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The “New Economy”: Real Substance or Just Visionary Hype? On Social Theory and Technology Rhetoric in the Digital Age

Mais qui dit comprendre dit savoir poser des questions. Or les économistes sont aujourd’hui, avant tout, des gens qui ont des réponses, ou qui font semblant d’en avoir. Il en résulte à la fois leurs succès, tout le monde aime avoir des réponses, et la crise de leur légitimité.

– Jacques Sapir: *Les trous noirs de la science économique* (2000: 14)

[...] the “new economy” appears less like a new economy than like an old economy that has access to a new technology. Even the phrases “new economy” and “old economy” are rapidly losing their relevance, if they ever had any. The old economy of established companies and the new economy of dot-coms are merging, and it will soon be difficult to distinguish them.

– Michael E. Porter: “Strategy and the Internet” (2001: 78)

1. Introduction

Times and situations have undergone a dramatic change. We have witnessed an “IT fervor” and “dot-com fever”: a blind faith in new media and Internet technology. Looking back from now, the speed of progress in the end of 1990s is nothing short of breathtaking. According to Porter (2001), the great expectations of and the eagerness to invest in the Internet is natural. However, there has been at least one fatal error made by techno capitalists, business leaders, and mass media alike that is evident in the *Zeitgeist*: greed and a craze for speed.

In its April 2001 issue, *The Economist* analysed the turbulent situation of the IT business under the title “Easy.com, easy.go.” Some dot-com services are doing their best to generate income by starting to charge fees for their previously free services. This is hardly easy. Indeed, so far the only sites masses have been willing to pay for have been porn sites and the online version of the *Wall Street Journal*. Therefore, it is expected that a significant number of the dot-com companies established in the last couple of years will soon close their virtual doors or, as soon as their value has dropped low enough, be taken over by an old economy company.

The contemporary discussion on information society, new media technology, and the economic development has been not only highly utopian and vividly visionary, but often unfortunately also extremely uncritical (cf. Inkinen 1999; Myllynen 2001). It should also be noted that the analysis of the “new economy” is made more difficult by the fast pace of changes in the technical-economic and social development. In a networked world (cf. Castells 1996), progress is fast, uncontrollable, and full of unexpected turns. As Paul Virilio (1986) puts it, this could

be interpreted as the general acceleration of culture and society. Easy access to information has been said to increase rather than reduce the feeling of uncertainty (Giddens 2000: 67–68). Our contemporary society has given an entirely new meaning to “risk” (ibid.: 25).

It must be emphasized, however, that despite the reorganizations, restructuring, and consolidations the development of the Internet technology, new media, or digital culture in general has not come to the end of its road – on the contrary. Rather, the extra air has been let out of the “Internet bubble”; this has had a positive effect on both the academic and popular discourse as well as the strategic decision-making. In this article we discuss the concept and theory of the “new economy” as well as the links between the technology and culture of the “new economy.” A quote from the aforementioned Porter article serves as a kind of motto for this text. Although the strategy guru wrote his article from a business economics point of view, its message has a more general relevance for economy, culture, and the future of our society.

The time has come to take a clearer view of the Internet. We need to move away from the rhetoric about “Internet industries,” “e-business strategies,” and a “new economy” and see the Internet for what it is: an enabling technology – a powerful set of tools that can be used, wisely or unwisely, in almost any industry and as part of almost any strategy. We need to ask fundamental questions: Who will capture the economic benefits that the Internet creates? Will all the value end up going to customers, or will companies be able to reap a share of it? What will be the Internet’s impact on industry structure? Will it expand or shrink the pool of profits? And what will be its impact on strategy? Will the Internet bolster or erode the ability of companies to gain sustainable advantages over their competitors. (Porter 2001: 64)

2. *The “New Economy” – the Notion*

The concept of the “new economy” has become increasingly prevalent in the Anglo-American media since the mid-1990s. In 1996, Don Tapscott published a book titled *The Digital Economy*, which lists 12 characteristics of the new economy. Especially in the dot-com industry, the book has been considered one of the central works on the new economy. In the book, Tapscott writes the term “the new economy” in lower case letters with the definite article. According to Tapscott, the concept “the new economy” includes, among others, the multipolar economy, digital economy, and knowledge economy (Tapscott 1996: 6–7).

