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ARTICLE

# Cultural differentiation or social segregation? Four approaches to the digital divide

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## Abstract

This article analyses some of the contradictions of contemporary technological society through the term 'digital divide' and the societal consequences predicted by this development. It briefly examines the history of communication technology in the 1970s, when a lively debate about the new information and communication order and the unbalanced diffusion of mass media took place. The many views on the 'digital divide' are presented here as four distinct approaches differing from each other in context and definition: the technocratic approach; the social structure approach; the information structure and exclusion approach; and modernization and capitalism. The main characteristics of these discourses are explained and evaluated. The role of the information technologies in contemporary societies is briefly discussed and a tentative conclusion drawn on the issue of cultural differentiation as against social segregation in a context of a technologically advanced Nordic country. In conclusion, a few ideas concerning the adoption and use of the internet in a given locality are given.

## Key words

democracy • digital divide • internet • modernization • social inequality

## INTRODUCTION

A member of the reading public may find it rather confusing to make sense of current social and technological developments, even in a country so determinedly heading towards the information society as Finland. In a Finnish quality newspaper one can read stories about the next phase of the information society with all its amazing features, as well as stories of brutal everyday violence and growing social inequality. How do we obtain some understanding of what is going on in a western hi-tech society? Putting these different stories together creates two separate views of a world which is supposed to be unitary. These divergent views of the world and the society seldom, if ever, coincide in the same story.

The other account gives us, as in the words of the Okinawa Charter of the G8 countries (see www.g8.utoronto.ca/summit/2000okinawa/gis.htm), a vision of an information society that better enables people to fulfil their potential and realise their aspirations. According to this statement, information technology should serve for the mutually supportive goals of creating sustainable economic growth, enhancing public welfare and fostering social cohesion. Furthermore, leaders will work to realise the potential of information technology to strengthen democracy, increase transparency and accountability in governance, promote human rights, enhance cultural diversity and to foster international peace and stability. Undoubtedly, this is a future we would all wish to see, but it seems to clash with everyday experience and other accounts.

Could the term 'digital divide' offer us more understanding of the development of information societies and bridge the two issues? While information and communication technologies (ICTs) are ever-more important to the economic growth of industrialized countries, worries about the inequalities of the information society have arisen. Significant differences seem to prevail among social groups within nations and among nations in the access to and utilization of new ICTs. This is generally understood as the 'digital divide' and the term has quickly become so popular as to serve as a shorthand for any disparity associated with digital networks.

## WHAT IS NEW ABOUT THE DIGITAL DIVIDE?

A quick look back at the history of communication technology reveals the resemblance of the present discussion to that of the 1970s, when a lively debate about the new information and communication order and the unbalanced diffusion of mass media took place (see e.g. Berrigan, 1981; UNESCO, 1980). Although the basic term is no longer 'gap', as this disparity was previously called, in other respects the recent discussion is perfectly familiar. Usually, the concept is seen as a multidimensional phenomenon encompassing different levels. In general, the distinction is made between the global and national level, with the global dimension

covering the divergence in internet access between industrialized and developing countries and the social dimension covering the gap between the information-rich and poor in each country. In addition to these dimensions, democracy has been of particular interest, both then and now (e.g. Axford and Huggins, 2001; Becker and Slaton, 2000; Hacker and van Dijk, 2000). The democratic dimension signifies the online community and the difference between those who do and do not use digital resources to participate in public life and the enduring hope of a new communication technology realising its democratic potential.

Thus the digital divide is not a one-dimensional phenomenon and could be formulated as a variety of hypotheses. A relevant question is whether information technology mainly produces cultural differentiation or basic social inequality. The first possibility is nothing to be worried about and the consequences are more or less in accordance with the emergence of late-modern cultural development. Neither would this situation need specific countermeasures. The development of either cultural differentiation or more basic social inequality could be formulated as follows.

## The weak hypothesis

This suggests that segregation is a temporary trend and mainly concerns disparate skills and the ability to use the internet. Differences will remain to a certain extent, since people naturally differ from each other. The weak hypothesis resembles what Pippa Norris (2000) calls the 'normalization model', suggesting that the spread of the internet will follow an S-curve. Those who adopt these innovations at an early stage will be ahead of the curve, but in the long term, optimists believe that penetration will reach saturation. The initial period of adoption may be expected to increase social inequality, but the normalization hypothesis suggests that this temporary gap will close eventually.

