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**Reality vs. Linearity in creating
the Norwegian Internet.
Some ethical and methodological
reflections on studying the
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A history based on stories

In the early stage of the research process by studying the History of the Norwegian Internet many actors' eager and obvious strong interests to interpret the History of Internet surprised me. My response was to stand back and take time to reflect on what happened, why, and especially figure out what to do in the further research. This essay is a result of those reflections, based on my preliminary experience with the actors, also with written sources as timelines and various stories that can be understood as narratives of Internet heroes. Frequently we get to know what happened more than how, not to speak of why it happened in those ways. This is typically for timelines, but it is not rare for more complementary told stories either. Different actor groups based on various relations to Internet development and spreading are of course interested in making their work and efforts visible, both in our own times and for the future. This rise questions with aspects of both ethical and methodological issues, although here the last mentioned stays in foreground the two of them are often mutual affected.

As long as this essay is based on an early phase of my research process according to the Norwegian History of Internet the discussion may appear as insufficient and not so concrete. Though my intention here is not an empirical study but a preparing for going into a new dialogue with the chosen sources on a further step of my Internet history research. Writing a History, either of Internet or other areas, involve a dialogue with actors and groups, either as oral or written sources, that obvious are not conform to each other's interpretations nor explanations of what happened neither their storytellings. It does not mean that one story necessarily is more true than another, although it can mean that, if for example some tries to take the responsibility for something others have done, or if someone directly lies and tells fictitious (fairy-) tales instead of stories based on memory.

The way of how I write and communicate the Norwegian Internet's History may also make significance for how eventually controversies today are understood, because those often are based on conflicts and disagreements about what solutions should and should not be chosen back in past. Subjects as freeware, share and freedom contrary to commodities, sale and monopoly have been relevant issues of the computer network discourse since its origins. The subjects are understood and explained in different ways based on various concepts of ideas, also based on unlike viewpoints dependent on where the different actors were and now are standing in the process of inter-netting and

¹ With great thanks to Dag Elgesem for reading and valuable critical comments, to Knut Holtan Sørensen for serious and open reply to my questions, to Øyvind Thomassen and Hendrik Spilker for readings, inspiring discussions and encouragements together with several other colleagues at the Department of interdisciplinary studies of culture, and to Roar Madsen for reading corrections and comments. Errors, faults, short-circuits or misunderstandings are of course my responsibility only.

Internet development. This raises questions related to my research in various angles of view, both as a Historian, by studying technology and society as mutually constructed, and in a perspective of writing the Internet's history.

Here I emphasize on reflections related to these three perspectives to what extent it is possible or fruitful to separate those points of view. Before I go further with this I will try to uncover what 'black box' the reflections of this essay is about by a brief introduction to some of the origins of the Internet in Norway. Next to this I will present some relevant aspects from the Norwegian debate on methodology of History, followed by a discussion related to how to write the History of the Norwegian Internet in a perspective of Internet constructed by negotiations with(in) the society.

(Inter) net to Norway

The Internet's origins in Norway started among other things with relatively early development of computers and computer languages like SIMULA. The universities' need for heavy computer capacity especially for complex mathematical calculations, contributed to the idea of building local networks for more effective utilization of the two computers with highest capacity in country. At the University of Oslo the carrying and transportation of the punch cards was replaced in 1972 by a link to a computer and research centre at Kjeller outside Oslo. Similar links followed at the other universities and in some companies. In 1973 also the first link to ARPANET outside USA was established in Norway, by a node at Kjeller. England's connection to ARPANET followed straight afterwards.

