Internet Between Utopia and Dystopia
The Narratives of Control

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Abstract

The Internet has often been envisioned as a technological utopia, framed by the rhetoric of hope. However, after studying the popular discourse, *three meta-narratives are identified*: utopian narratives containing the *pro-innovation position*; dystopian narratives containing the *anti-diffusion position*; technology-as-risk narratives containing the *control position*. While narratives of anti-diffusion are more or less invisible, narratives of control are surprisingly absent from the scientific discourse about the Internet. The present article sets out to explore narratives of control as they were presented in the Norwegian press during the 1995-2006 period. We have also studied how the expectancy cycles of the Internet fluctuate over time within this period. The study supports two general conclusions: (1) the expectancy cycles for the Internet in the mass media fluctuate in a manner comparable with the stages of the innovation-decision process and; (2) the control position promotes individual, social, technological and institutional control, and is more prominent when the Internet is lower on the media agenda.

Keywords: Internet, innovation, expectations, narratives, domestication

Introduction

Narratives about expectations are significant in the diffusion process of innovations. These narratives utilize resources concerning opportunities and potential risks. They also exert a performative force; they spur different actors into the process of making technology their own, thereby contributing to the domestication processes of innovations. The rhetoric of the Internet is often described as the rhetoric of hope. Mulkay claims that the rhetoric of hope is the dominant science and technology discourse in our culture, while the rhetoric of fear is culturally subordinate (Mulkay 1993, p. 724). However, Bloomfield et al. state that "this subordination is relative rather than absolute" (Bloomfield & Vurdubakis 1995). The rhetoric of hope is prominent in much of the discourses surrounding the development of the Internet, as well as the research into these discourses. For example, in an early study, Johansson studied the rhetoric of technology and computing discourse in Sweden from 1955 to 1995, using policy documents as the empirical corpus (Johansson 1997). Later, Cronehed studied the technology hype by analysing a computer fair (Cronehed 2004), while Lennstrand reports findings from two experiments "gauging the effect of diffusion models on people's perception of speed in this process" (Lennstrand 2001, p. II). A more specialized study was conducted by

Karlsohn; he studied policy documents about information and communication technology (ICT) and education as well as a range of articles from professional educational journals (Karlsohn 2009). A similar but more general study was conducted by Flichy, focusing on a corpus of articles consisting of Internet books, articles from *Wired* and some high-profile magazines (Flichy 2007). The aim of this exercise is to illustrate that the empirical corpus often is strongly biased towards the rhetoric of hope, and the rhetoric of fear is more or less invisible, as it is often absent from or not revealed in the empirical corpus. The control position has been studied earlier in relation to how users produce and distribute information (Bordewijk & Kaam 1986). The issue here, however, is how control is understood when studying how a new media technology is portrayed in the media discourse. My first claim is, therefore, that a more inclusive empirical corpus is necessary to overcome the often very biased descriptions of Internet narratives.

In accordance with the hope-fear dichotomy, Nye argues that new technology is understood using two meta-narratives: utopian and dystopian (Nye 2004, p. 171). However, I claim that those new technological innovations in both the popular and more policy-driven discourse should be better understood using the three meta-narratives or a trichotomy instead of a dichotomy: utopian narratives containing the pro-innovation position, dystopian narratives containing the anti-diffusion position, and technology-as-risk narratives containing the control position. The pro-innovation position implies that an innovation should be diffused and adopted by all members of a social system. The innovation should be diffused as rapidly as possible and neither re-invented nor rejected. Anti-diffusion recognizes innovation (or invention) in fact, but states that for different reasons this innovation ought *not* to be diffused or assimilated by particular user groups or by society in general. The anti-diffusion position is, as the above researchers underline, barely visible in narratives about the Internet. For the most part, the narratives do not reject the innovation, but claim that new technology entails potential risks that must be controlled. The three positions are linked to anticipatory action, thereby creating expectations (Brown, Rappert, & Webster 2000). Over time, these expectations fluctuate. A twofold research question is therefore investigated in the present article: First, how do the expectancy cycles relating to the Internet fluctuate in the mass media? Second, how do the narratives of control contribute to the domestication processes of the Internet?

