Niels Ole Finnemann

Professor, Dr. Phil.
finnemann@imv.au.dk
http://old.imv.au.dk/medarbejdere/finnemann
Director, Center for Internet Studies
Department for Information and Media Studies
Aarhus University
Denmark

The Internet and the Nordic model

of the Information Society.

I. The global picture.

The number of internet users in Asia is now close to 400 million. There are 310 millions users in Europe, and 230 million users in North America. Latin America counts 85 million, Africa counts 33 million, Middle East and Oceania counts less than 20 million each. Altogether it is estimated that there are 1.075 million users in 2005.[1]

The number of users in Asia counts for 35% of the total number while the penetration rate in Asia is only 10%. Europe counts for 28% of the total number of internet users while the penetration rate is 38% of the population. The internet penetration is most mature (69.7%) in North America counting 21.5% of the internet users and in Australia and New Zealand (70% & 76%, Oceania in total: 54%).

The usage growth in the years 2000-2006 follows the same trend: Asia is up with a growth rate of 230%, Europe follows with a rate of 196% while the growth in US has slowed down to 113%.

It won't take much counting to conclude that the number of users in Asia will outgrow the number of users in Europe and North America even more in the years to come. First movers will be catched up.

The diffusion of innovations are often assumed to follow a simple S-curve due to a very small number of "innovators", a still small number of "early adopters", a growing number of "early majority" etc. (Roger Everett 1963) but the S-curve does not help much to explain the huge differences in the penetration of the internet around the globe. The figures indicate that the development is not driven by technology itself and they do not support adherents of technological determinism.

According to Castells (1996-1998) and others the overall picture can be related to three main components: the economical developments within the various regions, the rise (or presence) of a modern well-educated middle class and the presence of a proactive nation-state. A closer look on the development also shows that the development in each region is driven by different constellations of a tri-polar set of actors constituted by nation states, corporations and civil society institutions and individuals (M. Castells, 1996-1998, M. Castells & P. Himanen 2002).

While most Asian countries lag far behind the American level of internet penetration, a few countries like Japan, and the "Tiger economies": South Korea, Taiwan, Singapore and Hong Kong is actually on a par with penetration rates above 65%. This is also the case for a number of – smaller – European countries, primarily the Nordic countries, the Netherlands, Luxembourg and Switzerland.[2] In the other end of the scale within the European Union you find Cyprus, Greece, Hungary, Lithuania, Malta, and Poland, with a penetration rate lower than 40% while the penetration rate in Italy, France and Spain is between 49 and 43 % as is the case in Czech Republic, Slovakia, Latvia and Belgium.

These figures are probably going to change, narrowing the gaps of course, but it is not likely that we are heading towards equilibrium in the global spread of and access to the internet (and other ICT applications) in a foreseeable future.

Some of the differences may be a result of differences in the speed of diffusion processes – due for instance to inequalities in available economical and infrastructural resources. If so, one might assume that the different penetration rates reflect different stages of developments in the very same direction. A question then is how to explain the existing inequalities in resources and how do they relate to internet development? But the gaps might also be result of developments following different trajectories.

In both cases it is of relevance to ask whether the differences are manifestations of digital divides, which should be considered negative, or they are manifestations of cultural diversity and hence to be considered positive?

What are the most relevant economical, social, political and cultural differences which we need to take into account in the explanation of internet diffusion? Is it reasonable to believe that these differences will lead the various regions and countries in the same direction or is it more likely that we will continue to see different developmental trajectories – either because of different political strategies and/or as a result of differences in values, norms and needs rooted in prevailing cultural and social traditions?

Since digital divides are considered to be negative, while cultural diversity in many cases can be considered positive, one should probably also consider how to distinguish between positive diversity and negative divides?