The year before the Norwegian research council for science and technology originated a research project called "Distributed data processing". Soon, an idea about a computer network between the four universities in Norway came up. The Universities of Bergen, Oslo, Trondheim and Tromsø, plus the Computer centre and the Telecom Research established "The study group in data network". In 1975 this was followed by the research project UNINETT (the Universities' net), for developing a Norwegian computer network for academics. This network was in experimental operation during 80'ies, mostly based on the different European Telecommunications' choice for network standard the Open Systems Interconnection (OSI) with X.25 protocols, instead of the ARPANET technology based on Internet Protocols (TCP/IP). The choice of network technology was probably among the reasons why the UNINETT was not established with regular service and operation before in 1987-88. At the same time the Nordic academic computer network NORDUNET was established with a so-called multiprotocol developed at the University of Oslo, as made a connection by several types of protocols (ARPAnet TCP/IP, OSI X.25, IBM/NJE, DECnet) into a common infrastructure possible.²

² Gisle Hannemyr: "Begynnelsen på en historie om Internett" (The beginning of a History of the Internet), in Braa, Hetland and Liestøl (eds.): *Nettsamfunn* (Net society), Tano-Aschehoug, Oslo 1999.

Hindsight and pushing informants

As already introduced, in the beginning of the research project writing the Norwegian History of Internet we met several actors that were pushing and as took us by surprise. Others didn't appear at all, in the meaning of being quiet-mannered. In the beginning I understood the pushing actors as those with the strongest opinions of how to interpret the history. Later I have experienced that they all in various ways have stated opinions about the process or parts of it. It looks therefore like it is different individuals' behaviour that I meet as a researcher, if so not impossible combined to controversies of various types related to computer networks as well as competitions among different groups of interests related to the same area. According to some of the audible actors' opinions, the principal questions seem to be: Who saw the great opportunities if Internet first? Which technologies were best? Who knew that early? Who realized – after a while, and who did not – at least not in time?

My assertion is that those questions more or less are characterized by hindsight and tend to represent both a deterministic approach and a linear understanding of the history. Timelines tend to give the same impression. What ethical and methodological problems do such internal contrasting interests combined with this distinction by loudly and silent actors rise in writing a history of the Norwegian Internet? By discuss and reflect on those experiences from our first meetings with actors and how to deal with some of the actor's strong opinions and messages of the history in detail, I will try to illuminate those problems.

Methodology in a historical context

The Norwegian methodology of history has been dominated by so called 'records criticism', a direction of if and how we could trust the sources and the way of using them or not. Therefore historians should be neutral to values into studying course of events, and objectively render the veritable past. The scientific ideal in this approach is to claim the truth for it's own sake, and to claim the research free from social engagement, based on the requirement for acknowledgement, observation and reflection. Historical research is proclaimed to have a meaning just to correct wrong historical contentions appearing in the public debate, and most of all should historians work against historical argumentation supporting political points of view.³

This approach's position can be explained by the stable political situation in Norway after World War II through the 60'ies, by then optimism, economic growth, welfare and happiness contributed to less need for methodological criticism. The approach is also seen as a result of an early problem about forged documents used as sources for historical research, and further as a result of misusing historical research into ideological advantages

³ Ottar Dahl: *Grunntrekk i historieforskningens metodelære* (Essential features of the methodology of historical research), Universitetsforlaget, Oslo 1967, quoted in Odd-Bjørn Fure: "Kritisk empirisme" (Critical Empiricism), in *Historisk tidsskrift* bd. 72 nr. 1 (Norwegian journal of history) 1993: p. 56.

where sources that said something else than wanted was neglected. This approach is therefore a kind of a remnant, still existing.

From the 70'ies the prevailing methodology of historical studies was challenged by critique of positivism, contemporary and coincided with political revolted comprehension and critique of the existing conditions in society. The historian Per Maurseth visualizes a paradox to the scientific interpretation in this way: "The results are regarded valid, but contemporary maintained social invalid."⁴

Another diversity of history as became visual by the debate of the methodology is that the science of history always mainly has been marked by qualitative studies, although in a period history research in various directions was influenced by natural and social sciences with quantitative approaches. A generalization is that historical discussions and evaluations then tended to be strongly logical and built upon counting, this more than interpretations of meaning or intention not to mention contents of cultural meaning, as History is much about, for approaching problems about the past that means something (important) for us today.