## The strong hypothesis

This suggests that the emergence of the information society will create new social cleavages and strengthen old ones. This is the core question of the digital divide, to which researchers, politicians and decision-makers wish to find an answer. What most would like to hear is that information technology is not creating new social inequality but is assisting in levelling it out. The strong hypothesis is close to what Norris (2000) calls the 'stratification model'. Pessimists, for whom this provides a more realistic scenario, suggest that groups which are already well networked via traditional forms of ICT will maintain their edge in the digital economy.

These hypotheses serve as a background for the sections following, where the discussion of social inequalities and digital networks will come under closer consideration. The discussion is conceived here as four

approaches which, although in practice are often interconnected, are theoretically distinguishable:

- the technocratic approach;
- the social structure approach;
- the information structure and exclusion approach; and
- modernization and capitalism.

## THE TECHNOCRATIC APPROACH

A popular form of the digital divide discussion is the technocratic approach, since it is often involved in social experiments and projects. These projects usually aim to widen internet access and usage in order to include new groups of users in the virtual world. The basic idea is that the internet has become an increasingly important means of everyday living, offering jobs, strengthening communities and assisting in education. Although the average user is no longer a white, middle-class and highly educated man as was usual in the early days of the internet, there is still a marked bias.

The core issues here are access, competence and content. Inequality is related to these factors, with most attention being paid to the industrialized western societies in which the new technology is already widely used. Statistics show that technological opportunities are still very unevenly dispersed, even in the vanguard countries, and the situation becomes more alarming if it turns out that some social groups are being systematically excluded. Many governments have identified this problem and have attempted to tackle it.

In the United States there is a growing tide of opinion that advanced communication services such as internet access and email are not just value-added services but increasingly essential tools for the new economy. Many users, consumer bodies and regulatory authorities argue strongly that dominant telecoms operators must provide some form of universal service, not only because it is essential in combating social exclusion, but also because it will boost global competition (ci-online, 2000). In the Okinawa meeting of the industrialized nations, concern over the emerging divide between the 'haves' and 'have-nots' was expressed. According to the Member States, a gap in the availability of internet access will have a multiplier effect and can create an even more significant divide in critical areas such as education, job training, literacy, public health and economic prosperity. Consequently, access to the internet and technological know-how would be absolutely fundamental to the survival of the developing nations in the new economy. However, even consensus between governments, pressure groups and corporations that enhanced universal service obligation is not only desirable but critical has not resolved the problem of who should pay for it.

One argument gaining more credibility, especially in the US, is that the emergence of e-commerce means that all small and medium-sized enterprises, micro-enterprises and individuals can participate now in the global market. This makes universal internet access a potent tool, not merely for social goals but also in promoting competition. Thus universal access is justified on economic grounds in view of the fact that equal opportunity internet access can maximize competition in an economy by making market entry easy.

There is a difference, rhetorically at least, between the US and the European Union (EU) in that whereas the former pays more attention to the economic gains resulting from information technology, the latter emphasizes its social and democratic aspects (see e.g. the eLearning Action Plan). However, the suggestions that are intended to overcome the digital divide include fairly similar measures. For example, the Clinton Administration proposed a plan to help bridge the gap, offering private companies a tax break, new teacher training programmes and the development of community technology centres in low-income neighbourhoods.

To summarize the technocratic approach: first, it is generally admitted that there still are considerable differences in internet use, even in the most advanced countries. Second, it is argued that the public sector should level out the differences by making opportunities available to everyone, notwithstanding differences in social, educational or economic backgrounds. Third, the discourse expresses confidence in the ability of the new technology to overcome social inequality.

## THE SOCIAL STRUCTURE APPROACH

Here the point of departure is the existing social structures and the unevenness of internet use. The approach can be seen as part of the more general issue of the interaction between technology and society where the emphasis is either given to the former or the latter. In its early phase of diffusion, a new medium is frequently considered as potentially radical, being able to transform the whole of society along with its basic structures. A reaction to this view argues that moulding the uses and features of a specific technology stresses society and its societal arrangements (e.g. May, 2002; Winston, 1986). This is the social structure approach and Colin Sparks (2000) can provide us with an illustrative example of this argument. He strongly emphasizes the importance of the status quo and defines the technology in question not as the internet but more precisely as internet resources.