The internet can be accessed all over the globe, but so far it's only used by 15% of the world population. As a rule of thumb it can be stated that if there is a modern well-educated middle class there is internet and vice versa. The penetration rates reflect not least the size, political strategy and cultural position of the middle class in the various countries. It does not mean that the internet can only be a medium for the modern middle class all over the world, but it raises the question whether other social groups do need the internet to the same purposes and in the same forms as those developed and defined by the middle classes?

The general picture reveals three types of differences. First, there are differences between countries in which the internet penetration has reached more or less the

same and high level. Second, there are differences between whole regions with varying degrees of penetration (e.g. America, Asia and Europe opposed to regions such as Africa and Arabia which are only at the entry point). Third, there are differences between high, middle and low penetration rates within each region.

In the following section the Nordic model will be compared to the American and Asian models which have reached the same level of penetration. The third section will take a closer look at the Nordic Model while the fourth section will be concerned with some of the different developments within The European Union. The distinction between differences that should be considered negative (digital divide) and positive (cultural diversity) is especially relevant in the third case and I shall return to this in section 4.

2.*Three models of cultural selection*

Ten years ago only few people, if any, would have expected that the Asian tiger-economies and the Nordic countries in the years to come would be found on the top of the various IT statistic-lists such as the lists of broadband diffusion and internet penetration. But so they are.[3] The main forces behind this development are various sorts of interaction between:

1) State and public institutions, including possibly public service media – acting on behalf of the authorities and public service obligations;

2) Corporations and private enterprises, including commercial media – acting on a commercial basis and purpose;

3) Civil society groups, organizations, and individuals acting for idealistic or individual motives and values without any public obligation or commercial purpose.

What differs in different cultural settings, however, is the roles and balances in the interactions between these three groups of actors. (J. Abbate (1999), Rodan (1998), M. Castells (1996-98), M. Castells & P. Himanen (2001), Rastin (2003)).

The American development originated in joint efforts by universities and civil society initiatives, the latter mostly on individual (students) basis. From a certain point in time it was also driven by various sorts of social communities (e.g. Usenet, the Well, the Minnesota-e-democracy project, the open source movement providing e.g. netscape, apache, napster etc.) very much in accordance with American community tradition. Later the developments were mainly based on the interaction between civil society and commercial players (MySpace, YouTube, Second Life) though still drawing heavily on universities. The state has taken a relatively detached, lean-back attitude, favoring the market more than civil society initiatives.

The Nordic development is also based on state, civil society and commercial players. But the state and public institutions are more active agents. In these countries you will find a number of proactive state initiatives supporting commercial initiatives as well as civil society participation projects, including local e-democracy projects and projects for the huge sector of public institutions.

In the Asian cases the process were initiated by strong, more or les authoritarian and nation-building state initiatives, which were later accompanied by civil society initiatives driven by a middle class which oriented it self towards more modern or western ideas of high-tech development. In some cases it was also part of a political development towards the establishment of a more democratic political system based on a growing well educated, modern middle class opposing older patriarchic value- and norm systems.

The three models are examples of different social constellations in the neo-corporate triangle driving development. One difference is obviously related to the differences in the size and density of the populations. Small countries are more likely to be able to provide the new communicational infrastructure all over though both Norway and Sweden are geographically widespread with a low population density and widespread remote rural areas, while Denmark and, to an even greater extent, Hong Kong and Singapore have a much higher population density.[4]

A second difference is political, related to the general views on the role of the state and the political strategies of the middle class. The American model represents a kind of liberalism, while the Asian model is profoundly more authoritarian; with some reservations the Nordic model can be located somewhere in between. On the one hand, the role of the state is proactive like the Asian model, but on the other hand it is based on the idea of a universal welfare state, which is not authoritarian but oriented towards the inclusion of the whole population in the developmental strategies. As a consequence the Nordic countries are characterized by a huge public sector for tax paid social, educational, and health services. While the Asian states had authoritarian roots, the Nordic welfare states originated as a result of a process in which the political democracy was extended to include a "social democracy".

The overall lesson of this is that there is a plurality of methods and strategies which may lead to successful development of information society infrastructures. Different strategies are not simply possible, but inevitable because of the different historical and cultural conditions of the modern middle classes.

