-ordinated blogs, thus, there are many differences within the blogosphere: differences in number of inbound links, blog-cluster-communities and the structural coupling to search engines that can find blogs on a special topic. Also systems like RSS (Really Simple Syndication or Rich Site Summary) help finding way through the millions of blogs. Each blog community is anchored around a topic (Neilson 2004 p. 40) like the Knitting WebRing (Wei 2004). Like in Usenet, where we see bifurcations when the complexity grows beyond what is possible to handle within the TM, we also see bifurcations in blog-communities. For example, the Knitting WebRing that is separating out new and more specialized knitting webrings (Wei 2004: 5). This indicates that a development like we have seen in regard to Usenet is starting in the blogosphere, at least when we talk blog-communities. There has been a lot of discussion about how to categorize the blogosphere within the CMC-literature. The leading definition is that there are only two types of blogs: the filter-blog and the free-style blog (Blood 2000). Another proposal is that there are 14 content-focused categories (Miller and Shepherd 2004: 5). It is my presumption that we see the same development that we have seen in relation to Usenet, so, we in some years see a highly specialized topical hierarchy of blogs, providing the possibility for a differentiation that match the *hypercomplex society* (Qvortrup 2003). There will be differences, where Usenet are not so advanced in regard to interaction possibilities, in relation to non subscribers, or for the distribution of identity, blogs are not so democratic or open to newcomers as newsgroups where you just link up and are a member technically seen.

Communication communities based on weblogs

To state that a medium is social, easily leads to the misunderstanding that the technology determines the social that is mediated. The TM provides a communicative space, as described in relation to weblogs in the former section, which provides a special scope for the social to process within. The social can be described as systems (Luhmann 1995) that use communication as reproduction medium (Luhmann 1999). When the social process of communication is mediated in a specific TM the constraints of that TM influence the communication, for example, it is often important to tell that a certain conversation was on the phone because others then know the technical conditions that was present. The telephone doesn't determine what you said to each other, but that you could not see each other and that you where situated in different physical environments. Following these thoughts we now have to think about communication as mediated in weblogs. In weblogs, the communication can process under the conditions that are described in the former section, but what is communication itself? Following Luhmann (1995) the social cannot be reduced to humans, the social is in-between humans as a reality in its own rights. The reason is that communication is a process that the single human cannot carry out alone. Luhmann (1995: 140, 147) defines communication as the unity of three selections: the selection of information, utterance and understanding. The first two are selected by

the alter ego of the communication: what to say and how to express it, while the understanding of the communication contribution is up to the ego of the communication. If ego connects to the communicatively selections of alter ego, no matter if she agrees or not a communicative element is a reality. In regard to weblogs this is the case if a comment or trackback connects to an entry on a blog, or just every time one blog refers to another.

Complexity

Over time there is produced a lot of communication, which can be seen as an increasing complexity. We define complexity as when there are more possible relations between elements than can be realised in one exact moment of time. The social complexity increases if the blog author comments back on the comment and a thread of communicative elements emerge, or if a topic has been communicated in a cluster of interrelated blogs in a way where the contributions connects to each other. The only thing that can reduce complexity is complexity (Luhmann 1995: 26), which means that some of the contributions are meta-communications deciding: what is decided, who said what, in what tone can we address each other etc. Some of these decisions become global as a weblog-etiquette (Blood 2002) and works as the norms for weblog communication, while others are only local (see Wei 2004 for an example). We can understand this phenomenon using the concept of meaning that is defined by Luhmann (1995: 74) as the distinction between actual and possible.