For Sparks, the dialogic and searchable nature of the internet has enormous potential, involving a great extension of the citizen's power to enter the public arena and to participate in debates and decision-making. It

also allows people far easier and greater access to a huge range of information and opinion about their situation, which empowers them to make informed decisions about their political choices. The problem, however, is not the potential of the technology, but the ways in which it comes to be embedded in societies. Potential can be realised, or can be stultified and atrophy. What happens depends upon the ways in which the technology is developed and implemented, the social uses to which it is put and the degree to which it is diffused throughout society. Sparks focuses on the social uses of the internet and its social diffusion. Finding out who has access to this technology is the first step in deciding whether its democratic potential is being realised or not.

So far at least, the infrastructure of the internet has not developed in a way that would distribute opportunities for people to participate in any form of online activity equitably, let alone in the governance of their countries. Sparks finds the online world as it appears today very inequitable. Findings from the US show that although access to computers and the internet has soared for people in all demographic groups and geographical locations, the digital divide between the information-rich and the information-poor also persists. For many groups, the digital divide has widened as the information 'haves' outpace the 'have-nots' in gaining access to electronic resources. These gaps are based upon divisions familiar to European observers, such as income and education, as well as on particularly sensitive US markers of disparity such as ethnicity.

The systemic inequalities of access map existing and well-known forms of social differentiation very closely, says Sparks. For the richest groups in society the internet is embedded in the routines of both work and leisure and perhaps has accelerated the blurring of the distinction between the two. For less well-off groups, however, the internet is primarily a communication device, an extension of the telephone and the postal service, and is predominantly used for leisure purposes. Accordingly, in its present state of development, the internet is a technology that shows signs of adaptation to the social patterns of its users and its usage is beginning to reflect the differences between them.

For Sparks, it seems highly likely that the internet will fail to realise its undoubted potential as a medium of democratic life. Both its availability as a mode of participation and expression and the presence of information and opinion will continue to be very unequally distributed. To the extent that it is a medium through which people can learn and debate, it will be for rich white people rather than for the mass of the world's population. Further, the evidence is that the distribution of the internet and the associated opportunities for political and cultural enrichment map even more closely the existing distributions of wealth and power than other, older technologies such as the printing press.

Norris (2000) shares views similar to Sparks about the diffusion of the benefits of new technology. Even if the basic digital divide shrinks gradually over time, it is naive to believe that the virtual world can overturn the fundamental inequalities of social stratification which are endemic throughout post-industrial societies, any more than it is likely to overcome world poverty. According to pessimistic accounts, global and social divides in particular mean that internet politics will benefit the elite disproportionately.

The alternative would be to find ways of providing the existing democratic technology for the whole world. Among suggested mechanisms is community access, whereby the technology can be made available to groups too poor or marginal to have any other way of getting online. But however worthy and well-intentioned these efforts are, according to Sparks, they miss the point. What is embedded in the internet is social positions and social practices. The problem is to diffuse social relations, not technology. For Sparks, only to the extent that it is possible to overcome social inequality will it be possible to generalize the diffusion of the internet and realise its potential.

## THE INFORMATION STRUCTURE AND EXCLUSION APPROACH

A further extension to the previous approaches to the digital divide is comprised of social segregation and the process of marginalization, with social inequalities as the starting-point. The role of ICT is examined in a geographical context, the perspective including the differentiation between urban areas.

Sociological studies of social exclusion tend to focus on poverty and the underclass, leaving the role of information technology out of consideration for the most part. The current notion of social exclusion refers not only to poverty but also problems in various other areas such as the employment market, democratic activities, the social welfare system and family and social relationships. While poverty has to do with the division of material resources and is still a core factor in exclusion (Wacquant, 1996), the problems of participation, which concern the dimensions of citizenship, the feeling of belonging, social integration and the experience of disempowerment, also have attracted more attention. If all these areas are weak, serious social exclusion will follow.

A representative of this position is Scott Lash (1994), who considers the process of modernization and the impact of ICTs on social equality. At stake here are the information and communication structures, not only the internet. Lash discusses the thesis of reflexive modernization, especially in relation to the social change in economic life. This process has been understood commonly in terms of 'flexible specialization', in which increasingly specialized consumption entails more flexible ways of producing.