As a consequence we also have to admit the existence of different models of information societies. We do have the very same matrix of media (including speech, writing, printing, radio, television and a variety of digital media) all over the globe, but this matrix allows for a huge variety of institutionalizations of media systems.[5]

The fact that these different strategies lead to the "same result" in terms of internet penetration does not imply that the internet is used for the same purposes and plays the same political, social and cultural roles. Unfortunately, there are only few comparative studies of internet development on this scale, but some indications of cultural differences can be found: One indication is differences in use of mobile phones, weblogs and community sites such as "myspace" in North America and Europe. It seems that the younger generations in Northern Europe are giving greater attention to the mobile phone in their socializing process, than the young Americans who gather around myspace-

communities or focuses on individualized blogging. These activities also take place in the Nordic countries but not in the same scale.[6] A part of the explanation is probably that the cell phone development in US is lagging far behind the development in Europe. Another reason could be that young Europeans are less individualized and more used to gather face to face in their leisure time whether in youth centers or sports clubs or at home, and now using cellphones to coordinate these gatherings. They do not blog as much as the Americans. If local communities plays a major role in civil society in US, and civil society in Nordic countries are much more based on public institutions such as youth centers, participation and membership in all sorts of associations, societies or clubs, one might also expect such differences manifested on the internet.[7]

Cultural diversity may also be needed to explain that there is no serious American or European equivalent to the Korean citizen journalism-news site, OhmyNews either. An explanation could be that the Korean development is closely connected to the young democracy movement. The internet is also used for political purposes in US and Europe, but in other formats (among them election campagn sites, news sites, party sites, spinsites, and weblogs). Similarly, the lower internet penetration in Southern Europe may also be a result of differently based civil society divided between an urbanized educated middleclass and a greater part of the population living in "remote" rural areas. The character of civil society activities on the internet reflects the specific political, cultural and social conditions in the countries in question. To some extent they also reflect price and technical availability.[8]

So far, many studies have been concerned with the cultural impact of the internet and digital media in general. But digital media are flexible and malleable media open for all sorts of cultural influences.[9] Therefore we also have to look the other way around and focus on the impact of culture on the innovation, utilization and diffusion of the internet and digital media. The interrelations

between old "digitized" media and digital media will be further discussed in section 4.

3. The Nordic model

Even if one cannot claim that there are no digital divides in the Nordic countries it is safe to say, that the internet has actually penetrated these countries and is now an integral part of the overall media structure. New statistical sources show that the penetration rates given above is still increasing, and the Nordic countries are on top of a number of IT-and internet statistics including socalled "e-readyness"-statistics.[10] According to the literature, this should be a surprise.

During the last 20 years it has often been assumed that the Nordic welfare society wouldn't survive the development of so-called information society for economic reasons and also due to increasing conflict between the values attached to welfare society on the one hand and the information or network society on the other hand.

The welfare society was based on egalitarian principles, equality, including sex equality, free public education & health system, social solidarity and democratic rights guaranteed by public institutions. The media system was based mass communication, which to a high degree was centralized around the state driven radio and television monopoly – following BBC-like Public Service ideals. To this came a widespread protestant work ethic. The welfare ideas were universalistic but only meant to be valid and applied within the well-defined frame of the nation state.

The Information society, it was said, would be based on quite opposite principles, such as differentiated communication, individual choices, leaving solidarity to others, in a more fragmented, individualised flow culture, within a global, multicultural and complex system of ever-changing networks. Such positions can be found not only in the national literature but also internationally. In their book "The Information Society and the Welfare State" Castells and Himanen summarizes the effects of the ideas of "liberalization and disengagement from the public sector in society" (p.4) as follows:

The dominant global trend is that the network society connects to itself those people who are valuable to it (and creates further value for them) and disconnects those who are valueless to it (and decreases further their ability to acquire value). The result is growing social injustice…The global trend is a result of the decline of the welfare state, whose task it was to guarantee social justice through education, health care and income transfers. (Castells & Himanen, 2002: 77-78.)

