

Towards getting to know information society

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A brief introduction to the structure of the chapter

Let us take a closer look at the term “**information society**”. It must sound familiar since we have most probably heard the term either on television or on the news, spoken by a politician or an informatics company representative. Do we know what it means exactly? To answer this question we need, through a thorough inspection of libraries, the Internet, the Web and our immediate surroundings, to explore three relevant fields to grasp the essence of this concept.

1. First of all, we approach the issue on the level of everyday life and examine common dilemmas and the so-called introductory discourses that, in an ideal case, could lead us to a more meaningful level of understanding.
2. Secondly, we put the concept itself under examination and deconstruct the assumptions underlying the two component parts “information” and “society”.
3. Finally, social science research has already been conducted in this field, thus we look through its literature and research practices in order to discover the meaning of the concept.

As a result of this approach the conceptual network can be explained along with a general understanding of information society. The following chapter deals with the history of the information society and examines the relationship between the concept and related notions such as knowledge society. Subtopics and politically highlighted fields are discussed in further chapters of the book. This serves as a springboard for further explorations of related fields. The objective of the introductory chapter of our course book is nothing more than to prepare the ground for the following chapters in order to facilitate a better understanding of terms and concepts.

The introductory discourses of information society

“Every age, every generation has a right to have its own utopia,” wrote Nobel-prize winner Joseph Brodsky in his essay entitled *‘Collector’s Item’* right after the fall of the Soviet Union. The newly emerging generation in the Cold War era, whose members attended secondary schools and left them after 1990, can unquestionably claim a utopia of a different nature. Apparently this utopia, or dystopia as some view it, is information society.

Everyone has his or her more or less well formed opinion about the information society, the Internet and its influence on our everyday lives even if they have never used a computer or surfed the Internet. Most of these opinions are fed by the discourses on information society and the Internet presented in the media. The introductory discourses concerning these themes—which could lead to a profound understanding of inherent relations—show us the actual origins of the popular concepts and related attitudes, and the way they distort the interpretation of the concept which is the focus of our inquiry.

Primarily, there are three discourses guiding us into the depths of information society. To know and understand these could help to dismantle the onion layered structure of the beliefs and values wrapped around the information society.

I. Discourse I: The Internet comes from the devil

The first discourse revolves around common fears and beliefs related to the Internet. According to some of these the Internet abounds in pornographic and paedophile contents, it stirs up violence and ignites hatred, while whoever utilizes it is involved in bomb making. Its users become addicts, lonely, incapable of communication and mentally twisted.

Krajcsi (2000) collects these misconceptions and all the Internet related problems, “the old troubles of the Internet,” as he calls them, and claims that “the often cited harmful mechanisms that are considered to be the threats presented by the Internet are not at all related to the net but rather to old dangers which had existed before and resurfaced in the Internet era (Krajcsi, 2000: 3):

Some examples of this:

- The question of reliability: you cannot know who is at the other end of the communication channel.
- Authenticity: to what extent can we trust the information from the Internet?
- The loss of the sense of reality: those spending too much time online lose contact with reality.
- Alienation: those addicted to the computer gradually lose their relationships with other people.
- There is a loss of identity: you can become whoever or whatever you want on the Internet as a result of which you yourself no longer know who you actually are.
- Aggression: computer games are alien to human life and make their users violent.
- The appearance of extremes: pornography and paedophilia; the Internet is the favourite gathering point for men of unnatural inclinations and extremist beliefs.

- Communication becomes impoverished: the potentials of the new means of interaction result in the loss of vibrant communicative practices so that language becomes stunted.
- Data smog: the abundance of information overwhelms the users since there is no of finding one's way through the mass of data.

When we consider these negative notions several counter arguments also arise. First and foremost, the basis for these false beliefs is a distorted view of the media in general and the logic of its inherent mechanism. This suggests a certain urge for negative sensation, since the media is exclusively preoccupied with unusual, extraordinary incidents; and the extraordinary usually means something disastrous. There is nothing sensational in the successful landing of an airplane or, to stick to the original theme, in downloading and reading one's e-mails. The abnormal and the pathological appear right away: the plane crash, the paedophile pictures, or the instructions for making a bomb. Eventually, the world, or at least that particular segment which appears in the media, is suggested as abnormal and pathological, which is not true. The problem is that at the beginning the Internet related news was almost exclusively shocking, with appalling phenomena appearing routinely in and about the Internet. This is still partly true even today.