New approaches in historical studies as well as in other spheres have been represented by different manners of reading and putting questions in various ways. Micro-history for example tries to catch variations and ambiguous contents of meaning as often could be hided behind synthesized and general categories and conceptions.⁵ Another approach is represented by social constructivism, with theories as social construction of technology, large technical systems with seamless webs of interaction with political, economic and social activities, and actor-network-theory.⁶ Those approaches, built upon interaction between social and technological changes, pretend to be anti determinist and anti positivist, and contribute to tear up the linear understanding, as they conducive to open more for question and interpret instead of setting stringent demands of how and what to study in past and present.

⁴ Per Maurseth: "Historikeren som produkt og produsent av historie" (The Historian as a product and as a producer of History), in *Studier i historisk metode* nr. 5 (Studies of Methodology of History), Oslo 1970, quoted in Knut Kjeldstadli: *Fortida er ikke hva den en gang var. En innføring i historiefaget* (The past is not how it was once upon a time. An introduction to History), Universitetsforlaget, Oslo 1992: 302. ("Resultatene ses som gyldige, men hevdes samtidig å være samfunnsmessig likegyldige.")

⁵ Ingar Kaldal (refers to Hans Medick): "Sosialhistorikaren i 'Nr. 13' – kulturhistorisk gjensitt" (The social historian in number 13 – a cultural historical return visit), in Håkon With Andersen et al. (eds.): *Historie, kritikk og politikk. Festskrift til Per Maurseth* (History, criticism and politics. A homage volume to professor Per Maurseth), Historisk institutt NTNU, Trondheim 2002: 308f. (Syner til Hans Medick, som ytrar at "mikro ikkje handlar først og fremst om å redusere skalaen, men å stille inn blikket på *lesemåtar* som fangar opp variasjonar og fleirtydige meiningsinnhald som elles lett blir borte bak store og allmenne kategoriar og begrep.")

⁶ For example Wiebe E. Bijker, Thomas P. Hughes and Trevor Pinch (eds.): *The Social Construction of Technological Systems. New Directions in the Sociology and History of Technology*, The MIT Press, Massachusetts/London 1987.

According to Arthur Danto, historians are interested in to explain, not single episodes but entire processes as led from historical situation to a new situation.⁷ The account of what happened will be the narrative, and the choice and use of theory and methodology will make the differences. This choice may depend on what's looking for.

Related to the historical research on the Norwegian Internet I'm curious on how the Internet was implemented, put to use, domesticated and furthermore developed in a Norwegian context. Of course it is interesting how and otherwise when Internet was introduced in Norway, but the more I study the early stage my understanding is that the "starting edge" is much more fringe. It is no explicit starting point. There are plenty threads, some are going far back, others can be picked up by the beginning of 70'ies.

The approach of ethical issues of studying the Internet has brought me further into related questions of methodology of historical studies. In some way I'm going back to the records criticism, but I also have to ask what influence my use of the sources and my interpretations will have on the individuals as and behind the sources and on the narrative. These thoughts are not new,⁸ but for me latest influenced by my meeting with the approach of ethical issues in studying the Internet,⁹ and are a result of my research of the history of the Norwegian Internet in itself as well.

Which technology is best or who is being heard?

The Internet history project is both a study of past and present, and fortunately for me the majority of actors are mainly alive and kicking. Some of those actor's attitude are very different and unlike from my experiences in earlier studies, where people often were inaccessible for oral objections or comments. Many actors, both directly involved in the different processes of developing Internet in Norway and related in more remote ways, have showed a genuine interest not only for the work by them selves but also for "our" work studying the process of development of the Norwegian Internet. Further, some express (unconsciously more or less) a strong wish to twist the history in a direction followed by their stated opinions. And we are confronted with opinions about one single true and verity history of the Internet.

The problem is not only about subjectivity and objectivity, but about whom has the power to be heard as well. We are all subjects and have our certain understandings of different situations and processes. That's neither

⁷ Ingar Kaldal: "Å fortelje, å forklare og å tenke historisk" (About narrative, explanation and thinking historical), in *Historisk tidsskrift* bd. 72 nr. 1 1993: p. 83.