If the change towards knowledge intensities and reflexivity is a positive step, Lash asks, how should we react to the creation of millions of 'junk jobs' in the services and the systematic creation of large armies of the unemployed?

If the transformed middle class works in the information and communication structures and the reflexive working class for and with these structures then, according to Lash (1994), there is a third paradigmatic class in reflexive modernity which is fundamentally excluded from access to information and communication structures. This third class, downgraded from the classical proletariat of simple modernity, is at the bottom of the current 'two-thirds societies'. A large portion of this new lower class is very much in the position of an 'underclass'.

The exclusion of the new lower class from information and communication structures does not merely take place on the job. As Lash found, their residences are also affected. Communications geographers' maps show the locations of fax machines, large satellite receivers and senders, fibre-optic cable, international computer networks and suchlike. Lash points out the heightened informational and communicational density in the downtown districts of central cities, with their concentrations of head offices, finance and business services; the intermediate levels of density in the suburbs, the locations of factories and many advanced consumer services; and the sparseness of the ghetto and underclass areas.

As civil society, the public sphere itself, becomes increasingly superimposed on information and communication structures, exclusion from them becomes exclusion from political and cultural citizenship (Lash, 1994). Citizenship rights in simple modernity, featuring equality before the law, political rights and the social rights of the welfare state, become transformed into reflexive modernity's rights of access to information and communication structures. For Lash, reflexive modernity's new lower class is deprived of both the obligations and rights of predominantly cultural citizenship.

In the information order, inequality tends to be less and less defined by relations of production between a corporation and production workers (Lash, 2002). This is the paradigm for inequality in the industrial order. Today, exclusion is becoming more significant than exploitation, being first and foremost something that is confined along with information and communication structures. What Lash sees as emerging are relatively disembedded and hence increasingly global elites. The closer the country is to the core, such as France, Germany and Japan, the less self-exclusion there will be and the less it will lead to massive inequality. Lash claims that the greatest inequalities are produced on the periphery.

Manuel Castells (2000) also comments on the regional dimension of the information society development. Networks of capital, labour, information and markets link valuable functions, people and localities around the world

through technology, while switching off those populations and territories deprived of value and interest for the dynamics of global capitalism. The social exclusion and economic irrelevance of segments of societies, areas of cities, regions and entire countries follows, constituting what he calls the 'Fourth World'. Lash and Castells do not speak about the digital divide and or suggest action to overcome inequalities. Rather, Lash prefers to indicate potential counter-forces and counter-trends, while Castells, for his part, is very cautious in giving recommendations.

## THE MODERNIZATION AND CAPITALISM APPROACH

Castells' notions of global capitalism leads us to the fourth approach, which represents more a continuation of, than a distinction from, the third one. If we wish to acquire deeper understanding of the impact of information technology, we should ask about the causes of its emergence. This brings us to the crucial trends in modern societies, that is, to modernization and capitalism.

Which one will provide a better explanation of the existence of the net, modernization or capitalism? Obviously, it is difficult to distinguish one from the other since they are interconnected, but it is important to pose the question. According to Jan van Dijk (1993, 1999) there is a connection between modernization and information technology, the latter assisting in controlling and managing very complex modern societies. The increase in information and communication can be explained by, among other factors, expansion of scale, the growing differentiation and division of labour, the rationalization of the economy and culture and social and cultural individualization (see also Slevin, 2000). The industrial system is increasingly dependent on ICTs as a means of managing the flow of production, distribution and consumption. Every time the production system falls into crisis because of bottlenecks and other disruptions, new ways of controlling and conducting it have to be developed. For van Dijk, digital networks are the technology currently used for these purposes.

If modernization explains the emergence of the net, capitalism can make its consequences more understandable. Graham Murdock (1993) poses the question of the importance of capitalism against that of modernization to western development, giving relative importance to capitalism. The impact of the networks on our way of living may be more comprehensible if we add to the effects of rationalization those of global competition and capitalist profit-making.

Again, the changes in production relations are at stake. They are capitalist, but of a historically different kind, which Castells (2000) calls informational capitalism. The rule is still production for the sake of profit and the private appropriation of profit on the basis of property rights, which is the essence of capitalism. The new characteristics concern the production process,

labour and capital. Under the new system of production, labour is redefined in its role as producer and sharply differentiated according to what Castells calls generic labour versus self-programmable labour. The critical quality in differentiating these two is education and the capacity to access higher levels of education; that is, embodied knowledge and information.