The next section contains a presentation of the theoretical framework. This is followed by a section on methodology, before the findings themselves are presented. The final section contains a concluding discussion that sums up the findings and points to further research possibilities.

Encountering the Internet

During the 1994-1995 period, the general public encountered the Internet through the *mass media*. The Internet was interpreted, dramatized and given content. Mass media channels are therefore important for creating awareness and knowledge of a new innovation (Nelkin 1995; Rogers 2003). In the mass media, innovations are promoted and changed through different support strategies as conflicts are resolved. An innovation may therefore be both domesticated and re-domesticated (Lie & Sørensen 1996) or re-invented (Rogers 2003). Domestication involves the processes whereby innovations are adapted to everyday life and the processes that involve adaptation of everyday life

to innovations (Aune 1996; Silverstone & Haddon 1996). The domestication of innovations in the mass media takes place by establishing frames for interpretation and by appealing to different positions. The positions or morals of the meta-narratives shape the domestication processes.

The stories of the Internet, as they have been told in the Norwegian press during the 1995-2006 period, are central to this study of domestication. Spigel undertook a parallel study of how the introduction of television was represented in different types of magazines (Spigel 1992). A premise for her study was that new media technology is introduced to the general public through old and well-known mass media, and an analysis of the magazine representations would therefore say something about the agenda-setting process. The stream of Internet stories in a number of media may be seen as a "mega-text", which socializes sections of the public into specific understandings or expectations: "the 'mega-text' lives on, then, in the audience's interpretive repertoires" (Jensen 1995 p. 111), until it become obsolete or irrelevant.

In order to study how technology communication in the mass media contributes to domestication processes, I have chosen to study a technology that later became an everyday technology. Yet at the same time as journalists play an important role, members of the public are also active participants in shaping the technological narratives. A variety of actors consequently influence the agenda-setting process (Dearing & Rogers 1996). In a discussion about the threat society and the media, Nohrstedt claims that "when a risk is politicized, it tends to be formulated as a threat" (Nohrstedt 2010, p. 26). Threats, therefore, exploit people's uncertainty and anxiety. This distinction is interesting and gives the media an important role, elucidated by the concepts of "mediation" and "mediatization". While, according to Nohrstedt, "mediation" implies dissemination of information, "mediatization" implies "something more, namely that the problem or danger is created *in and by* the media" (op. cit. 41). The different narratives and their accompanying positions may therefore also be examples of mediatization processes, in and by the media.

To study the popular narratives about the Internet, I have used the media package model that stems from William A. Gamson and his studies of political themes such as social welfare policy and affirmative action (Gamson & Lasch 1983; Gamson & Modigliani 1987). In connection with such themes, a particular use of concepts is established. From a large inventory of possible reference frames, expressions, metaphors, paradoxes and so forth, a smaller repertoire is selected. The purpose of the model is to analyse how this repertoire is used to describe particular aspects of a phenomenon. It is normal to say that media packages consist of two main constituents: *frames* and *positions* (Gamson & Modigliani 1987, p. 143). According to Gamson and Lasch, metaphors, exemplars, catchphrases, depictions, and visual images are framing devices, while roots, consequences and appeal are reasoning devices for a more general position (Gamson & Lasch 1983). However, the selection of facts, context, examples and sources is also important to the framing process (Reese 2001).

The media package model is normally used to describe a group of individual packages within a policy question. The policy questions that Gamson et al. have chosen are marked by two characteristics: (1) they are clearly delimited, and (2) they are the objects of controversies. My aim, however, is to test the model on a larger empirical corpus, that is to say the "total" coverage of the Internet as it appears in the Norwegian

press. This has a number of implications. In the first place, the investigation will lack a unifying theme. Second, the Internet is a new media technology and does not necessarily represent a particular controversy with clear adherents and opponents. Instead of controversies, one can therefore find more investigative strategies. Here, the journalists explore different interpretations within the various themes.