There is, however, another reason why the Internet is so severely criticized. Our fears and superstitions are fed by inherently psychic characteristics. One such human feature is a fear of the unknown, novelty in general or any radical changes in life. Another typical human attribute is that people tend to formulate opinions on matters they do not know and do not intend to study. We frequently create stereotypes of others (which are sometimes an indispensable condition for survival) but the truth and value of these stereotypes is relatively small. No wonder then that the supposed immensity of changes that were once assumed to follow automatically on the introduction of the Internet, the idea that it would totally change our lives evoked fear, and aroused our instant, perhaps unconscious negative reaction; the result was resistance.

However, there is nothing mystical about the Internet. It is *exactly the same as the world that surrounds it*, a claim that can be easily justified since the world is also violent, certain people are evil, and sexuality appears considerably in our everyday lives as well. The world is reflected in the contents of the Internet and its usage. Obviously, it is not only the negative aspects which appear in this mirror but some worthy ones too. Numerous humanitarian initiatives have been able to strengthen their forces with the help of the Internet (such an initiative is the green movement whose public image was considerably altered positively and which became effective through the Internet). *We should not disregard the fact that there is nothing else on the Internet, but uploaded content that had existed in the real world beforehand*; it is nothing less, nothing more.

The second counterargument is much more significant than the previous arguments: the negative representation of the Internet disregards the fact that the exploration of the structure and dilemmas of the information society cannot be reduced solely to the examination of the Internet. The two, to put it simply, are not the same and they are not identical. The Internet is a worldwide network, whereas information society is one potential mode of social existence. Anyone who condemns the latter based on false assumptions of the former makes premature judgments before getting to know the concept itself. In effect, the Internet incorporates numerous other media, unifying their communicative characteristics.

The information society not only differs from the Internet but also exceeds it. The Internet is only one of its significant features and techniques in such a society. Information society, in accordance with Castells' theory, (which we will discuss later) is the new mode of human existence where the organized production, storage, retrieval, and utilization of information play a central role. New structural elements and networks appear through which a certain "network society" is being created accompanied by appropriate institutions that are transformations of those already existing. As a result of this, on the macro level, politics, economics, and culture are reformulated, as are the institutions of the mezzo level and at the micro level, families and individuals experience similar changes (Castells 1996: 13-18).

2. Discourse II: everything is bright in the future

The second discourse appears in the dispute taking place between enthusiastic devotees of futurology and more down-to-earth people. Numerous books were published in the 1970s both in the US and several Western European countries discussing the future of everyday life and the dominant trends for the future Toffler (1980) Naisbitt (1984). We can see from the dates of their publication these works appeared much earlier than the emergence and wide spread distribution of personal computers or cell phones, and well before they turned into mass-produced products. Thus the bright future depicted in these “masterworks” of the early futurologists could not be considered as scientifically oriented works fed by personal experience or experiment of the age. Roszak’s *The Cult of Information* (1994 [1986]) that appeared at about the same time also comments on the phenomenon: “Books like these belong to that immensely popular category of contemporary literature called futurology, an ungainly hybrid of potted social science, Sunday supplement journalism, and soothsaying (1994: 21).” This means that, in case we intend to grasp the essence of their success, a futurologist’s work gains its authenticity through some sociological attribute, the “Sunday supplement journalism” makes it easily digestible, whereas its prophetic tone creates a “pleasing thrill” and excitement in the same manner as science-fiction does. If the sociological element turns out doubtful and fake; if its prophecies become outdated; since it is not about the future anymore but the recent past, relating the wonders of 2000 to the stale fashion of the 1980s. In addition to this, its journalistic style becomes impoverished, and these books simply lose their imaginative power. The missionary faith these works laid on technology remains their sole hope to regain some of their former status.