For Castells, a fundamental feature of informational capitalism is global financial markets. It is in these markets that profits from all sources ultimately converge in search of higher profits. The margins of gain in the stock market, bond market, currency market, futures, options and derivatives and financial markets in general are, on average, considerably greater than in most direct investments. This is so not because of the nature of financial capital, the oldest form of capital in history, but because of the technological conditions under which it operates in informationalism, namely its annihilation of space and time by electronic means. The global financial networks are the nerve centre of informational capitalism, their movements bringing doom or bonanza to savers, investors, companies and countries.

The consequences of this development for social class relationships are as profound as they are complex, according to Castells (2000). One way to understand them is to look at social inequality in income and social status along the lines of social stratification theory. From this perspective, the new system is characterized by a tendency to increased polarization: namely, the simultaneous growth of both the top and bottom of the social scale. According to Castells, this results from three features: first, a fundamental differentiation between self-programmable, highly productive labour and generic, expendable labour; second, the individualization of labour, which undermines its collective organization, thus abandoning the weakest sections of the workforce to their fate; and third, under the impact of individualization of labour, globalization of the economy and delegitimation of the state, the gradual demise of the welfare state, thus removing the safety net for people who cannot be individually well-off.

The daily experience of the information order diverges markedly between cultural groups. Zygmunt Bauman (1998) makes a distinction between the first world and the second world inhabitants, or the learned elites and the people. The residents of the first world live in a perpetual present, constantly busy and 'short of time', since each moment of time is non-extensible. People in the second world are crushed under the burden of plentiful, redundant and useless time with which they have nothing to fill. Residents of the first world live in time, whereas residents of the second world live in space: two worlds, two perceptions of the world, two strategies and an almost complete communication breakdown between the two groups.

Castells summarizes the fundamental social cleavages of the information order as follows. First, the internal fragmentation of labour between informational producers and replaceable generic labour; second, the social

exclusion of a significant segment of society made up of discarded individuals whose value as workers or consumers is used up and whose relevance as people is ignored; and third, the separation between the market logic of global networks of capital flows and the human experience of workers' lives.

Both Castells and Lash are concerned about the global economic order and describe it as informational and as capitalist as ever. Thus they conclude that the inequality of the information age is structural and not contingent. What is noteworthy in their reasoning is how ICT is conceived, not just as another medium, but as an infrastructure in many ways connected to inequalities. It even assists in deepening the disparities.

## HOW SHOULD DISCUSSION OF THE DIGITAL DIVIDE BE EVALUATED?

In order to make sense of the various approaches let us relate them, first, to the rhetoric of the information society and, second, to the experience of a small Nordic country striving to be on top of information technology development. The approaches will be handled as ideal types, detached from the respective authors and will be placed in the discourse of modernization.

The approaches all have in common an understanding of real disparities in the use of information technologies, but they differ in how they see the significance of the phenomena. In the main, the technocratic approach is a result of the information society 'project' itself and, accordingly, is affirmative of it. It deals with the internet, which is presumed to bring with it noticeable but occasional rather than structural differences. Thus the suggested measures are meant to be temporary and aim especially at increasing access to devices, relevant training and meaningful content. The other three approaches are counter-arguments to the information society rhetoric and are critical of the project. They consider the concept of the information society as more an ideological construct than an empirical phenomenon (see e.g. Garnham, 2000). The social structure approach considers the internet and internet resources and understands the inequalities as structural and not dependent on conditions. Accordingly, the suggestions are not moderate but concern the removal of basic social disparities. It doubts the autonomy of information technology as a societal force and emphasizes instead the role of other factors in social development.

The information structure and exclusion approach sees a strong relation between information technology and growing social disparities. The modernization and capitalism approach goes still deeper into the basic trends of modern society. The inequalities related to information technology are understood as highly structural and technology is seen accountable not only for strengthening existing inequalities but even for creating new ones. If

there are any suggestions, they are radical: end global capitalism (Chossudovsky, 1999).