Research Method and Media Coverage

In order to gain a more detailed understanding of the introduction of new media technology, I have chosen the presentations given by the mass media. For this purpose, three large Norwegian newspapers were selected to provide as broad a description as possible of how the narratives about the Internet were presented to the general public. Daily newspapers are probably the most important source of information for the majority of people when it comes to material on science and technology during the period studied. According to Ramberg, 74% of the Norwegian public in 1999 and 58% in 2004 stated that they frequently read news about science and technology in newspapers (Ramberg 2004). In the same period, the Internet as a source of information increased from 18% to 33%.

Large portions of the public have engaged with the Internet, both regarding presentations given by the mass media and through practical actions. That is, they have started using the Internet. In Norway, Internet access grew from 8-9% in 1995, to 88% in 2006, while daily use grew from 3-4% in 1995 to 60% in 2006.[1] The Internet is therefore embedded within Norwegian society. The purpose for selecting the 1995-2006 period was to ensure that it covered (a) the years when the Internet was both high and low on the agenda of the mass media, and (b) all important stages of the diffusion process of the Internet. In an earlier study only the first three years was included (Hetland 2002), thereby lacking the later stages of the diffusion process.

The database consists of 2772 newspaper cuttings about the Internet from the paper editions of the following newspapers: *Aftenposten* (the morning edition) (1334), *Dagbladet* (813) and *Dagsavisen* (625). The important point was not to compare the three newspapers, but to select three newspapers covering the breadth of the Norwegian press both politically and journalistically. In 1995/1996, 40.2% of the population over the age of 13 years read one or more of the three newspapers included in the investigation (in 1996/1997, 42.2%). When it came to what was required for an article to qualify as an 'Internet article', I used criteria corresponding to those Bader used in her case study of articles on research (Bader 1990). She had, as a criterion, that roughly half the article should discuss the object of her study. I chose as a criterion that the Internet should be a central theme in the article. This meant as a rule, that at least half the article took up one or more sets of prospects or problems concerning the Internet. In addition, the selection of articles was performed according to the following criteria: a) the article should consist of at least 200 words and b) the Internet should be mentioned in the headline or in the intro-text. Media coverage of the Internet before 1995 was only sporadic. In 1995, the three newspapers studied placed the Internet on the agenda. As Figure 1 illustrates, the Internet was high on the media agenda from 1996 to 2000, falling to a lower level after 2000.[2] By including all articles that satisfied certain criteria, it was also possible to combine a more qualitative textual analysis with a quantitative approach to explore changes over time.

Narratives about the Internet

Creating meaning out of new media technology reaffirms that the introduction of new technology always entails ambivalence. Media-technological ambivalence is often articulated as normative dichotomies. Technology, for example, is presented as good or evil: it makes freedom or control possible, one loves it or hates it, it is reliable or unreliable, or one feels oneself to be included or excluded. Perceived dichotomies are, therefore, common and the middle alternatives are often ignored. The advantage of the Internet is that it is a technology that affects many people first as members of a public audience and, as time passes, also as users – the Internet becomes an everyday technology. As far as everyday technologies are concerned, I have chosen to focus on a technology that "took the public by storm" once it was made available to the general public. I have, in other words, picked out a *success story*.