The phrase “the New Economy” or “the new economy” has crept into the broader public language simultaneously with the discussion on the commercial possibilities of the Internet. It was not until 1993–1994 when Mosaic and Netscape published the first graphic Internet browsers that the Internet became more widely used among the general public. The discussion on the new economy has also been linked with the “economic miracle” in the US in the 1990s when both unemployment and inflation were low while economic growth was strong.

Other countries and language regions have followed. For example, in Finland the concept of new economy arrived a few years after the US: the general public became aware of the concept in 1999 when the *Bisnes.fi* magazine was started. This magazine calls itself “the magazine of the new economy” and, on its website,

“the messenger of the new economy.” It was in 2000 that the concept “the new economy” was introduced in the main Finnish media.

Sirkka Hämmäläinen, the Finnish board member of the European Central Bank, has described the new economy as an economy that can grow faster than before without accelerating inflation (Hämmäläinen 2001: 5). According to Hämmäläinen, the risk of inflation is reduced by such factors as the globalization of goods and services as well as the increased competition in the market. Moreover, reducing control and increasing flexibility in the job market prevent wage inflation and interruptions in economic growth caused by bottlenecks of the workforce. (ibid.: 6–7)

It is natural that a representative of the European Central Bank – whose primary interest is that of monetary policy – would consider the new economy mainly in terms of inflation. The well-known assumption in neo-classical economics is the inverse relation of inflation and unemployment, also known as the *Phillips Curve* which states that the higher the unemployment, the lower the inflation; and the lower the unemployment, the higher the inflation. A state of the economy in which this relation is not realized has been considered unusual. The state of simultaneous high unemployment and high inflation of the 1970s was named *stagflation*.

If the new economy would change the unemployment-inflation relation, this would be a paradigmatic change that *The Economist* (July 24–30, 1999) ironically called “the heavenly combination of low inflation and very low unemployment.” Economists are eager to point out that it would take years of study before such a paradigmatic change could really be detected. In the light of the current knowledge, the “heavenly combination” of low inflation and low unemployment is unrealized. Although inflation has remained moderate, unemployment has increased in the US.

We let economists deal with the more detailed analyses and doctrinal disputes. We should point out, however, that the concept of “new economy” didn’t originate in the field of economics, but in popular (business) literature and general “digital hype.” The “heavenly combination” mentioned by *The Economist* was only noticed by scholars after the mid-1990s when they started to pay attention to the long economic boom in the US. However, the discussion on the business applications of the Internet and e-business had started much earlier.

3. *Polysemic Concepts*

Merely analyzing the concept “the new economy” (or, the “New Economy”) cannot provide a satisfactory picture of the entire phenomenon. There are a stunning number of new concepts that essentially describe the same thing. The following are some of the key terms and concepts that are used in the discussion on the information society and the new economy: *digital economy* (Tapscott 1996), *connected economy* (Davis & Meyer 1998), *net economy* (Barksdale 1999), *global on-line economy* (Bangemann 1999), *knowledge-based economy* and “*Third Wave*” *economy* (Toffler 1999), *Web Economy* (Schwartz 1997), *Creative Economy* (Puttnam 1999), *Experience Economy* (Pine & Gilmore 1999) and *Entertainment Economy* (Wolf 1999).

If desired, the new economy can be defined very succinctly. In the special “new economy” issue of *The Economist* (July 24–30, 1999) it was ironically remarked that “if ‘new economy’ means no more than ‘lots of high-tech firms and workers’, all controversy on the point can cease.” Conceptually combining the new economy and Internet companies is one way of defining the concept.

Especially the Anglo-American market has been flooded with business guidebooks for companies functioning in the digital and networked “new business environment.” What these books have in common is a catchy name and 10–20 theses, rules, or laws that businesses must adhere to in order to succeed in the “digital economy” and “new market situation.” Some examples of these include: *Webonomics. Nine Essential Principles for Growing Your Business on the World Wide Web* (Schwartz 1997); *Blur. The Speed of Change in the Connected Economy* (Davis & Meyer 1998); *New Rules for the New Economy. 10 Radical Strategies for a Connected World* (Kelly 1998). One of the latest works is *The Death of “e” and the Birth of the Real New Economy: Business Models, Technologies and Strategies for the 21st Century* (Fingar et al. 2001).

The introduction of new terms does by no means prove that they would be better than the old terms. According to postmodern philosophers, intellectual discourses and terminology often change according to trends without a corresponding objective change in the surrounding reality. Both the concept of the “new economy” and other related concepts and terms in the field can be interpreted as reflecting both the need for intellectual change as well as the power interests of the individuals, communities, and institutions participating in the intellectual discussion.