The measures suggested by each approach diverge partly because of the definition that they give to the technology. When the horizon expands from institutional arrangements to the whole economic system and the process of modernization, the definition of technology also extends from the internet to the entire information and communication structure. Thus different conceptualizations result in different understanding of the subject. The digital divide may be conceived of as a serious social problem or temporary discomfort, all depending on the basic conceptual choices.

In all, the broader the point of view, the more serious the tone and the more alarming the future prospects. Apart from the first approach, all advance strong arguments that digital gaps and crucial social inequalities will endure. They point out that radical political change should be pushed, if we wish to retain the social order and a sufficiency of welfare arrangements.

## OBSERVATIONS OF A TECHNOLOGICALLY ADVANCED COUNTRY

How do the experiences of a fairly democratic information society respond to these accounts? Although the answer remains hypothetical by necessity, it is possible sociologically to diagnose our own age in broad terms (see e.g. Bauman, 2000). As for Finland, the prospects seem very ambiguous. To begin with, we should survey the statistics and especially the figures on social inequality. From the technological viewpoint, the picture looks quite bright in Finland (Nurmela et al., 2002). In many age groups women have bypassed men as the internet users and, similarly, earlier regional differences have been mitigated. By and large, the differences are accounted for by low income and the old age of small remote households, indicating that exclusion from ICT could be a transitory problem. The same holds true with other Nordic countries (Nordic Information Society Statistics, 2002) and this seems to lend support to the importance of public policy programs.

As yet, the concept of the underclass does not fit well into the framework of a welfare state. In all Nordic countries (although to a varying extent) welfare arrangements still count, despite heavy pressure for dismantling basic structural elements. Regional segregation has been tackled quite successfully so far through national and local policies. Although signs of accumulating problems are evident in some suburbs and regions, it is not easy to predict who will be actually using the internet. Thus the divide between social groups and individuals is not as clear-cut as one might think.

However, this does not justify the notion of a specific Finnish model which successfully combines the construction of an information society and the maintenance of the welfare state, as stated by Manuel Castells and Pekka Himanen (2002). Neither does the internet appear to be developing so as to

automatically realise its potential as a mechanism for enhancing democracy. By and large, Castells' (2000, 2001) descriptions of the new global order meets with a response in Finland. Under the new system of production, a considerable number of people are becoming irrelevant both as producers and consumers in the logic of the system. Castells is not saying that there is mass unemployment, but that the mass of generic labour is circulating in a variety of jobs which are increasingly occasional and with a great deal of discontinuity. The proportion of people who are constantly in and out of paid work is steadily growing in Finland and is higher than in other Nordic countries. The loss of a stable relationship with employment and the poor bargaining power of many workers tend to create major crises in the lives of their families.

Therefore, the notion of a Finnish model could serve rather as an ideal than as an empirical description. What the Finnish case indicates is that in a democratic society with a leaning towards equality, the accessibility of information technology is not a major problem. As recent statistics show, a great majority of Finns have become users of ICT during the last five years and information technology has been accepted very smoothly as a part of everyday life (Nurmela et al, 2002). This has happened at the same time as the segregation of social classes, a fact which strongly suggests that the causes of exclusion and marginalization are much deeper.

## WHAT NEXT?

The overall picture seems unclear and the prospects both promising and frightening. Striking inequalities in society and communications are evident worldwide. A 1998 United Nations Educational, Scientific and Cultural Organization (UNESCO) report emphasizes that most of the world's population lacks basic access to even a telephone, least of all a computer, producing societies increasingly marginalized at the periphery of communication networks (UNESCO, 1998). On this basis it seems likely that, despite initiatives by state and international agencies and technological developments in the marketplace, the global digital divide probably will continue in the foreseeable future, driven by world poverty (Norris, 2000).

Castells (2000) also states that inequality and polarization are prescribed in the dynamics of informational capitalism and will prevail unless conscious action is taken to countervail these tendencies. However, this means that inequality and polarization are not inevitable and could be countered and prevented by public policies. As the extreme option suggests, if we do not dismantle global capitalism immediately, there is still something we can do to affect the development of the information society.

First, considered action is needed to include the widest possible body of citizens in information and communication structures. The 'metamedia' quality of digital networks makes it necessary to extend them everywhere.

Since the internet is both an information and communication medium and a new form of infrastructure on which the most varied activities and forms of social life are enacted, there is no easy way to remain outside it. Rather, we should learn as much as possible of its qualities in order to manage it better.