The dominant position of the meta-narratives is important for understanding the domestication processes. Expectations usually have a temporal pattern (Borup, Brown, Konrad, & Lente 2006). However, in spite of the dot.com hype, the popular discourse of the Internet does not fluctuate in cycles of hype and disappointment (Fenn 2007). The expectancy cycles for the Internet fluctuate in a manner comparable with the five stages in the innovation–decision process: *knowledge*, *persuasion*, *decision*, *implementation* and *confirmation* (Rogers 2003, p. 199). Two important factors enable the stages to be described in a more systematic manner. First, the agenda-setting intensity (the volume of media coverage as measured by the number of articles), and second, the media balance between the pro-innovation position, on the one hand, and the control and anti-diffusion positions, on the other (measured as the difference between the percentage of pro-innovation articles and the percentage of control and anti-diffusion articles). In the twelve-year period studied, the pro-innovation position was dominant in 68.7% of the stories, the control position was dominant in 31.3% of the stories, while the anti-diffusion position was more or less absent from the press reports. So on average, the media balance was +37.4. As already mentioned, the journalist appeals to a certain public, and there are reasons to believe that the Norwegian public in general are rather optimistic or pro-innovation biased when it comes to new technologies. One measure of this optimism is given by the Eurobarometer 2010. In 2010, Norway was included for the first time, and the Norwegians are, according to this survey, the most optimistic nation among 32 European countries with regard to eight selected technologies (ICT, biotechnology, space exploration, solar energy, nuclear energy, nanotechnology, wind energy, and brain and cognitive enhancement) (Gaskell et al. 2010). In spite of this pro-innovation bias in Norwegian society, which may compress the diffusion process compared to other countries, the Norwegian media coverage about the Internet also represents Internet narratives in other countries. Many of the stories are either imported from other countries or inspired by events abroad.

A high positive media balance is symptomatic of a period in which all relevant actors are enrolled to promote the technology, while a low positive or negative media balance signifies a more reluctant or mature period. Using the data presented in Figure 1, describing the volume of media coverage during the diffusion process together with the media balance, we can identify five stages in the expectancy cycles describing how the discourse evolves:

1. Knowledge (1995-1996). The public is exposed to the Internet in the trigger year, 1995, and the press coverage reaches its first peak in 1996; the media balance is +48. Internet access reaches about 17% and daily Internet use is about 5%.

2. Persuasion and decision (1997-1998). Press coverage is moderate; the media balance is +30. Internet access reaches 36% and daily Internet use reaches 10%.

3. Implementation (1999-2000). Press coverage has its second trigger year and peaks at a media balance of +54. Internet access reaches 63% and daily Internet use reaches 27%.

4. Confirmation (2001-2006). Press coverage falls to a lower level; the media balance is +20. Internet access reaches 88% and daily Internet use reaches 60%.

Figure 1. *Media Coverage and Daily Internet Use*
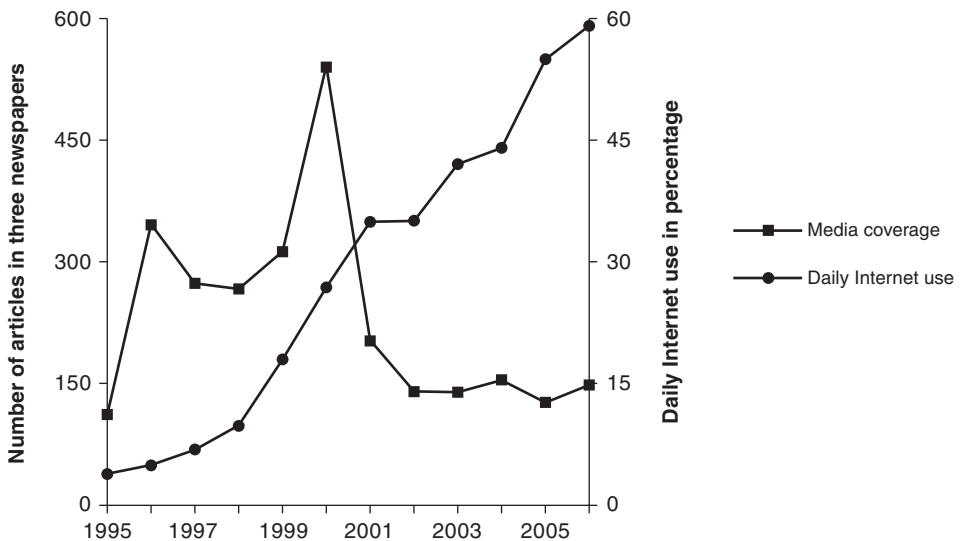
During the twelve years studied, we can conclude that the higher the Internet is on the media agenda (the stages of knowledge and implementation), the more prominent is the pro-innovation position, and over time, when the technology is more mature, the control position becomes more noticeable. The fact that the control position grows in importance during the domestication processes shows that the three dimensions of domestication described by Silverstone and Haddon (1996) – *creating the artefact*, *constructing the user*, and *catching the consumer* – do not constitute a linear process. The domestication processes during the confirmation stage are both characterized by protests and unruly users, exploiting the space for *interpretive flexibility* (Pinch & Bijker 1984), and new attempts to delimit this flexibility (Oudshoorn & Pinch 2003). The domestication processes lead to two important questions; (1) which aspects of new technology are easily domesticated and become "cold" during the diffusion process and (2) which aspects are difficult to domesticate and will remain "hot" even after most potential users have started to use the technology (Callon 1998)?