4. *Knowledge and Information as Factors of Production*

In addition to foreseeing the current discussion on globalization and media culture, Marshall McLuhan’s ideas provide a basis for the debate on the new economy. According to McLuhan, in contemporary society the value of money as a means of storing or exchanging services and skills is decreasing. The continuous progress from commodity money to printed money to credit cards is creating a metamorphosis of transactions where the changing of goods becomes replaced by the transfer of information (McLuhan 1968: 160). At the same time, McLuhan saw the traditional currency turn into “tribal money.”

According to Jean-François Lyotard (1984, 1985), knowledge will assume a *form of value* which is similar to the relationship suppliers and users have with commodities. In this new situation, knowledge is no longer an end in itself. The form of the new information channels determines that only information that can be quantified is operational.

A society in which *information* is the most important factor of production has been named in many terms. Peter F. Drucker (1993) has suggested the term *post-capitalistic society*. In such a society, the main factor of production is no longer capital, natural resources, or workforce, but *knowledge*. The value of knowledge is based on the increase of productivity and innovation when knowledge is applied to work. The leading social group in the post-capitalistic society are the knowledge

workers who, unlike in the capitalistic society, own their factors and means of production, i.e., their knowledge capital. (Drucker 1993: 8)

McLuhan was one of the first to consider knowledge and information as factors of production: he compared knowledge with “game” which we gather much in the same way food was gathered in the primitive society. Knowledge has also been linked with formal economic theory. Lately there has been a lively discussion among economists on the *knowledge-based economy*. Since the early 1990s this has been an important topic, for example, in the OECD. (Kasvio 1999)

In the 1996 OECD report *The Knowledge-Based Economy* the term refers to economies that are directly based on the production, distribution, and utilization of knowledge and information. Progress toward this is evident in the member states of the OECD in which investments in high technology, the proportion of high-technology industries, the number of highly educated people in the workforce, and the resulting productivity are rising. (OECD 1996: 7) Furthermore, the report refers to the so-called “new growth theory.” The main message of these new theories is that economic growth can be influenced. This has emphasized their significance in various political recommendations and in reports on industry and commerce published in the 1990s (Leiponen & Ylä-Anttila 2000: 141).

New theories on *endogenic growth* have explained economic growth with endogenic factors. According to the new theories, economic growth depends on such factors of production as *technology* and *human capital*. Since knowledge and new innovations can be endlessly developed, they provide the possibility of continuous growth. In principle, the distribution of knowledge does not take it away from anyone. (ibid.: 128–129) Moreover, a digital environment makes endless copying of information possible.

The core factors of the new growth theory are *knowledge*, *new ideas*, *rising profits*, and the inevitably-resulting *imperfect competition* (ibid.: 129). Due to the imperfect competition, the public sector is seen in a double role as both a producer of knowledge and know-how capital and as a maker of rules. In terms of knowledge, the market can act in a very imperfect manner. Knowledge has many outside effects: many others besides the investors can benefit from knowledge.

According to these new theories, knowledge and know-how increase the productivity of traditional production investments, and thus diminishing marginal productivity is no longer inevitable. Thus, economic growth can continue in developed countries without restrictions from the slowing increase in the workforce as is assumed in the neoclassical theory.

Leiponen & Ylä-Anttila (ibid.: 130, 143) recognize that the new theories on growth have picked up Alfred Marshall’s (1920) ideas on the importance of know-how and education for rising profits. However, the researchers note that a third essential element is missing from the mainstream economic theories: this element is *organization* which includes the economic institutions as well as the structure and principles of action in businesses. We would like to point out that the *business culture* of, for example, the Internet and new media companies have not been sufficiently studied. Recent experiences in the field point to the fact that it is exactly in the *work culture* that fundamental changes have taken place (cf. Himanen 2001).