Meaning

To understand something (to give meaning to something) is to mark it in difference to something else that it is not, but could have been. If I say that the whether in Århus is wet and rainy and a little cold you understand my statement as the actual on a background of other possibilities (raining cats and dogs, sunshine, etc). So, meaning is the difference between actual and potential, which as well could be expressed as the difference between form and medium (Luhmann 2002). The medium is the whether-discourse, what you possibly can say about the whether and the form is what you actually say. Luhmann claims that the process of communication turns out to produce the difference between acceptance and rejection of a meaning proposal (Luhmann 1995: 149). Therefore we can talk about the social process as one of condensation and cancellation of meaning proposals building up and modifying a social structure. If we think about what a system is, we can say that a system is, what can be differentiated from its environment, which is possible because the system is defined by what is condensed and negated in it, in comparison to what is condensed and negated in other systems. The system is a selection of social possibilities on a background of impossibilities. In the process of communication norms, for what can be communicated and how (in what tone) is created. This means that the history of interaction is the structure of the system, describing what is acceptable and possible and what is not. This dynamic structure I define as *the border of meaning*. The border of meaning is the possibility-space of a social system consisting of the expectations performed by its attributers on the basis of previous communications.

Community

Interactions are defined as face to face situations and *organizations* as complexity reducing mechanisms that wedge in between the interaction systems and the united complexity of society as an assortment, or a selection of possibilities. The Media Sociography works with the concept of *self-organizing interaction system*, which

means social structures created by communicative selections made in the interaction history of the systems. Here I call them communities for short and because they consist of communication. With regard to blogs, the storage of how the structure (the border of meaning) is, is partly in the minds of the bloggers and partly condensed in entries, comments and even in explicit conventions and netiquettes. Re-actualisations and modifications of the border of meaning is itself a communicative process.

Storage

The border of meaning is maintained through reproduction of distinctions between system and environment, therefore the storage capability of the TM is also important. In face-to-face situations we have to remember everything, because, the spoken words disappear as fast as they are articulated (Tække 2003). In newsgroups, access to Google provide an archive of all communications so the participators in this TM can referrer back to what has been said before, which helps stabilizing the border of meaning (Tække 2004a, c). In Chat, archives are not used, even if they exist like in IRC, and the border of meaning is much more diffuse in chat than in newsgroups or in face to face interaction situations.[15] Weblogs provide storage as a kind of database with permalinks enabling that you can re-actualise an utterance from another participant even if it is years old. This is the background for Blood (2002) to mention that it is very important to read an entry very carefully before posting it to the blog. It is a risk to contribute to communication because you get visible doing it, as we return to, there are never any security for how your contribution is understood. But to know the interaction history of a community provides the contributor with the best possibilities for calculating how to make an entry that fit with the border of meaning.

Encirclement of blog communities

In other forms of online communities users post messages to a mailing list, a newsgroup or a chat room, but in blog-communities users post to their own blog or comment on another person's blog. Usually a TM helps bound the system, or in other words, helps the system to separate out from the environment, like a list of participators in a chat room or the list of members of a mailing-list. In the blogosphere the only technically closed communities are those that only are coupled to one blog, like the *Julie/Julia Project* that while it was on the air, had about 7.500 hits per day, and provided long threads of comments and comments to comments (Blanchard 2004). There seems not to be clear borders around blog-cluster-communities, because, the blogs they consist of always in their blogrolls have links, not only to the other blogs in the cluster but, also, at least one or two links to other blogs that in their blogroll, again have links to external blogs and other clusters. According to Nielson (2004: 21), a blogroll link is an explicit statement of social affiliation. This makes every single blog to the centre of a community, consisting of the blogs on the blogroll. According to Herring et al. (2005) blogs that link reciprocally cannot generally be seen as a community. The blogosphere is partially interconnected and blog conversations, while occasionally intense, are the exception rather than the rule (ibid.). Anyhow, Herring et al. do pinpoint two blog-communities, which show that it is only a quantitative fact that blog-communities are not the rule but the exception in

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[15] The embodiment of the participants helps stabilizing the border of meaning in face to face situations, in cyberspace interaction (Tække 2002) the social uses functional equivalents for the body in regard to localize persons and for expressing body-language, which we briefly return to when discussing the roll of persons in communication.

the blogosphere.[16] Nielson (2004:26) has made research in language use in clusters of interconnected blogs to find out if the use of personal pronouns shows signs of a linguistic in-group versus a linguistic out-group. She did not find a strong "WE", but still frequently use of the "WE", but she did find a strong "I". This again underlines that blogs have a unique mediation attribute, that you by writing on your own blog makes a communicative contribution. Nielson (2004: 30) did also find a strong use of blogger jargon and that it is only possible fully to understand the communication in a blog-community if you have been following the debate over time, which actually is a logical closing mechanism in all communication systems. Distinctions used within systems communication, that make it probable that other bloggers connect to certain meaning proposals, are only made explicit exceptionally.