Domestication Processes

In the following section, the three main domestication processes – (1) pro-innovation, (2) control, (3) anti-diffusion – are explored. I will concentrate, however, on the control position, as this position is the least developed in the literature.

The pro-innovation position

The pro-innovation position is full of positive expectations and is closely linked to more utopian understandings of development. The solutions lie in the future. The narratives place weight on what is going to happen and do not communicate well what has happened. The things that have happened are always more modest than the expectations. This paradox may be described as a trivializing process. The fact that the stories are future-oriented also means that they look upon the new technology as a driving force of positive developments. Resistance to, or criticism of, new media technology is rapidly turned into an attempt to restrict the liberating force of the same technology. Pro-innovation is the most dominant position in science and technology communication. In classical innovation models, new technology was looked upon as a set of established facts or machines, and the role of the public was limited to that of being adopters or rejecters.

The control position

In the first place, ICT has increasingly become an enabling, generic technology that is embedded in other technologies to manage, monitor and regulate technological functions and processes. Second, ICT connects technologies together in increasingly integrated technological systems, and connects people and organizations in new ways. In contemporary society, important societal functions become dependent on electronic communication, which increases various forms of vulnerability. Communication can be interrupted or disturbed by failure in technological systems, through program errors, misuse or deliberate sabotage, and also as a result of mishaps that are ultimately due to human error. The whole risk problem, thus, illustrates that the Internet can also be regarded as "the wilds of nature". The Internet provides the dark sides of Western culture with new arenas in which to unfold, such as criminal activity in general, political activism outside the democratic tradition, or sexual expression and acts outside what is allowed and accepted. As a rule, these actions are met with various forms of social or technological control systems. The control position takes its point of departure in the notion that technology implies risk and its users may be ungovernable. Both users and technology must be regulated and controlled, i.e. domesticated in order for technology to serve the community. When the problems have been solved, the technology will become domesticated and apparently trivial (until the problems arise again). While invention is the process by which a new idea is discovered or created, adoption is a decision to make full use of an innovation. Rogers (2003; pp. 181) defines re-invention as "the degree to which an innovation is changed or modified by the user in the process of its adoption and implementation". Up to the 1970s, re-inventions were looked upon as rare. As a rule, re-inventions were treated as "interference" in diffusion research. Gradually people have come to see re-invention as an important process. In current research dealing with invention and re-invention, the focus has been shifted to the co-construction of users and technology (Oudshoorn & Pinch 2003). The control position

may, therefore, be seen as an important element in the co-construction of users and technology.