5. *Technology as a Factor of Production*

The effects of *changes in technology* on economy are studied in the field of evolutionary economics. In this branch of economics technology is seen as the engine of economic growth and progress. Although evolutionary economics has no single guru, it has been called “neo-Schumpeterianism” after economist Joseph Schumpeter. (Lemola 2000: 149–150) According to Schumpeter, economic progress is characterized by *inconsistencies* and *continuous imbalance*: economic progress is *a process of creative destruction*. (ibid.: 152)

It is relatively expensive to produce information, but it is cheap to copy it. In other words: information products have high fixed costs, but low marginal costs. Information can also be analyzed as an experiential product. Question: how do you know that the day’s tabloid is worth the price before you have read it? Answer: you don’t. Information is an *experience* each time it is consumed. (Shapiro & Varian 1999: 3–5.) The new economy has also been called the “experience economy.” Indeed, one of the most widely used books in the new media and advertising business is *Experience Economy* (Pine & Gilmore 1999). Another popular work is Rolf Jensen’s *Dream Society* (1999) in which the importance of experiences and stories is also underlined.

Shapiro and Varian point out that in an information society change is caused by information technology and infrastructure rather than the quality or even the quantity of information. A new development in the recent years is that the Internet has changed the availability of information by providing immediate access. (ibid.: 8) This corresponds with Manuel Castells’ view that it is information *technology* that is most essential in the development of a “network society.”

The development, however, is not equal in different parts of the globe. In many geographical areas the benefits of the latest technology have not even been heard of – and their installation is far from reality. The situation and crucial question remains one of the information haves *vis-à-vis* the have-nots; the electronic elite *vis-à-vis* the information proletariat; the included *vis-à-vis* the excluded. To cite Manuel Castells,

[...] new information technologies have spread throughout the globe with lightning speed in less than two decades, between the mid-1970s and the mid-1990s, displaying a logic that I propose as characteristic of this technological revolution: the immediate application to its own development of technologies it generates, connecting the world through information technology. To be sure, *there are large areas of the world, and considerable segments of the population, switched off from the new technological system* [...]. Furthermore, the speed of technological diffusion is *selective*, both socially and functionally. Differential timing in access to the power of technology for people, countries, and regions is a critical *source of inequality* in our society. The switched-off areas are culturally and spatially discontinuous: they are in the American inner cities or in the French *banlieues*, as much as in the shanty towns of Africa or in the deprived rural areas of China and India. Yet dominant functions, social groups, and territories across the globe are connected by the mid-1990s in a new technological system that, as such, started to take shape only in the 1970s.

6. *Technophilic Rhetoric: “Atoms and Bits”*

In his book *Being Digital* (1996), Nicholas Negroponte, the director of the MIT Media Lab, distinguishes between the world of atoms and the world of bits, i.e., the concrete world and the digital world of computers and information networks. Negroponte notes that the transfer from atoms to bits is irrevocable and unavoidable (ibid.: 11). He discusses the “bit industry” and predicts changes in the pricing models in the new “digital reality.”

Negroponte points out that the purchase of content and products should be based on *real value* rather than on the channel of transmission. The mass media, for example, are currently push-media: they screen and filter the information stream for the consumer. In the future, mass media will allow the consumer the possibility of “pulling” and choosing the interesting information him-/herself. (ibid.: 93) According to Negroponte, we are moving towards a post-information age that is characterized by the fact that the number of audience is *one*: information is personalized and made to order. (ibid.: 171–172)

An essential part of digital economy is business that utilizes information networks - for example, electronic stores or the so-called *e-commerce*. Thus, the new economy has been characterized not only as a digital economy, but also as a “web economy” (Schwartz 1997). An important effect of the digital economy is the change in the significance of money. For example, Evan I. Schwartz, the author of the business guidebook *Webonomics* (1997), points to a new monetary system in which digital cash is used (Schwartz 1997: 4–5).

In the US Secretary of Trade report *The Emerging Digital Economy* the expression “Digital Revolution” was widely used. It is interesting to compare this with the 1999 slogan of the digital business consulting company Razorfish: “Everything that can be digital, will be.” It should be pointed out that the term “digital” is being used in a much broader context in the US than in many other Western countries. Indeed, the word “digital” has become a general concept to describe not only an economic but also a social transition. The concept has even gained *hegemonic* characteristics. A world where everything would be digital – as predicted in the slogan by Razorfish – would be a very scary, Orwellian place.

7. *Teams, Tribes, and the New Work Culture: “Gemeinschaft” vs. “Gesellschaft”*

The discussion and research on the information society have been widely concerned with the revolution of work. A central vision has been *distance work*: new technology is expected to free workers from the restrictions of time and space. Another vision has been voiced by Alvin Toffler, among others, who has pointed out that increased productivity of work would benefit workers with more free time and, thus, more time for personal interests outside of work. Neither vision seems to have been realized. (Kasvio 1999)

One prediction about “the end of work” was made in 1995 by Jeremy Rifkin in a book of the same name. He argued that the progress of information technology is leading towards mass unemployment. As work becomes increasingly automated,

different technical devices and applications will replace the human workforce. The productivity grows faster than the total output, thus resulting in fewer rather than more jobs. As a result, big corporations present one reorganization program after another. These will give a quick boost to the stock market, but the workers' uncertainty will increase.