It is the interactive possibilities within the blog-TM that blur the impression of a border or a membrane around blog cluster-communities. It is not only a result of links to cluster external bloggers on the participants blogroll; where a blogroll-link is an affiliation-creating relation to a special blogger, a permalink relates only to the information on another blog or on a website (Marlow 2004). Two bloggers can link to the same blog without knowing each other, the link has to be reciprocal and deal with the same topics in a meaningful way before we can talk about community. According to Merelo-Guervós (et al. 2003) if two bloggers link reciprocally they are statistically seen semantically related in their entries. This pinpoints that blogs are TM for a wide range of social activities and that communities is only one part of the actualised societal activities within this medium. Where comments are often reciprocal, links in the entry draw long threads through the whole web that are picked up by others in the social network and commented on in their blogs (Neilson 2004:39). Trackbacks make the web even more complex, like cross-posting in Usenet, where usually separated groups suddenly are mixed (Burkhalter 1999, Tække 2004c). But while cross-posting is against the netiquette in Usenet, trackback is only one of many examples on how one blog can be the medium for both: contributing to a community, participating in different present discussions (discussions attacking their own contributors across the Web), making political statements, investigating oneself, explaining about oneself and one's life, etc.

A-list blogs
The blogosphere is a big society and if we take the ultimate quantitative perspective of Shirky (2003), blogs provide diversity plus freedom of choice, which create inequality: In systems where many people are free to choose between many options, a small subset of the whole will get a disproportionate amount of traffic. The blogosphere follows the *power law distribution*, a 80/20 rule describing a curve where, for what ever is being ranked – incoming links or traffic – the value of second place will be half of that of first place, and tenth place will be one-tenth of first place (ibid.). In the blogosphere, like in other systems following the power law distribution curve, two-thirds of the blogs have below average number of inbound links. The blogs that have many inbound links and readers are called *A-list blogs* and are for the most about political topics. A-list blogs can be accessed from many many blogs, which is not the case for the majority of blogs. A-list blogs only link to other A-list blogs and

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[16] In regard to distribution Herring (et al. in press) estimates that there are 2.1 million blogs and that 66% of them are actively maintained. Using the Technorati weblog seach-engin I found 4.845.710 weblogs the 3rd December 2004.

are only in reciprocal relations with other A-list blogs making A-list blog clusters (Herring et al. 2005). A-list blogs are not the most interlinked clusters, they just have most inbound links and traffic and are therefore easy to find quantitatively. The other clusters or those that we must call blog-communities are not possible to find using quantitative methods but only qualitatively (Herring et al. 2005: 7). It is not the mass popularity that makes a community a real community it is the mutual building on a border of meaning, which separate the system from other systems.

Documented blog-communities

The documented blog-communities are bounded around a special topic like the *Knitting Bloggers NetRing* where you must actively post about knitting (Wei 2004). In a community documented by Neilson (2004) the topic were a scientific approach to computer games, and Herring (et al. 2005:7) points out two communities one communicating catholic related topics and one communicating home-schooling related topics. Herring (et al. 2005: 9) found that blogs that link to one another also tent to comment more reciprocally, and that; two-thirds in the clusters were engaged in more dynamic textual interaction. In the Danish blogosphere I have found a community that did not have another topic than what we could call *to tell about yourself and your everyday life*. It is a cluster that is linked both by the blogroll, comments and links in the entries. Like described before, this community, also, have external links in the blogroll and elsewhere, but the cluster expose a core of 5 to 20 blogs. They all seem to be subscribed to *Blogbot* that is a service that keeps track of when the submitted blogs update.[17] Even this community can be said to have a topic (to tell about yourself) and a border of meaning (to keep in tough in a friendly manner).