⁸ Narrative history and methodological discussions of studying oral sources are now well established. Their theoretical emphasis seem to be a result of their origin as a critique of the traditional way of studying history, and the critique as the new approaches met from the traditional point of view as well.

⁹ Nordic interdisciplinary workshop, 2002 June 1.-2.: "Making Common Ground: methodological and ethical challenges in internet research", and Graduate course, 2002 June 1.-6.: "Internet and ethics" with lectures by Dag Elgesem, Charles Ess, and Chris Mann. Both at the Norwegian University of Science and Technology (NTNU), Trondheim 2002.

possible nor desirable to avoid, but following just a single one's opinion about a progress gives neither any way out.

Take for example the story of where and by whom the first computer where built. First it was an official confirmation that the UPENN ENIAC from 1946 was the very first computer. The Atanasoff-Berry Computer (graduate student Clifford Berry) was built in 1942 at Iowa State University, and in 1973 the ENIAC (or it's inventors Mauchley and Eckert) lost the patent as the very first computer in the world by a court in Minnesota in US to dr. John Vincent Atanasoff. Now it seem to be Alan Turing from England that was the inventor of the world's first programmable electronic computer (as he was a pioneer in deciphering German code messages (the more advanced Lorentz, not the older Enigma) during World War II, and in artificial intelligence), with an article about the Turing-machine from 1936, and later the building of Robinson and Colossus (1943).¹⁰ This story not only demonstrates that US inventions tend to be more visible than earlier or simultaneous similar inventions in another countries, it demonstrates also the significance of the prevailing cultural meanings in the society (here: England), where the homosexual Alan Turing was convicted in 1952 for 'improper behaviour', two years later he committed suicide. His research is just recently little by little been brought out and elucidated.

The study of the History of the Internet in Norway is comparable to the example above. There exist various and contradictory stories about how the Norwegian Internet was developed. Somebody's claims to be described as the first to realize and make use of the 'best' and 'most proper' net technologies tend to generate hindsight and give an impression of a deterministic and linear approach of the History of the Internet.

It is not only individuals that struggle for visibility and honour. It seem also to be rivalries about what interest groups have been given the most valuable contribution to inventing of the Internet, scientists or technologists, military, politicians, industry, discussion groups, hackers, pornography on net, not to speak of all kinds of various user groups. My approach is that probably all those and plenty others have contributed in the respect of inventing, shaping and reconstructing the Internet. Accordingly to this, shouldn't as many stories as possible be heard and re-told? My most conspicuous dilemma here is the contribution from the industry of pornography. However, by an ethical point of view groups' contents shouldn't be a reason to exclude them neither as a user group nor their innovative use of technology. Further it is also an example of that technology is not (necessary) good or bad, but that we all have a choice with ethical implications of how we use the Internet.

According to the question about alternative technologies there is an example, related to different computer network technologies. Relevant questions in this respect and related to the first period of the Internet History are concerned with who chose which technologies, why were those chosen,

¹⁰ Magne Lein: *Fra tekstilvev til verdensyev. Kunnskaps-samfunnets IT-røtter* (From textile weaving to the World Wide Web. IT origins of the society of knowledge), IDG Norge Books AS, Oslo 2000: 31f, 99ff, 112ff.

and how did a certain technology by several succeed? Maybe there's no relevant questioning to the Internet's enthusiast's asserting TCP/IP representing the most open, less complex and therefore a better network-technology, than the rather more closed systems of DecNet and EARN and also OSI often described as a more complicated and intricate system. Anyway it is not far to another problem, what made, or how was TCP/IP made successful and not the others, especially in the Norwegian and European context containing heavy actors as the authorities that favoured the system by OSI? These questions among others I hope to be able to answer at the end of the History project of the Norwegian Internet.