Contrary to these expectations, they document that Finland has been able to obtain a position as one of the most advanced information societies while maintaining the basic features of the welfare system.

The explanation given is based on the idea that a change has taken place in the character of the welfare state. The »informational welfare state« in Finland, they say, is *"no longer the old species of welfare state, which was often just seen as the alleviator of the economy's worst effects and occupied a fundamentally defensive position against the economy"* (Castells & Himanen, 2002:87).

The old welfare state has been changed into a so-called "developmental state" which has reorganised the welfare system according to the needs of the developing information economy.

In the case of Finland there is no doubt that the state took on new activities and responsibilities after the breakdown of the Soviet regime simply because Finland had to reorient itself from a strong (and forced) dependency of the Soviet Union towards full integration in western economy, but this is a story very different from the development in the other Nordic countries, whether Sweden, Norway, Iceland and Denmark.[11]

Even if it is true, that the old welfare state was often *seen* as "the alleviator of the economy's worst effects and occupied a fundamentally defensive position against the economy*",* it was build on another idea. From their very beginning in the late 1950s, the Nordic welfare policies were conceived of as a reform-strategy aiming at progressive developments. The idea was to reinforce economic and technological development and progress with the help of a leftist

Keynesian economy manifested in proactive state policies & the building of public institutions which should bring the nation-state into the role of a developmental state by integrating the whole population into its productive resources.

The welfare economy was based on the acceptance of the idea that the role of the state should be to optimize economic growth based on technological innovation. The egalitarian principles were not solely an idealistic goal; they were utilized as a means for growth and development as well. This also explains why the Nordic nation-states became early and proactive actors in developing information technologies and information society, which has brought these countries to the top of the IT statistics.

It is also worth to mention that the Nordic welfare economies in 20th century were based on different industrial structures. The Swedish economy was dominated by relatively few and huge industrial companies in a variety of branches (e.g. mining, foresting, car- and weapon industries), Norwegian economy was dominated by fishing- and oil-industries, while the Danish economhy was based on farming and food industry and with a huge majority of small companies. Since the industrial structures differ they cannot explain the succes of the welfare economy in these countries.

The role of the welfare state in this process is manifested in a number of different ways, the most important being

• A deliberately articulated national strategy for developing the »information society«. In the case of Denmark the strategies were published in popular form with telling titles: »Information Society Year 2000« (published early 1990'es), »Digital Denmark« and »The Network Society« (published late 1990'es). Similar projects were initiated in the all Nordic Countries, also accommodating to the EU Bangemann Report from the mid 90-es. For each phase a number of specific goals were defined, and project groups were established and financed. The strategies included state support both to the IT industry, to civil society initiatives and initiatives to support the digitization of the public sector.

• The effects of the direct strategic support was reinforced because public institutions (including schools & universities, libraries, the health sector, social services) by far were the dominating customers on the market, thus providing the IT industry with a stable mass market for its products. Unfortunately, no figures exist showing the total amount of public spending in this area, but they are huge though they were not always spend according to any overall strategy. The already existing welfare state thus contributed significantly both to the development of the upcoming IT-industry and to the rapid diffusion of IT in society as a whole.

• A third significant factor has been a more indirect impact of previous welfare policies, as they generated a transformation of a great part of the population into a homogenous, well-educated, modern middle class including a high percentage of women on the labour market (now doing their traditional family work in modernised and functionalist public institutions).

Among the results of these developments is a lower rate of social exclusion than in the U.S. and Singapore (Castells & Himanen, 2002:15-18, UNDP 2005).