The control position involves a variety of control measures. How this control might be exercised varies from one media package to the next. The factors that contribute to giving form to the control position are linked to: (a) the delegation of responsibility and (b) the point of time in the process when control should be exercised. Control can be performed by individual and/or social regulations or delegated to humans and/or non-humans (e.g., technology) (Latour 1992). Individual and/or social regulations imply that a single individual, or an individual organization, is responsible for keeping this wilderness under control. Delegation to technology or institutions means that technology and/or control bodies are established to keep an eye on the activity on the Internet. The timeframe is also important. Is this control to be proactive or reactive? Is it to prevent undesirable activities on the Internet before they take place (ex-ante), or is this control to be primarily exercised after the undesirable activities have taken place (ex-post)?

In the group of media packages under the control position, control activities are categorized into four ideal situations indicating where the focus is directed: (1) individual control, (2) social control, (3) technological control, and (4) institutional control (see Table 1). In the stories, one obviously finds combinations of these control situations. However, most of the stories focus on one type of control.

Table 1. *Four Control Situations*

Responsibility for Control	Control in a Time Perspective	
	Proactive	Reactive
Individual and/or social self-regulation	(1) Focus on individual control	(2) Focus on social control
Delegated	(3) Focus on technological control	(4) Focus on institutional control

How control is to be implemented and how far the actors are to go in the exercise of this control activity is the object of ambivalence in the stories. On the one hand, forms of control can be adopted to prevent undesirable activity. On the other hand, the exercise of control may imply "throwing the baby out with the bath water"[3]. Here, the four control situations are presented in general:

1. Individual control. Individual control entails individuals drawing their own line within the area that is covered by freedom of expression, statutes, and regulations. Furthermore, individual control also entails delineating responsibility in relation to those who are not mature enough to exercise this control on an individual basis. It is stressed that parents must use "sound common sense" and stay well informed of what their kids are up to on the Internet and keep an eye on their activities. One reason for the fact that individual control is emphasized so strongly has its background in the notion that "technology cannot be controlled". The Internet breaks down the barriers of censorship and other barriers and what remains is individual control. A good example of how self-control is presented

is the story of the Norwegian Broadcasting Corporation's journalist, whose voice was so well known to Norwegians who listened to her radio programme at 9 o'clock every morning. She became totally addicted to the Internet and practically disappeared into cyberspace, but after a few weeks, she said to herself "this simply cannot continue". She then made her own traffic rules.

In the struggle between good and evil, it is not only "the good citizens" who exercise self-control; the "villains" also protect themselves with various forms of control measures. The exchange of information and services is a risky activity for those concerned. The stories stress how the actors involved build up networks characterized by confidence and secrecy. Getting inside a sphere where people exchange unlawful pornography, software and other items requires building up the necessary trust among those within the sphere of exchange (Bohannan & Bohannan 1968, pp. 220-239). Establishing spheres for co-action and exchange is their most important strategy for risk control. The users split their activities up in spheres where different forms of control are exercised with respect to access and participation. Seen in this way, the establishment of spheres of trust is an important domestication strategy.

2. Social control. Social control takes its point of departure from the view that all responsible members of society ought to engage in ensuring that the Internet becomes a place for "free and open public dialogue". This is done in part by teaching one's fellow human beings how they should behave on the Internet. Netiquette is an example of this. The same is true of the use of "flaming". However, just as important is the fact that one should commit oneself to preventing unwanted activities on the Internet. A number of organizations and individuals engage in activities whereby they infiltrate the communities that should be combated (e.g., paedophile groups who exchange contacts and material). People who tip off the police in such cases are presented as "heroes" in press reports. This also provides the basis for various campaigns to get people to inform the police. The threat of displaying details of sex offenders on the Internet, of exposing them to public scorn, is put forward as one of the options one ought to use. There are a number of examples of this kind of "lynch law". Almost without exception, this is considered praiseworthy, even by the traditional control authorities. There are reports both of computer viruses being sent to bases containing child pornography and of their lines being blocked with music. "The police cannot use such methods, but in the struggle between good and evil, there's no doubt who has my sympathy", says the leader of Interpol's working group to combat sexual abuse of children. A number of measures also entail new scripts being written into the technological solutions. Control is delegated to technological control systems.