Linearity and verity

Although I really gratify the obvious interest from actors with different views by professions, experiences and involvements into the Internet history, because it helps me to get in touch with relevant actors and groups of actors of interest as hopefully opens for several angles of incidences, but our effort is not to contribute to an 'Internet hall of fame', neither to forward any expression of the existence of one single veritable historical approach. There are many stories contributing to the history. However, a misrepresenting history can promote both a false history and an appearance of a linear evolutionary view of history. As Knut Sørensen, Margrethe Aune and Morten Hatling writes do linear models often "reflect an underlying asymmetry of producers and users of knowledge. The producers are seen as active, essential, and defining. Users appear as reactive and limited."¹¹ This lead me over to the timeline problem, where the account is made chronological advancing, like a chain of stories arranged in order time series. The presentation is descriptive, not explanatory, and will often promote linear comprehensions of history, instead of going thoroughly into history combined with various angles of incidences.

A large part of the history of the Internet online is represented by timelines. Those are not necessarily updated nor modified according to recent research results. Anyway are they easy to get at, and several are plain and clearly set up. On the other hand do they tend to simplify and express the history as linear like development happens along a straight line step-by-step with gradual improvements and upgrading? This understanding was typically for the old history writing as chronicles and annals, and in earlier History of Technology often called internal history, where the main point was the objects shape, function and manner of operation. The nuts and bolts got the attention and the techniques were more or less infrequently related to social processes. Social conditions was rather included in a technology deterministic way. The power of technology drove the society forward. This way of writing history was also characterized by that technologists got status as heroes. The internal logic implied, but rarely expressed, that the technological advance couldn't be

¹¹ Knut H. Sørensen, Margrethe Aune and Morten Hatling: "Against linearity. On the cultural appropriation of science and technology", *STS-working paper 9/96*, Centre for Technology and Society, NTNU, Trondheim 1996: 2.

stopped. That lead to two different positions, both deterministic: The technology in progress would go on and the society had to accommodate to this. The other position was that the technology couldn't be controlled and therefore had to be stopped.¹²

The internal understanding of history is still alive, as we happen to meet with actors in the history of Internet as well. It is not always easy to see several perspectives from one point of view, although his (or her, even I haven't met her yet) story can be a part of an explanation. Anyway, there is not the informant's task to express such an overview. That must be the researcher's duty and therefore my problem.

A narrative history needs a dimension in addition to the chronology that is a configurative. We will put the elements in order by chronology, but we also have to construct a meaningful whole and context from the elements. In this process the researcher often has to go outside the chronology and arrange the moments in order to each other in a way that gives the best-explained thread or theory, to make a history or a narrative in difference to a chronicle, as the Historian Ingar Kaldal writes.¹³

The historian Jörn Rüsen asserts that in addition to the mainstream of events the historian includes the unexpected or the extra occurred and turned (the understanding of) the situation in a way we never would expect from inherent orderliness in general. The coincidences created a degree of freedom, an opening or a room for human manoeuvre.¹⁴

Ethical reflections around selecting perspectives and about methodology

Which voices do I route, what voices do I risk to neglect, and to whom does the interpretation of the past belong? Often informants have the opinion and proclaim there is one true history. This is neither a new theoretically nor a new methodologically problem and my arguments maybe appears to fling open already opened doors. That is however not my intention, and similar issues have been discussed by other researchers as well.

Professor in Folklore Anne Eriksen has studied some of the consequences of the sentences followed by membership in the Nazi party and treachery during the World War II and the German occupation of Norway, the atmosphere that was shaped against these people and their families up to present days.¹⁵ Among her sources is letters that were sent to the Norwegian Broadcasting Corporation after four television programs where some of the

¹² Per Østby: "På historiens motorveg. Linjer i studier av teknologi og samfunn" (On the highway of history. Lines in studies of technology and society), in Stig Kvaal and Per Østby (eds.): *Emner fra norsk teknologihistorie* (Topics from the history of technology in Norway), compendium, Centre for Technology and Society, University of Trondheim 1994: 37f.

¹³ Ingar Kaldal: "Å fortelje, å forklare og å tenke historisk" in *Historisk tidsskrift* bd. 72 nr. 1 1993: p. 90.

¹⁴ Knut Kjeldstadli: *Fortida er ikke hva den en gang var. En innføring i historiefaget*, Universitetsforlaget, Oslo 1992: 119.