I shall not further elaborate on the evaluation of the results of these direct and indirect contributions to development. Many projects, of course, didn't succeed and huge amounts of money have been wasted. In spite of this, the overall effect has been 1) a widespread integration of IT in all sectors of society and 2) the development of all sorts of IT-related competences ranging from traditional computer science competences (within the fields of system engineering, system development, and design) to various forms of IT-competences acquired and possessed by professionals in many other fields (economy, business, communication and media, education, health etc.). Though they are often ignored or underestimated IT-competences anchored in all sorts of disciplines and fields outside computer science are strongly needed both in the development of IT and in the integration and maturing of the technology into social life.

The role of the welfare state goes far beyond the direct impact on the IT development first of all because it also added significantly to a general change in social structure and the cultural value system.

The universal and institutionalized welfare principles are now accepted by a vast majority and form a common, shared basis for a more individualized an lifestyle-oriented practice according to personal interests. Even if the class structure has not completely vanished it has lost cultural and social significance as a main dividing line. In the same process there has been a dramatic change in the rural areas. Especially in Denmark farming has developed into huge, specialized industries employing a still diminishing part of the population, and similar tendencies can be found in the fishing industry in Denmark, Norway and Iceland. A fast growing part of the population on the countryside is now urban pendlers.

While the welfare state had its point of departure in a society, which was culturally divided on a vertical axis according to class relations, it has succeeded in creating an overwhelmingly large, educated middleclass sharing a common set of basic cultural values and social habits, while acting according to specializations in functions and personal interests – and so divided on a horizontal line on top of the shared welfare system, choosing their individual path within the same range of values and options.

So far, a lesson is that the welfare state is not necessarily – as predicted by scholars, journalists, and politicians – a burden for the development of a knowledge society. Rather it has been a lever which has brought the Nordic countries (and the Netherlands as well) to the very top of the statistics on welfare services, IT, Internet penetration, and other measures of the competitiveness of national economies.[12] Contrary to the prediction that the welfare state would die, it has developed into a main instrument for the information/network society because the welfare principles were extended to include IT and Internet policies.

The lesson is not that we should only do business or welfare politics as usual; it's rather that there are different roads to the future.

Although the homogeneity of the middleclass in the Nordic countries were an advantage in the 1990'es and early 2000's, it may, however, turn out to be a growing disadvantage in the years to come, as it seems to favor cultural protectionism against "foreign" multi-cultural influencies.

4. Sources of diversity

The preexisting welfare state is of major importance for the development of the Nordic model of the Information State, but there are other factors in play too. Even if the "old" media played a rather weak role on the internet in the mid 90-es they have had a still growing influence in the later development. At the same time "old media" are also strongly influenced and reorganized in their attempts to get into the digital media platforms.

It is not yet clear whether these relations will follow the same trajectories as we have seen so far. Maybe the emerging new transnational media corporations – whether originating in the "old media" world of Rupert Murdoch or in the "new media" world of Google and Yahoo – will succeed in transgressing former cultural barriers or maybe they will have to adapt to the specific cultural settings in different areas of the world?

While Public Service broadcast media such as British BBC in some countries are significant actors both on the television and internet platforms, they play only a marginal role in countries like US. They also play a minor role in Southern Europe compared to Northern Europe. In the Nordic countries Public Service channels has a strong hold in the population reaching 75-80% on Television[13], while their share of visitors on their web sites differ significantly. The national Danish Public Service Channel DR has the most important internet portal in Denmark both in respect to amount of content and in respect to the number of unique visitors, while the Norwegian, Swedish and Finnish counterparts are ranked significantly lower than their commercial competitors in each country.[14]

The existence of a strong Public Service Broacast tradition is not in itself a guarantee for strong Internet presence. While the DR can be seen as one of the

main drivers for the internet development in Denmark the same is not the case in the other Nordic countries, at least not to the same extent. In the case of Finland an explanation is probably that the IT development has been driven by Nokia around mobile technologies, while the significant role of DR is a result of a deliberate institutional strategy to be in the lead on the new platform, following the strategy of BBC as much as possible.