Lacking any personal experience these technophile writings targeted one single issue, in the then future, our present; namely that people would not be adequately prepared for the sudden changes in their lives. Undoubtedly, this is a modern problem since information literacy, skilful employment of informatics and the development of a future oriented consciousness are all the focus of the information society; being prepared is not sufficient for the foundation of the information society.

The best criticism levelled against the arguments of the devoted supporters of the information society articulates the inadequate picture of the information society. Its disciples failed to introduce the disadvantages of changes; they tend to forget that in this process some will win but some will lose out. The fact that the losers are rarely mentioned is because the themes of those discourses related to information society are primarily defined by those who succeed. Thus, the winners’ terminology prevails. The language they use is exclusively used and understood by them, while those on the periphery do not even get the chance to have their voices heard. Another serious danger is that the winners, mostly technocrats, politicians, and economic leaders, have a naïve image of society which fails to show the world in its inevitable complexity. Obviously, it is a myth that any technological change can guarantee avoiding any kind of failure or loss. Neil Postman in his 1990 lecture given to German informatics students drew attention to the Faustian pact of information technology, which is similar to that of any other technological innovation. Because technology is a give and take game the amount of the gains never, necessarily, equally balance lost value. On the social level, certain groups in society are strengthened while others are weakened. In the same way locksmiths did not hail the appearance of the automobile, as these particular technological changes would have had their own victims too (Postman, 1990).

Another similarly critical argument against the information society is the idea of a “top-down revolution”; this suggests that the beneficial changes of information technology are initiated from the topmost layer of society and that they are instituted by the representatives of economic and political power. The changes, however, are much less “socially” based than one might suppose: the demands are not rooted in society but in economic advantage and it is power relations that urge them on. While almost half of the adult population in Germany experience the new media environment as a force that makes social orientation all the more difficult, those in

favour of development judge these people as having a “false mentality” and emphasize the importance of jumping on the bandwagon.(Bernhardt-Ruhmann, 1995 quoted in Döbel, 1999) However, it is obvious that without the cooperation of the majority of society there will be no chance of building the information society; in a non-utopian realist social model the human factor cannot be excluded.

The uncritically enthusiastic view of the futurologist fails and, it is not anthropocentric enough either. This image of information society is utopian since it claims that technological development will annihilate all social inequalities. This myth cannot be kept up anymore: the information society promises no redemption; the inequalities merely reproduce themselves in altered forms¹. Futurology that depicts the future of society with the help of technological determinism cannot answer the questions raised by complex social issues.

3. Discourse III: Athens or Orwell?

The third discourse rehearses the intense argument between the technophiles and the technophobes. Those involved are often not aware of having taken sides with either the uncritical positive view of technology or the contrary negative approach. However, without an unprejudiced, value free scientific attitude to this controversy it is difficult to develop an unbiased view. This also hinders the process of getting close to the central issues involved. The dispute between the so-called *Athenians* (technophiles) and the *Orwellians* (technophobes) becomes a vulgarised scientific discourse. As it will turn out, the first discourse elaborated above reflects the fears of the technophobes, while the technophiles are enthusiastic futurologists producing promising visions of a bright future. One should ask questions about the origins of technophilia or technophobia; to what extent is it rooted in our human nature? Perhaps the seeds of these prejudices are present simultaneously in our unconscious, and one will prevail over the other powerfully and coherently only in the course of time?

In accordance with the Athenian model technology should have a liberating effect and by enhancing human prosperity, it will eventually lead to the development of a new electronic democracy. The 2,500-year-old Greek city state’s direct democracy will be able to regain its power in a new digital agora. The Orwellian model was coined after George Orwell’s cult book *1984*. Its supporters claim that the inevitable effect of new technology will be the surveillance and subordination of the people. Everyone can be observed, and the technology of total surveillance is ready to be launched. At the end of the story, the evolution of *Homo sapiens* might end. Worse, new intelligent machines may annihilate the human race. Dystopia takes control!

It is valid to dismiss these extreme visions. They are projected so far into a distant future that even if partly based on reality they are too far removed from everyday life to be realized. Even if mass surveillance arises as a significant problem, our evaluation of present democracies indicates there are inbuilt guarantees in democracy for the management of such centuries old difficulties with the misuse of power. These past guarantees may need revision in order to accommodate the altered circumstances thus preserving their efficiency and recognition.