3. Technological control. A central belief among many actors is that all problems created by new technology also have a technological solution. The Internet is no exception. Control can be delegated to new technology. Particular views of what the user should or should not do are built into the technology. It is the same in the stories that focus on technology as an instrument of control. Parents can delegate their parental responsibility to various control programs. Filtering is, however, not without problems, and readers are told how a great deal of useful information can easily disappear in the filtering process. "It is quite simply not possible to make a 'naughty! naughty! filter' that does not throw

the baby out with the bath water", is one conclusion. The security routines are becoming increasingly better; encryption programs are taken into use and the "holes in the system must be filled". Various virus programs are designed to combat the activities of hackers. Secret computer agents and electronic watermarks are among the means being adopted to stop the unlawful distribution of music. In addition, various persons are refused access to the Internet by Internet providers. The providers develop different traffic rules.

One side of technological control is characterized by ambivalence. The actors behind unwanted activities have the same ability to use technological control. To prevent criminal activities, bans are imposed on the use and/or sale and/or exportation of encryption programs, for example. The authorities try to prevent criminal actors from using control technology for their own purposes.

4. Institutional control. Institutional control is primarily reactive. It is the law and regulations that take effect when they are broken, together with the control bodies, that are to safeguard law and order. There are constant reminders emphasizing that statutes and rules have not been adapted to the new technology. They do not keep pace with developments. Among other things, the national anchorage of statutes is a problem – "computer signals cannot be inspected at the border". It is therefore claimed that we are "powerless in the face of the new information technology" without international co-operation; because in situations of conflict, a number of the new entrepreneurs threaten to move offshore. At the same time, it is stressed that the police and security authorities must have new powers, new competence and not least, increased resources.

The Anti-diffusion Position

In contrast to the pro-innovation position, we find the anti-diffusion position. In popular discourse, there are few, if any, examples of total rejection. This position emerges in "letters to the editor", however they have not been included in the present article. When it comes to the anti-diffusion position, there is very little empirical material. In connection with the Internet, the anti-diffusion position is presented either as a temporary solution to a problem where one lacks good solutions, or it is a position that "others" are spokespersons for. When the daily papers describe "machine stormers", it is with amazement. The press offers little understanding for the position.

Conclusion

The Internet took the public by storm and the diffusion rate has been high. The present exploratory study supports two general conclusions.

First, expectations are significant for the diffusion of innovations. The higher the Internet is on the media agenda (the stages of knowledge and implementation), the more prominent is the pro-innovation position. At the other stages, where the Internet is lower on the media agenda, the control position increases in importance. Hypes such as the dot.com hype are important for two reasons: they frame expectations and spur diffusion. Consequently, the hype is most visible during the implementation stage.

Second, technological innovations in both popular and more policy-driven discourses can be understood through three meta-narratives. Utopian narratives are prominent in

modern society; they signify progress and hope. In this respect, the narratives about risk and control are an important counterpart to the utopian narratives. Winner claims that technological development is most productive when the breadth of possibilities is neither foreseen nor controlled (Winner 1977, p. 98). Technology always does more things than we planned. This fact is a part of general knowledge to such a high degree that it becomes part of our intentions.

Beck claims that "in advanced modernity, the social production of *wealth* is systematically accompanied by the social production of *risks*" (Beck 1992, p. 19). We initiate technological development projects in the hope that unplanned consequences will arise, not least in the form of other actors actively participating in the development process with their own inscriptions. *Positive side effects* are a latent expectation or an implicit desire in all plans for innovation. In the same way, *negative side effects* are looked upon as a necessary evil that we are obliged to put up with. Any intention contains a hidden "non-intention", which is just as much in our calculations as the immediate goal we have in view. This interplay between intention and non-intention demonstrates that the pro-innovation and control position are two sides of the same coin. They are both equally important in the domestication processes, and the expectations are important in order to "mobilise the future into the present" (Brown & Michael 2003).