The Nordic countries also differs from most other European countries when it comes to the reach of printed newspapers, their reach being between 80% and 90% of the population, though gradually falling. The reach in Southern Europe is below 40%. This is a difference more or less identical with the differences in internet penetration rates.[15] Probably this is not simply a statistical coincidence. It's more likely, that it is an indication of a more fundamental cultural difference related to the role of literacy both in cultural and public life and in the productive work especially outside the major cities. In spite of the widespread claim that "new media" are image-rich multimedia internet-literacy is still to a very high degree based on literacy.

Cultural differences may also manifest themselves in a more subtle form on the micro level. In a recent comparative study of print media and their online editions (Wurff & Lauff (eds.) 2003) it was found that the use of multimedia features was very low with a few exceptions in Southern Europe.[16] The significance of these exceptions becomes more evident when we recall that the broadband penetration in Northern Europe is much higher than in Southern Europe, which means that multimedia use would be more likely in Northern Europe than in Southern Europe. Since the findings pointed in the opposite direction one may conclude that multimedia use on online newssites is not as much a function of broadband-penetration as of cultural tradition.

In the 1990-es most old media took a lean back position towards the internet. They were present with their online editions, but they did not invest much and maybe they silently hoped the internet would soon disappear. The

internet developed more or less independently of other media. This was also reflected in a strange separation between theories of IT and Internet on the one hand and theories of old Media on the other hand. If IT and internet scholars underestimated old media, media scholars thought that the "new media" was not "that different".[17]

While for instance Manuel Castells convincingly argued that there are different models of information-societies, he did not consider the role of the existing media. In stead he claimed that the internet would be a new hegemonic supermedium for the transnational network elite, silently assuming that it would develop more or less independent of the different models, he identifed and independently of old media as well.

In their book "Comparing Media Systems" D. Hallin and P. Mancini present another perspective in which the transnational media corporations are on their way to break down the former nationally organized media systems with only marginal mentioning of the internet.

Like Castells, who showed the differences between the American, Asian and European information society models, Hallin and Mancini also argues for a tripolar model though they only focus on the American and European media systems in the 20th century, and well before the spread of the Internet.

The three models of Hallin and Mancini are as follows:

1) The Mediterranean or polarized pluralist model

2) The North (and Central) European or democratic corporatist model

3) The North Atlantic/liberal model

The Northern European model is described as characterized by three "coexistences" of components from the Mediterranean and American models.

1) Commercial media and media tied to political and civil groups;

2) Journalistic professionalism and political parallelism;

3) Liberal freedom of the press and strong state intervention in the media regulations.

While the first mentioned components in these coexistences connect this model with the American model, it is connected to the Mediterranean one via the second. Hallin and Mancini trace these "coexistences" in the North European model back to the Protestant Reformation, the development of literacy, and strong efforts to organize and negotiate.

Even if Castells interprets his models more realistic as empirical valid, while Hallin and Mancini consider their models as "Ideal Types" of Max Weber, there are striking similarities: First of all that the American pole is described in more or less identical form, as constituted in a liberalist tradition with the state taking a lean back attitude. There are also close relations between the descriptions of the North European models. Hallin and Mancini stresses the role of a proactive state manifested in strong public service media-policy, while Castells and Himanen stresses the role of a proactive state manifested in national internet policies. The third pole is trickier. State intervention can be found in both cases, but political polarization is probably more a European than an Asian phenomenon. But a main difference is that the South European models of information societies have a significantly lover IT and internet penetration than their counterparts in the advanced Asian model. Cultural explanations are maybe possible, but it may also be a result of "americanized" lean back IT- and media policies.

As old print media and electronic media are becoming more influential actors on the internet, while they are themselves transformed into crossmedia corporations, new developmental patterns will emerge. While "old media" mogul Rupert Murdoch buys social network spaces like "Myspace" to make money out of user generated content adding new business to his deliverances of news, Google introduces its own news service (as well as targeted adds and a number of other services which may effect the media systems all over the world), and print newspapers all over the world enters in to the electronic and digital media world.