Social mobility

The community external links or the zoon of blogs that only are linked to in one or a few of the blogrolls dose not signify that the community border are blurred or that it is open to everybody. More specified, these links indicate blogs that are becoming members of the community or that are leaving it. In Usenet communities people are recommend by the netiquette and the FAQs to read the group for a while, getting familiar with the topics, tone and relations within the group, before contributing themselves. In some newsgroups there is a genre (a subject pointer) for the first contribution called *unlurking* or *newbies introduction* (Baym 2000:178), where the new member tells about herself. Maybe the way into blog-communities is determined by having one of the interlinked members putting ones blog on her blogroll. In Usenet communities there are many more lurkers than actively participants (Smith 1999), but in Usenet everybody that can read a message can also write one. In regard to blogs every body can comment, but only them who run a blog themselves can be real members that can be linked to. According to Blanchard (2004:3) even lurkers do have a clear sense of community, but only them who contribute to the negotiation of the border of meaning make a difference and become persons in the community. In regard to leaving the community it seems as a painful process in weblogs, because delinking a blog from the blogroll, is construed as a potential condemnation of it as a response to poor etiquette, opposing political view or, worst of all, an assessment of a blog as unworthy to be read at all. (Packwood 2004: 4).

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[17] 9 December 2004 Blogbot (http://blogbot.dk/) had 800 hundred subscribed blogs and 430 of them had been updated within the two preceding months.

Persons

Social systems maintain themselves (Luhmann 1995). In the blogosphere, communities generate by making themselves attractive through a stable border of meaning attracting participators to contribute. For social systems it is crucial that there is a stable surrounding world of psychic systems: "*Through the connection between selections and further selections in the course of communication, a domain of what is to be accepted and expected condenses, and its boundaries cut across the world of meaning. Psychic systems thereby become persons, namely, collages of expectations, functioning as points of reference for further selections within the system.*" (Luhmann 1995: 127). So the communities need a surrounding world of individuals who knows about the system's interaction history if the border of meaning is to be observed as surviving over time. There have been some debate about identity deception in relation to Usenet (Donath 1999), but as Burkhalter (1999) remarks the Usenet users seems more interested in reception than deception.[18] Blog-communities would not function if persons were not to identify. Even in chat with much lesser traces and signs of identity people have an identity for years and get widely known (Tække 2004b). In Usenet there are many traces and signs of identity that users can be recognized on (Tække 2004c) securing the groups a stable basis of contributing persons. To be recognized as a person is central in regard to linkage and in this regard weblogs seems as the very best TM at least for them who have a blog themselves. The blog provide a personal portal and archive telling exactly what people want others to know about them and their life, including pictures, links to affiliations etc. There is a play of identity between persons and communities; the community is depended on a stable set of persons defending and contributing to the border of meaning (the identity of the system) making it stable and ongoing. The persons on their site get identity out of their participation that makes them visible as persons (with special attitudes, positions, and a special kind of humour etc. and most important as members of a certain community).

The demand of updating

Blog-communities also maintain themselves through norms, both locally and globally, the best and most important example is the norm about updating that both are recognized globally (Blood 2002) and locally (Wei 2004). Constant updating is essential to a blog's success (Nielson 2004:35), and entries are only commented on when they are new (Herring et al. in press). In Herring (ibid.) statistically view 10% of all blogs in the US are updated every day and 60% are updated one or two times per week. Such calculations makes Lampa (2004:2) conclude that the perception of blogging as a rapid-fire back-and-forth exchange actually only describes a very small minority of the blogosphere. But again the statistics about blogs cannot describe actual use on the micro level, where many small communities with only few inbound links from the outside the cluster, if any, may exist. At the same time, we must admit, communities does only account for a smaller part of the blogosphere, because, most blogs dose not link to other blogs (Lampa 2004: 2, Herring et al. 2005) and can therefore hardly be seen as participating in communities at least not in blog-cluster-community.

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[18] Deception is also known in the blogosphere (see Miller and shepherd 2004 p. 5).

Conclusion

Now we can conclude that weblogs actually provide space for a positive answer to all the questions put forward in the abstract: weblogs as a Technical Medium for communication (TM) can be used both as a mass medium, a personal medium and as a medium for communities. This paper has described weblogs using the unity of three different approaches: 1. the media theoretical approach that by putting forward classic questions has drawn a picture of blog's communicative space, 2. the sociological approach describing the social possibility space of blogs and 3. the CMC and empirical approach outlining answers for the media theoretical questions and for describing the actual social use of blogs.