But which aspects of new technology are easily domesticated and become "cold" during the diffusion process and which aspects are difficult to domesticate and will readily remain "hot" even after nearly all potential users have started utilizing the technology?

People are often not aware of the problems before the media dramatize them and give them content. Mediatization of an issue "implies that its representation is changed into a form that suits media interest best, and that journalists as professionals are best at, namely to get public attention through emotional messages, dramatic angles and visual images" (Nohrstedt 2010, p. 46). The narratives of control are an interesting example of how risks are politicized, and how the media not only formulate threats, but also solutions. Nohrstedt claims that late-modern society "has become obsessed with the fact that our lives are not entirely safe and under our control" (op. cit. 18). The Internet narratives substantiate that even when problems or dangers are created in and by the media, the media are also searching for control of the same problems and dangers. The rhetoric of fear is, therefore, balanced by the rhetoric of control. In this manner, not only are the problems and dangers created in and by the media, but so are the solutions. The media are therefore important actors in domesticating new technology.

The narratives about risk and control are not only an important counterpart to the utopian narratives, they are also an important element in the media dramaturgy. Hence, the mass media and their sources are important actors in defining and understanding risk in modern society. The present study of the Internet in the mass media substantiates that risk is almost always understood as controllable. If one is unable to control the risks identified, this is always a result of weak control strategies and never because the technology is uncontrollable. This is in line with the fact that "risk management concentrates on normal procedures and regards extremes as inconsequential" (Beck 2009, p. 51). If the extremes were perceived as significant, the dystopian narratives containing the anti-diffusion position would have been more prominent in the media discourse.

During the diffusion process, some aspects of the new technology are easily domesticated and become "cold" during the process. Almost all the problems and dangers

described in this twelve-year period are domesticated except for one: the users. Users are always able to find new approaches that circumvent newly invented and often institutionalized control measures.

Some limitations of the present study are obvious: the Internet is a success story in which the media are both mediators and users. Mediatization implies, therefore, that the media often create problems and dangers they have self-interests in solving. The control position may be more prominent than if the technology studied had been a technology not used by the media. A follow-up study could involve a more comparative investigation of a technology that is more foreign (and threatening) to both the media and the readers. Would such a technology be portrayed in a manner that makes it necessary to modify the claim that a trichotomy is more interesting when studying technology expectations than a dichotomy is?

Notes

1. Access figures from tns Gallup. A percentage of the total population 12 years or older. Daily use from Norsk Mediebarometer 2006, and SSB. Percentage of the total population aged 9 to 79.
2. When it was possible to do so, the articles were collected from electronic sources, a) Aftenposten for the whole period, b) Dagbladet after 1.1.1998 and c) Dagsavisen after 1.2.2002. For the missing periods, the collection was done manually. We do not have a full overview of the total population, but it is possible to use Aftenposten as an indicator. For this newspaper, all articles were coded in the electronic database according to their topic, and the selected articles represented 32% of the total population. In Aftenposten in the 1995 to 1999 period, 47% of all the articles met the selection criteria for this study. This proportion declined to 27% in 2000 to 2006. Perhaps the main reason for this was the increase in the proportion of articles with fewer than 200 words. These made up 37% of all articles in the first period, and 48% in the second. The second reason for this is the 'Internet' as the selection criteria. During the period studied, 'Internet' is increasingly replaced by either a) the short version 'net' and/or b) more specific terms. A smaller control study of these articles gave no new information. It is therefore reasonable to assume that we have identified both the diversity and the changes in the period studied.
3. Some more illustrative quotes from the newspaper stories have been included without citing the source of every quote.

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