The systems described by Hallin and Mancini were all build around newspapers and electronic mass media organized within relatively well defined national horizons. Today there is a change of the common basis for these

models, partly initiated by the development of transnational media corporations and partly by the emergence of the internet.

In a short term perspective the media corporations will have the greater impact, but in a long term perspective they will have to adapt themselves to the properties of the internet: One the hand the internet allows for a more individualized, specialized and professionalized use; and on the other hand it allows for globalized reach not only for global media corporations but for anybody with interesting messages. One may speak of a new sort of mediatization based on the "coexistence" of individualization and global reach within a shared mediaspace.

The new matrix of media is more complex than the 20th century matrix and it is based on an *intensified interaction* between print media, electronic media and digital media. Cross media relations are fundamental.

What is not yet clear however is to which degree the transnational media corporations will have to adapt to cultural diversity – as it is still often the case in the film industry, while it is only seldom the case in the computer game industry.

Conclusions.

The transition from the old media systems of Hallin and Mancini into the media systems build on the new matrix including digital media such as the internet and mobile media is not a transition into a completely digital matrix. Old media still has a role to play. In most cases, though, they will have to redefine their function and purposes. In any case there is a transition into a new more elaborate and expanded world of media in which internet and mobile media become more seamless integrated into social life. But the integration process will take shape according to different social, cultural and political needs.

This notion of (extended) mediation should be kept separate from the notion of mediatization used to describe the peculiar characteristics of the television era referring to the role of television in agenda setting, priming, cultivation[18]. While these features generated what has been called mass media dependency and heteronymity in stead of autonomy, the question today is whether digital media

and the internet represents the end of this sort of mediatization (socalled de-mediatization) or rather, as argued here, a more elaborate mediatization of social life?

The internet changes the rules of the game because – contrary to the old media – it is based on functional symmetry between the communicative parts – even if the actual communication is not symmetrical as it is often the case. As a consequence the internet is more open for civil society activities and the development is based on the coexistence of commercial activities, civil society activities and eventually public service activities.

Technology is not the driver. Technology cannot inscribe itself and provide it self with purpose and meaning. Price can be important for individuals, but only within specific cultural settings. Culture matters because culture provides meaning both on the level of innovation, adaptation, selection and diffusion.

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[1] Internet world Stats, Usage and Population Statistics. http://www.internetworldstats.com/stats.htm accessed dec. 12th 2006.

[2] World Stats has a – somehow surprising – penetration rate of 74.1% in Portugal (Sep 06). They also refer to Computer Industry Almanac which gives a penetration rate for Portugal of 48,7% (March 2005) and 58% i 2006 (no month given). I have found no explanation of these differences.

[3] According to the International Telecommunication Union (2005) South Korea, Hong Kong, The Netherlands and Denmark ranks 1-4 (Between 25 and 19 broadband connections per 100 inhabitants) while Sweden and Norway ranks 10 and 11 (15 per 100, after Canada, Switzerland, Taiwan, Belgium and Iceland). Finland ranks 14 and Singapore as 15 (11 per 100). Site visited October 31 2005.

[4] The effects of size and density are not reflected as much in the Internet penetration statistics as in the broadband statistics. Cf. note 3.

[5] Literally, all societies are information societies and they can be subdivided according to a number of criteria, e.g. the matrix of available media. Today the notion Information Society is most often used as a notion of societies using a variety of digital media (socalled "information technology"/IT or ITC) in business, administration, education etc. Since digital media interfere with other media the whole matrix should be taken into account in the characterization of the information societies of today. Cf. also Finnemann 2001, 2006 and section 4 below.

[6] According til nielsen netratings there was 42 million visitors per month at MySpace in the summer 2006. Even if many visitors were only one-timers and many were foreigners, it indicates that a huge part of young Americans (the main user group is between 18 and 30) were users of MySpace, while many also used YouTube and other community sites.