In regard to code, the traditional boundaries produced by differences in educational level are reproduced within the communicative space of the weblog. The cultural codes are important because it is one thing to learn technically to construct and run a blog, another to hit a proper genre within the blogosphere, which is a must if anybody is going to actuary read, link and comment on the blog. The selectivity of the blog-medium determines that it is only people who can handle both cultural codes and the technical codes that actually can use blogs as a communication platform. Thus, now more people that can formulate a statement who have only little technical training can do that through a weblog. Some blogs create a communicative space with possibilities for interaction and some do not, which provide two very different kinds of TM: one that provide a single-directional communication space like the mass media, and one with a uni-directional communication space, that by itself can form a community based on comments, or be part of an interlinked cluster-community. The interactivity possibilities enabling interaction is: Blogrolls (and web-ring-technology), permalinks, comments and backtracking. The blogroll adds a new dimension to the hyperlink, because they indicate a communication in themselves creating a more permanent link between two bloggers providing the possible emergence of a community. The permalink link to a specific page and position, enable meaningful communicative turn taking between different blogs. Thus, the permalink also is blurring the impression of closed communities; they provide a complexity reduction, because, the blogs by use of them can be handled like a database. Comments serve as an effective medium for interaction both on the basis of a single blog with no links and as a medium of communication between bloggers. Trackback makes it possible that different blogs that are not in a cluster together are employed to directly communicative turn-taking, which means that the trackback function makes the communicative space of the hyperlink bi-directional. The more of these interactive features that are integrated in a weblog, the more the blog, technically seen, gives space for interaction. At the same time this extended interactive space, of such weblogs, are blurring the border around the communities, in the eyes of a media theoretical observer. Seeing blogs more sociologically, as meaning systems, shows how only participants that are committed over longer periods of time can handle the semantic codes of a community. This closure around a border of meaning is sufficiently for maintaining the systems internal self-production, differentiating them from the environment: Some communicative contributions connects to the historically produced condensations in the community, while others does not, they fits with the negated ones. The storage and retrieving features make possible to create an interaction history deciding what topics to thematize, who belongs to the community and what tone the communication has to follow. Interaction features, like the immediately notice of the blogger, that some in

the blogroll has made an entry, provide a feeling of near-synchronic interaction, and the reverse chronological organization of the blog provides a sense of immediacy. The remediation of social interaction in blogs provide the same good basis for distributing identity and identification of persons as the traditional website, but because of the mentioned interactivity features also makes a good basis for turn taking in conversations. It is not the mass popularity that makes a community a real community; it is the mutual building on a border of meaning, which separates the system from other systems. It is the border of meaning that is the identity of the community, which, at the same time gives identity to the participants that, contributes and maintains it. The community external links or the zoon of blogs that only are linked to in one or a few of the blogrolls dose not signify that the community border are blurred or that it is open to everybody. More specified, these links indicate blogs that are becoming members of the community or that are leaving it. The blogosphere are strongly biased: between A-list blogs and blogs with few inbound links, between interlinked blogs that are part of communities and blogs that are isolated as lonely riders. Blogs also contributes to the contemporarily media matrix's bias towards space: the ever increasing request for updating on every thing from political topics to follow-ups on alterations in diarists self-understanding and identity. The weblog is an extension of the human body, because persons are localised and identified through them on a global basis. They are an extension of the senses because people can utter their communicative contributions through them. They are an extension of the social space as symbolically generalised cyberspace avatars that combine communicability and personification. Blogs make the WWW to one big newsgroup where homepages as representations of persons performs a medium by which people can stay in contact with many different social contexts, introduce themselves in new contexts (e.g. by making a trackback to a blog in a community) etc. Blogs perform a front stage bias through which people can get visible as they are pleased, but also contains reminiscences of a back stage bias, because, expressions are also given off in this medium; e.g. by spelling like I am, not updating regularly, being too fast writing something offending etc.

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