The opposite view has been voiced by Manuel Castells. He shows that there are more jobs and more people of the working age that are employed than ever before in history (Castells 1996: 474). In Castellsian terms, the development of information technology can *create* new possibilities and jobs rather than simply destroy them. In the 1990s politicians and bureaucrats in particular have seen the new economy as a requirement for maintaining competitiveness as well as for creating new jobs. In the political jargon the new economy and the information society have often been conceptually linked together; the new economy has come off as a necessity to which we must adapt and in which "we must succeed." Recently, the discussion on the information society has focused on *life-long learning* and flexibility. In a report by the Finnish Ministry of Finance, for example, it was stated that in an information society everyone must keep updating his/her skills and knowledge, as we face the era of life-long learning (Valtiovarainministeriö 1995: 39)

When discussing new attitudes to work it is once again useful to refer to the older works of Marshall McLuhan. A creative, enthusiastic, and devoted attitude to work in the field of information technology has lately been called "hacker ethics" (Himanen 2001). According to McLuhan (1968: 161), in the "electric age" work is seen not only as a profession, but a voluntary devotion and committal that resembles tribal bonding. In addition to McLuhan, tribalism and neo-communality have been emphasized by, among others, Michel Maffesoli (cf. 1995), a sociologist who is often referred to in the discussion on electronic networks and digital culture.

Finnish philosopher Pekka Himanen (2001) developed the term "hacker ethics" to describe a way of working that is typical for hackers: what is essential is continuous learning and doing meaningful things. According to Himanen, a part of the hacker ethics is "flexible time," i.e., flexible attitude toward work and free time: work must allow for some play rather than just toiling away to fill up hours for the time card (Himanen 2001: 37–42). The phrase "hacker ethics" has, of course, been used much earlier, but in a different context. It is, however, important to bear in mind that although jobs such as programming do not require a precise schedule a part of the work culture in IT and new media is the idealization of work. On the one hand, a coder who works long hours is admired for his/her passion and commitment; on the other hand, *workaholism* is practically required. Long, obscure hours of work have often become a norm and an unwritten rule.

Interestingly enough, the Internet community has always had – or, at least, accepts – a revolutionary, anarchistic section. There are several subcultures among the "nerds" that define trendy clothing and music tastes. These groups continue to be influenced by certain anarchistic and communal ideologies. Many programmers, for example, consider it completely normal to "exchange codes," i.e., learn new programming techniques from each other. Such liberal conduct might conflict with information security: for many the primary reference group is their fellow code writers rather than their employer or even work community.

It is important to bear in mind that the new kind of work culture brings with it new kinds of uncertainties. *Risks* are a part of the new economy – and these risks affect the workers, too. Due to the fast development of technology, jobs are rather loose and insecure (cf. Giddens 2000: 68). The fact that jobs come with risks has played a part in creating the new kind of work culture: because of the risks, there has been a change in the job loyalty traditionally embedded in the Protestant work ethic.

As Antti Kasvio notes, the biographical structures of work are changing. People no longer necessarily follow the traditional pattern of first studying, then participating in the labor market, and finally retiring. In today’s society work and study alternate, and people can even switch careers rather drastically. (Kasvio 1999) It could be said that this is a symptom of a profound process of individualization in which *self* and *life-style* have become the central, significant projects in everyday life management.

There has been a crucial change in the nature of work: work is increasingly done in projects and in teams. Advancement does not necessarily come through rising in the hierarchy; rather, advancement takes place horizontally by branching out into several fields or specializing in one field. In *Global Paradox*, John Naisbitt (1995: 23) argues that digital technology is giving rise to new, virtual tribes. According to Naisbitt, computer-mediated communication (CMC) produces tribes, thus making us tribalized while also making us increasingly global (ibid.).