¹⁵ Anne Eriksen: "Å forske i det ubehagelige" (A study of the unaccepted), in *Norveg, Journal of Norwegian folklore Studies*, nr. 1 1995, Novus forlag, Oslo 1995: 29-38.

earlier members of the Nazi party appeared by their own story. This called many reactions both loudly protest against the whole perspective, and quiet-mannered letters of thanks. Professor Eriksen's motivation was to find new knowledge through voices of earlier invisible persons.

Eriksen writes there was many (among the convicted for treason after world war II and their families) that more than willingly shared their story with others. In fact it would be rather difficult to avoid them tell, cause there was a flow of history, but at the same time they made demands. They wanted a spokesman so tremendous. They wanted to be heard, and they had for a long time ago decided what to say. Their thoughts were matured the narrative was created long time ago. The convicted for treason would not discuss nor answer questions, they wanted to elaborate and introduce their own continuous story about what happened.¹⁶

Eriksen raise questions methodological and ethical aimed at not misuse the informant's confidence nor fail their stories. On the other hand do this project push those problems followed by aggressive actors to extremes. To the utmost consequence we can ask if the research project has any meaning if the informants already are nailed on understandings of what happened, followed by an understanding of the research as a process and a result of a dialogue with the sources as well. Usually these problems causes less trouble than in Eriksen's project about Nazis, at the same time as researchers can take notice and learn by those.

Another Folklorist, Bente Gullveig Alver met similar problems in her study of satanic supporters. Alver concluded with not claim to understand everything, and argue that in such cases are required to use other than qualitative methodology.¹⁷ In a study of this kind this maybe come to the consequence. On the other hand this raise another question, if it is not at least as important to be on guard for ourselves and eventually lack of reflections while studying 'kindly' and blameless records as the researcher additionally political and/or social sympathizes with? How can other than qualitative methodology contribute to solve such dilemmas? Will the interpretation be more true if it was made impersonal and been taken distance from? There is many various ways of contemplate and views, at the same time as there is actual happenings as most would be able to agree about. By disregard searching for the truth advantageous new knowledge based on various versions of course of events and episodes, it will maybe not be that problematic to release voices as we agree to, are critical to, or heartfelt sympathize with.

Another notice of appeal is the traditional methodology of history according to primary/secondary and credible sources. But this methodology was developed in the study of medieval documents as copies or placed

¹⁶ Anne Eriksen: "Å forske i det ubehagelige", in *Norveg*, Journal of Norwegian folklore Studies, nr. 1 1995, Novus forlag, Oslo 1995: 34, 36.

¹⁷ Bente Gullveig Alver: "Creating the Source through Folkloristic Fieldwork. A personal Narrative", in *FF Communications*, Suomalainen tiedeakatemia, Tiedekirja/Akateeminen kirjakauppa, Helsinki 1990, quoted in Eriksen 1995: 32.

together in a new version. In a study approaching our own times we may put a question to what we search for, then I argue that the what happened-question will imply another solution or methodology than if we study affairs in the middle-age. It depends of what we want to know, what did in fact happen, or what did the actors plan to happen, and how did they comprehend or what did they read in the facts?

Broadly using qualitative methodology can mean text-interpretation, interview in depth and life-cycle interviews to find the relations/coherences in a human life, and those who taking part as observers. As the historian Knut Kjeldstadli writes, with qualitative methodology we seek to find out if anything existed, what something was and what it meant.¹⁸

Karl Marx explained acting and development as an outcome of the interactions between the economic and social conditions and the world of ideas. This theory is still interesting, and can be related to this discussion by seeing the interwoven structures (basis), mentality and individual ideas. Therefore changes need time to break through, and each time has their own rooms for action and spirits of the times. The SCOT perspective represents a combination of basic methodology with an incline to qualitative methodologies and an advanced methodology as well.

According to Ingar Kaldal: "Instead of obstacle our hunting for exactly what happened we could use uncertainty, unsteadiness and confusing mode of expressions, self-contradictions and differences between various actors to uncover layers of various interpretations, meanings and opinions. It is not a problem but implies a potential."¹⁹

My intention is not to retell a representative group of actor's lifetime stories. I'm probably not even interested in their lifetime stories at all. I'm neither seeking the reasons behind their personal choices as I am interested into the consequences of their choices and actions, and then in a way into their motivations whether the course of events or episodes were intended or incidental.