[7] According to Computer Industry Almanac (accessed 15.11 2006) there was 930 Cell Phone subscribers per 1000 people in Europe in 2005, compared to 683 in US and 230 in Asia. According to "Nordic

Information Society Statistics 2005" (p. 14-16) the number of cell phone subscriptions in the Nordic countries exceeded 100 per 100 inhabitants in 2004. The average number in these countries exceed both the overall European average (65/100 in 2003) and the "EU 15" average (85/100). Until 2000 Finland was in the lead in cell phone subscriptions. It will be no surprise if future studies show that user generated content differs from country to country and from time to time because the low editorial threshold of the internet allow it to absorb and reflect all sorts of social and cultural initiatives more vivid, fast and unrestricted than old media.

[8] Price is most relevant in explaining the great divide between "haves" and "have-nots", whether it is PCs standalones or networked PCs. "Cellular Internet usage will be particularly important in developing countries where the price of PCs is too high for most households" says Computer Industry Almanac commenting a diffusion statistics. But price cannot always explain differences in the diffusion and use of cell phones. Mobiles are much more expensive in Norway than in Denmark, and MMS is much more expensive than SMS, but the use of SMS is especially widespread in Denmark and MMS in Norway. There is no clear correlation between use and pricing. Nordic Information Society Statistics: Table 1:1 p. 16. The Norwegian use of MMS is exceptional also compared to Sweden and Finland. In this case culture, not price matters.

[9] The peculiar flexible and malleable character of digital media is anchored in the textualised – editable – definition of the functional architecture (ie: programs stored in the binary alphabet) which makes these technologies distinct to other mechanical devices. For a detailed analysis, see Finnemann, 1999. For a slightly different analysis of the inscribability of technology see also Sassen 2006.

[10] Internet penetration has now reached 75% of the households (= 83% of the population) in Denmark, 73% in Sweden. 64% in Norway, 84% in Iceland. Finland is lagging a bit behind with 54% of the households. Nordic Information Society Statistics 2005. Around 70% of the population in the Nordic countries uses the Internet at least once a week. Danmarks Statistik, Statistikbanken (2005b). Site visited 13.9 2005. Broadband statistics: Point of Topic. Telecom Markets (2005) & International Telecommunication Union (2005). Site visited October 31 2005. Internet statistics: Danmarks Statistik, 2005a, Internet World Stats (2005 a-c). World Economic Forum ranks countries according to the "networked readiness index" defined as the "the degree of preparation of a nation or community to participate in and benefit from ICT developments". The Nordic countries are ranked as no. 2, 3, 4, 6 and 13. Singapore is ranked as no 1, the U.S. as 5, Hong Kong 7, Japan 8. World Economic Forum (2004) Site visited Oct. 1 2005.Se also the statistical references in note 12.

[11] Castells & Himanen use Finland as case for the Nordic Model. They describe the difference between the old welfare state and the assumed new informational or developmental welfare state as a difference between a rather passive model and a proactive model. There would never have been a Welfare State if it had not been proactive. A more important difference between the werlfare state 1.0 and th emrging neocorpporative version 2.0 seems to be that universities and all sorts of research institutions are now integrated into national strategies for international competitiveness so reducing the role of the state as guaranteeing the autonomy and independency of science and scholarship.

[12] World Economic Forum (2005) on global competitiveness ranks Finland as number 1, US: 2, Sweden and Denmark as 3 and 4, Iceland as number 7 and Norway as number 9. Site visited October 1, 2005.

[13] Wurff, R. & Lauf, E. (eds) 2006: Table 1 p. 9

[14] Nordic Media Trends 8: 174-175.

[15] Wurff, R. & Lauf, E. (eds) 2006: Table 1 p. 9

[16] Wurff, R. & Lauf, E. (eds) 2006. General picture p. 37, the Spanish case: Salaverría, R. et al: 231-243. Statistics p. 239.

[17] Schultz 2004. For an overview of theories of digitized (old) media and (new) digital media, see Finnemann 2006.

[18] Schultz 2004 p. 92, p. 94ff