Notwithstanding the fact that developing countries face fundamental deficits in many areas of everyday life, the diffusion of ICTs should be facilitated in the poorer parts of the world as well. This may seem contradictory, but it means simply that all nations should be provided with equal means of communication.

The fusion of the mobile phone and the internet may form a radically different basis for the utilization of the net from what we have been accustomed to so far. Because the internet is a social technology, taking at least part of its form from patterns of everyday usage, it can be socially 'reinvented', as Sparks (2000) points out. Obviously, this shaping can happen towards divergent ends such as private commercial interests or shared public good, depending on the social powers at stake. The poorer countries in particular could benefit from the fusion of the mobile phone and the internet, provided that much greater emphasis is placed on the actual needs and wishes of these countries. Essential to this is the creation of new small-scale software and hardware solutions. At present, content seems to remain a challenge, while clearly connectivity can expand. In addition to content production, the question is about other areas such as diversity of languages and copyright and intellectual property issues.

Second, forms of cultural diversity are emerging, fusing traditional forms of solidarity and community with new means on the internet. By and large, the effects of the internet upon the cultural field are as controversial and paradoxical as in every field of human action, which means that researchers and observers should be sensitive both to the process of digital division and that of digital diversity.

Actual cases show that in urban areas a sense of belonging and responsibility can be strengthened through information technology where local residents are taken in as relevant parties to the process (Bäcklund, 2003). If a neighbourhood is provided with low-priced connections, peer support in training is available and face-to-face meetings are provided, then new spin-offs of social processes can emerge. For example, a church in a semi-urban neighbourhood in Finland took a step towards community development by turning part of the church hall into a video studio (Bäcklund, 2003). A big screen, camera, laptop computer plus an editing suite are being employed to make community programs and to show them to the residents through narrowcasting. The experiment turned out to be important, especially for cultural self-expression, which is in fact a basis for more demanding political processes.

In regard to minorities, such as the Alaskan and Greenlandic Inuit, the internet plays a significant role in identification (Christiansen, 2003). The process can be realised either in cultural–ethnic form, as in Canadian Alaska, or in national–local form, as in Greenland. Identification is dynamic and relational in time and space, resting not only on the locals themselves, but on other users as well. The internet has enabled the Inuit to incorporate aspects of group identity into their relations with other people, for which the previous mass media left fewer options. In all, the internet has a double role: while bringing other people's reality closer to a distant rural community it also projects Inuit reality closer to other parts of the world.

Place still plays a considerable role and the manifestation of local values on a global network is not archaic. The Nordic Saami people of four neighbouring nations now have a chance to communicate with each other across national borders and place themselves culturally for the world outside. Although not yet a truly shared medium, the internet has nevertheless brought a new phase into their history. Since the local dialects diverge considerably from each other, almost to the point of being distinct languages, the main means of communication is English – a general phenomenon in other user surroundings as well.

Third, democracy is an area of social life where changes are genuinely sought and worked upon. However, so far the results seem uncertain and hopes for the potential of digital technology to revitalize direct participation are not strong (see e.g. Norris 2000: chapter 1). While skeptics claim that nothing much will change in the political system, the pessimistic view overlooks the indications of change which already are becoming apparent. In fact, technology as such does not drive social and political activities, since their causes are deeper, but it does facilitate their organization, mobilization and expression.

There is a real quest for new forms of participation in western democracies if local political life is to be renewed for a more egalitarian and multicultural structure. This includes new ways of displaying and distributing public information, as well as establishing a more influential position for the citizen as a relevant party in common issues. The internet publicity should be rethought and reconstructed in order to increase citizen participation in the dialogue between civil society and government. In essence, digital forms should assist the formation of public opinion.

In developing countries and in remote and poor areas the democratic potential of digital networks lies especially in strengthening organizational linkages and networking capacities and in enhancing access to information and communication. In this sense, discussion of the public domain and development of open source applications are crucial, since cost is an inherent constraint in the construction of information structures. Free software and open source solutions can be created on an equal footing

where now there is no option available at all (e.g. Rajani, 2003). The important thing is that when these devices and practices are introduced in developing countries, their value may be understood better in technologically advanced countries.

Even if parts of the world differ from each other in many aspects, they have one thing in common: the possibility of enhancing people's control over the conditions of their lives is at stake, not the technology as such.

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