Eriksen's and Gullveig's informants had both needs for getting their history authorized as stigmatized groups in many ways not entitled to give their opinion. My informants is representing by positions with more or less power in our community. Those actors' freedom to work in developing processes, to compete about technologies and network strategies, and the great meaning their work appear to have on the society make them to a complete different group, not at least to a strong group, with disagreements by various strong opinions. The different strategies by the different actors in how

¹⁸ Knut Kjeldstadli: *Fortida er ikke hva den en gang var. En innføring i historiefaget*, Universitetsforlaget, Oslo 1992: 175.

¹⁹ Ingar Kaldal (refers to an article by Tore Pryser: "Margit fra 'Nr. 13' - Sosialhistorie fra en arbeiderbygård" (Margit from 'Number 13' - A social history from a working-class apartment building), in Per Fuglum and Jarle Simensen (eds.): *Historie nedenfra. Festskrift til Edvard Bull på 70-årsdagen* (History from below. A homage volume to professor Edvard Bulls 70 anniversary), Universitetsforlaget, Oslo 1984): "Sosialhistorikaren i 'Nr. 13' – kulturhistorisk gjensnitt", in Håkon With Andersen et al. (eds.): *Historie, kritikk og politikk. Festskrift til Per Maurseth*, Historisk institutt NTNU, Trondheim 2002: 311.

influence the research project about their history, is maybe caused by different individuals' types of behaviour. Though this seems to be as much possible a result of that the first history version is going to be written, about their area, the Norwegian Internet. This is of course important, especially by those that understand themselves as involved, to have an influence on.

Traps of success?

In an attempt to (re)construct a history of Internet in Norway I am interested in a way what happened when, but especially in how and why by way of various actor's and actor-group's different experiences and explanations of both their work and network. According to Pinch and Bijker: "... both science and technology are socially constructed cultures and bring to bear whatever cultural resources are appropriate for the purposes at hand. ... the boundary between science and technology is, in particular instances, a matter for social negotiation and represents no underlying distinction."²⁰

From a SCOT perspective the history of technology presents two kind of problems, the descriptive historiography and the asymmetrical focus of analyse successful innovations at the sacrifice of technological failures. Accordingly to Pinch and Bijker, "This contributes to the implicit adoption of a linear structure of technological development".²¹ The History of the Internet is mostly introduced as a history of success as well. By application the theoretical contribution by SCOT I will try to counteract a linear understanding of the history of Internet in Norway, also search for any failures on the way, and for example look up for eventually clever technological solutions that for some reason didn't be preferred. By theories as 'domestication' and 'script' I also will attempt to illuminate both producer and consumer's use and the reconstruction followed by their domestication of the Internet through interactive negotiations of its meaning and practice, and integrated into social practices of action.²²

In this way I aspire to see and get to know about the technological choices, and by following at least some crooked paths and blind alleys I hope to get advantage of the different actor's various stories. By the theoretical foundation displayed here, indicate that the actor's role is dependent on their surroundings and the society's order and adjustment, breakthrough and application, and the interaction between inventors (both producers and users) and the community.

²⁰ Trevor J. Pinch and Wiebe E. Bijker (refer to Barnes 1982): "The Social Construction of Facts and Artifacts. Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other", in Wiebe E. Bijker, Thomas P. Hughes and Trevor Pinch (eds.): *The Social Construction of Technological Systems. New Directions in the Sociology and History of Technology*, The MIT Press, Massachusetts/London 1987/1989: 21.

²¹ Pinch and Bijker, in Bijker, Hughes and Pinch (eds.) 1987/1989: 22.

²² Knut H. Sørensen, Margrethe Aune and Morten Hatling: "Against linearity. On the cultural appropriation of science and technology", *STS-working paper 9/96*, Centre for technology and society, NTNU, Trondheim 1996: 3f.

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