The Danish futurologist Rolf Jensen (1999) claims that we are moving towards a “Dream Society.” The Dream Society is a phase of development that follows the information society. According to Jensen, in this future Dream Society businesses resemble tribes; work becomes *hard fun*; and workers hunt together and divide the catch according to pre-set rules. “Tribe” is a good metaphor because – as in a hunting band – the tribe’s success depends on its members and their strategic abilities rather than on mechanical devices as in an industrial society. (Jensen 1999: 133–136)

The “tribe” metaphor has characterized the discourse of globalization and the new economy (granted that Marshall McLuhan introduced the metaphor as early as the 1960s). The metaphor creates an image of returning to something original in a time before civilization as we know it today. The word “tribe” evokes a small community based on specialized roles. It is important to bear in mind that archaic tribal culture is characterized by, e.g., the pressure of conformity, hierarchy, and strict roles. This gives rise to the question of whether *it is possible to switch tribes?*

8. *The Age of Speed and the Rhetoric of “New”*

The exhilarating, fast-paced spirit of the times has been the focus of many theories on globalization and analyses on contemporary society. Paul Virilio has suggested his field of study to be called “dromology,” or the science of speed. The faster the pace of information, the more aware we become of its fragmentation. *Telepresence* creates a paradox of presence, and essentially changes our relationship with time and space (Virilio 1994: 46).

“The ecstasy of communication” and television culture have been widely criticized by Jean Baudrillard. He argues that time has not started running faster, but its meaning is disappearing: the illusion of time, duration, and its complexity is unnecessary, because all projects are evaluated in real time, based on immediate operations (Baudrillard 1995: 27). Manuel Castells (1996: 429–468) has introduced the term *timeless time* to describe the new social perception of time in which the perception of sequence and linearity is changing. This resembles McLuhan’s (1968) idea of the briefness of electric time and the implosion caused by electricity.

According to Martin Albrow (1996), modernity has monopolized the concept of the “new”: it either integrates the new into itself or denies its existence. In the Christian tradition the “new age” referred to the future epoch after the Judgment Day. Modern times have labeled our current phase as the “new age.” Jürgen Habermas notes that modernity considers itself as a transfer to the new; conscious of the acceleration of the pace of historical events, it waits for a different future. Constant renewal establishes a break with the past. (Habermas 1987: 190)

Habermas links the change in the concept of time to the project of the modernity. He argues that *Zeitgeist* is powered by the encounter of historical and utopian thinking – despite the fact that conceptually these two might seem to exclude each other. In a modern society, each generation claims to be experiencing a special time unlike any other (ibid.).

In recent years, the information society, the new economy, and digital technology have been discussed in terms of revolution and epoch rhetoric. Such theories that announce some revolutionary change are quite frequent in Western history. Particularly inspirational for messianic interpretations have been the turns of the century as well as millennium. The feeling of the end of something often contains the feeling of expectation for the beginning of something new (a new age, peace, freedom, happiness, etc.). *Fin de siècle* has always intrigued the Western mind. (cf. Rahkonen 1996: 13)

The turn of the millennium and the millennial consciousness provide a probable explanation for the use of the concept *the new economy* instead of such possibilities as “the digital economy,” “the Internet economy,” or “the electronic economy.” Thus, the *new economy* can be interpreted as a central contemporary concept in which is distilled the expectation for the new age, i.e., the new millennium.

In 1995 Jean Baudrillard suggested that we would cross out the 1990s and forget about the decade. This would save us from the necrocultural pathos and endless commemorations at the end of the millennium. The turn of the millennium came and went without much damage even from the feared *millennium bug*. It is noteworthy, though, that the concept of *the new economy* was created at the turn of the millennium.

When analyzing techno-utopian discourse, it is important to bear in mind that religious and metaphysical links are the rule rather than the exception. For technology enthusiasts the new technology is liberating and revolutionary, the initiator of a new era.

9. *Technological Determinism*

According to Finnish sociologist Erik Allardt (1998), technical innovations have given rise to the *technology rhetoric* that makes it difficult for people to perceive what has happened and is happening in society. Allardt notes that analyzing the rhetoric has similarities with social constructionism: both share the assumption that reality is a social construction. Research of technology rhetoric has shed light on how technology affects social ways of thinking.

Allardt has aptly focused on the ways in which the concept of information society has been used in the grand scheme of national development. As Allardt notes, such concepts as the “web” and the “network” have become important means of social description. Established practices have deteriorated, while competition, effectiveness, and the market forces have gained importance. To describe this development it has been necessary to develop new concepts and a new rhetoric that is well suited to handle such concepts as the web and networking. Indeed, Allardt (*ibid.*: 85–93) wonders whether the concept of “network” leaves something essential out of the analysis of our social life.

The importance of webs and networks has been aptly discussed, among others, by Manuel Castells, the dominant commentator on the “information age.” As communication researcher Erkki Karvonen puts it, in current bureaucratic discourses on the information society technological and economic determinism go hand in hand. *Economic determinism* refers to a view according to which social and cultural processes can be restored to economic and material relations (Karvonen 1999: 82–83). According to Karvonen, technological determinism is often linked with the view of technical development as *evolution* (*ibid.*: 85).

When development is seen as evolutionary, it is also seen as irrevocable. The transfer from an agrarian society to an industrial society and to an information society is often presented as natural and teleological development. An often-quoted source is *Moore’s law* that states that the capability of microprocessors doubles every 18 months. The word “law” easily brings to mind connotations with natural laws and unavoidable evolution. Interestingly enough, even scientific research is often restricted to studying the *social adaptation* to technology rather than searching for ways to better answer people’s needs. Similar criticism has been made before by, e.g., David Lyon (1988: 8).

Even “the new economy” has been presented as a result of natural evolution that requires people to adapt. As Sirkka Hämäläinen, for example, puts it:

The recent slowdown of the growth of the US economy and the failure of several Internet businesses does not mean that the process of the new economy would be finished. What has happened and is happening should be seen as normal economic fluctuations that are an integral part of the new economy; they are difficulties in adapting and a price for learning that are natural in all times of transition. (Hämäläinen 2001: 28)

Like many of today’s specialists, Hämäläinen sees that the process of the new economy is only getting started and refers to the recent problems as merely “difficulties in adapting” and “a price for learning” presenting them as “natural” and relevant aspects of the process. Claiming that the process is “natural” is a familiar strategy in technical and economic rhetoric: economy is often seen as a nature-like state in

which even transitions deterministically “just happen” without any outside action from people or society. This deterministic ideology and discourse has been discussed by Heinonen et al. (1996) in an analysis of the common illusion that economy is a system with its own laws.

One reason for the fact that the Internet economy has been considered as a qualitatively new form of economy might be found in what Michelsen (2000: 63) has described as *historylessness of technology*. According to him, it is the rules within the field of the research of history that have denied technology a clear place in the collective memory of the past. Technology is easily seen as merely a temporary visitor that can cause a sudden rupture. The end result seems natural, because the cause of the change has come suddenly and seemingly from outside of society.

According to Michelsen, practically all major 20th century social analyses are deterministic about the development of technology (ibid.: 69). Technological determinism is easy to recognize from the “before and after” arguments. Michelsen takes as an example the industrial revolution that began in England in the late 1700s: the revolution is said to have been started by the spinning Jenny and the steam machine. Similarly, the printing press invented by Gutenberg is credited with the breakdown of the Church of Rome and the advancement of the Reformation in Europe. (ibid.: 70)

The same analogy can be applied to the “invention” of the Internet and the following “revolution” – as well as to the new economy. In recent discourse, the new economy is seen as a natural consequence of the Internet: the laws of economy must change, since technology, too, has changed. Finland’s leading newspaper *Helsingin Sanomat* (November 6, 2000) even suggested that one of the theses of the new economy could be: “The Internet is an invention comparable with the steam machine.” In the article it is further suggested that we are experiencing the “third industrial revolution” which will be followed by “the age of globalized turbocapitalism.”

Furthermore, Karl-Erik Michelsen has discussed the *internalism* in the study of the history of technology. What this results in is presenting the history of technology as stories that are encouraged by a strong faith in *progress*. In these stories, inventions develop from primitive prototypes toward advanced models; machines and devices are detached from active interaction with the surrounding society. The present is seen as more developed than the past, while the future is seen as more developed than the present. (Michelsen 2000: 64)

Based on this logic, technological systems must be competing with each other. They conquer new market areas and work the environment to suit their needs. Importantly enough, the systems act in a flexible way. (ibid.: 76) The idea of mutual competition between technological systems is interesting also when considering the tension between the “new” and “old” economy. However, how this competition between two systems is staged is hardly unambiguous. In the postmodern media society the main “war zone” of discourse is mass media. The new economy keeps developing its own system and tradition through media discourse and technology rhetoric, while the old economy tries to push it out. The competition clearly works to establish an image of duality and tension between the “new” and the “old” economy. This is not, however, very wise or fruitful as the difference between the “old” and the “new” is, more or less, rhetorical.

10. Literature

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