Certain critics of information society claim that one thing will undoubtedly change, that is, power relations between the state and the citizens. Whereas the state attains increasingly efficient means of surveillance, citizens can gain easy access to information that they can employ against any transparent and controllable state mechanism. There is a gradual expansion of the individual’s freedom that runs parallel with the rising transparency of the state. This implies that both sides by fulfilling opposing interests can utilize the new processes. It is not only the state that gains further resources but citizens too.

¹ It is worth noting, however, that the authors mentioned above were not so optimistic after facing reality at the time of writing what were then influential works. The emerging digital abyss of the 1990s, the problems appearing with the technological developments and rapid changes disillusioned both Toffler and Naisbitt (cf. Toffler, 2005; Naisbitt, 2005).

However, the potential costs of the Athenian model are too irrational: who would give up the bulk of their free time for the sake of direct democracy in order to make political decisions? Especially if there is no need for such a thing. We know that only a minority of all citizens would (or could) take an active part in political decision making on a daily basis. To create the potential access to electronic information and publicity for issues is highly desirable in order to let citizens freely voice their opinions in all circumstances, but it might not be wise to force this upon the public and to create a directly democratic political system out of it.

4. Questions leading to the core of the matter

After succeeding, we hope in a more or less unprejudiced evaluation of the attitudes and arguments relating to the three discourses of the information society we may finally arrive at further questions devoid of misconceptions, which could lead us to the core of the issue.

We alluded to the problem of *surveillance* *in discussing Orwellian pessimism* above. The life of the citizen as a consumer can be tracked, without doubt, through an increasing level of precision by a sophisticated range of information technologies. This implies virtual dangers. We need only indicate governmental initiatives right after the September 11, 2001 attack or the tendency companies have to create databases of consumer profiles. Indeed, every single citizen can be surveyed. Questions concerning the consequences of this development automatically arise as do operational matters now and in the not so near future. Especially with reference to the propaganda that plays such a crucial role in the political mechanisms of modern democracies where the possibility of media examination of the state is apparently strengthened.

The second vital matter is the issue of *accessibility*, which encompasses several interrelated phenomena. The new, intensified pace of living requires the use of gadgets as a necessity not only for taking part in public life, but also for work. Participation using these accessories is voluntary, not compulsory and may not necessarily always offer a pleasant experience, even during popular leisure activities and social interactions. If we are to be real participants in the development of our information society then equal access to technologies and their contents is necessary. How can we achieve this if, on the one hand, acquiring technological instruments has its price, and, adequate knowledge is needed to operate those means? What happens to the “outsiders”? In order to consider this issue of accessibility by the individual, we have to face complex matters of technology, information, knowledge and difficulties with personal finance.

Inaccessibility is only one side of the coin; *information(al) stress* is the other. If everyone, or at least the great majority of a society, participates in the information flow, still another difficulty emerges. That is, the heavy burden of the information on the individual. This may mean that the problem of accessibility provides its own final solution (a vision projected by the concept of information society) How can we cope with such massive changes in our everyday lives? With regard to mass accessibility to information, we must also take into account the new levels of tension the population must endure as a natural result of stress. This is not simply a theoretical issue but a practical matter deeply incorporated into our decision making in everyday life, though it may not concern the bulk of the population in the short term.

It is now clear that the difficulties regarding the concept of information society originate from an entirely different source than either the technophiles or the technophobes would like to argue. The intense expectations which led them to be either in favour of the idea or to condemn it make a purely scientific and worthy dispute totally impossible. An alternative, *Technorealism* is a movement which was born in 1998 (Shenk at al, 1998). The founders searched for supporters through the Internet resisting both disputing groups' irrational claims and attempted to approach technology realistically without falling into the trap of extremes, neither

overestimating nor underrating the potentials of technology. The postmodern manifesto of **technorealism** defines the propositions of a realistic approach to technology as follows:

1. “Technologies are not neutral.” Every technology conveys both intended and unintended social, political, and economic contents. Their function is predetermined. Those holding a hammer search exclusively for a nail to drive in.
2. “The Internet is revolutionary, but not Utopian.” It embodies revelatory and assertive effects, it also has a perverted, pernicious aspect too, but in most cases it is trafficking in mundane content.
3. “Government has an important role to play on the electronic frontier.” Each governmental system has to accept the newly created rules and attitudes of the cyber sphere; alternatively it is their right and responsibility to assist the process of integration of the traditional social system into the cyber sphere. Technological standards, data protection and privacy are far too significant to be solely governed by the regulation of the market.
4. “Information is not knowledge.” One should not mistake the intensified information flow - or the introduction of technology to transfer excessive quantities of information - with knowledge, let alone wisdom.
5. “Wiring the schools will not save them.” The extension of the technical apparatus of a school does not automatically raise the level of education in that particular institution.²
6. “Information wants to be protected.” Although it is true that the cyber sphere has had an earthshaking impact on copyright and other intellectual property rights, it does not mean that information is freely available for everyone, or that information “wants to be free”. The aim is the same as in the “normal” world: information belongs to the one who produces it. The potential must be offered for everyone to have free rights protecting his or her intellectual property.
7. “The public owns the airwaves; the public should benefit from their use.” The employment of new technologies must serve the prosperity of communities and citizens, and resources must serve educational, cultural, and community goals.
8. “Understanding technology should be an essential component of global citizenship.” An understanding of the potential gain, and the limits of technology, is essential for becoming a responsible citizen.

Summarizing the essence of Technorealism one would conclude that universal access to information technologies does not mean that, necessarily, we achieve a better or qualitatively different society. Citizens’ active participation and the rational evaluation of technological progress are indispensable to establishing the information society.

² This proposition does not appear to fit. It can be explained by the origin of the manifesto which was written in the US where at sometime in 1998 the Clinton administration proposed the wiring of schools as part of its educational policy; an initiative which evoked harsh criticism. The whole educational system was desperately in need of renewal, which could not be resolved solely by obtaining the new information technology. This proposition, however, may be generally employed too: wiring any institution cannot be the sole means of regeneration.

Information, society, information(al) society

“Information society”—on hearing the term it appears straightforward enough to understand the meaning conveyed by its two component parts. “Information” indicates a certain attribute of society where **infor-****mation** as such plays a crucial role that transforms this particular society whose difference from others rests in its quality of, and access to information. Before we immerse ourselves in the exploration of the concept itself, let us focus on the meaning of the two components separately.

I. Information

Information in the vernacular is what we can find at a railway station or in a department store information desk where certain instructions, guidance, directions or data are provided to let people know about the timetable of trains, or the arrangements in that particular shop. Such information exchange works only if the right piece of information, the one that fits and makes sense for both parties of the communication is available. István Örkény writes about this in his one-minute story entitled “*Information.*”

A man has been sitting by the main gate behind a small sliding glass window for the past eleven years, and in all that time people have asked him only one of two questions.

“Which way is it to the Montex office?”

And he said:

“First floor to the left.”

The second question was:

“Where can I find Gum Residue Recycling?”

To which he replied:

“Second floor, second door to the right.”

For eleven years, he had never made a mistake and gave everybody the right instructions. Then one day a lady walked up to the sliding window and asked him one of the two routine questions.

“Could you please tell me where the Montex office is?”

But this time, quite exceptionally, he gazed into the far distance and said:

“We all come from nothing, and to a great big fucking nothing shall we return.”

The lady lodged a complaint with the management. The complaint was investigated, debated, then dropped.

After all it was not such a big deal. (Örkény, 2006)

Over the last thirty or forty years, the concept of information, as it appears in everyday speech, has altered, so that the limited sense in which it is used in the story is now rather rare. As a natural consequence of this our confidence that we have a vague idea about what the term could mean has been undermined.

This is mainly because we live in an information-centred world and because of the penetration of communication related technologies. In the industrially developed western societies almost everyone experiences information society, which suggests that information has become something essential, a central, indispensable component of our society.

Information studies offers relatively complex definitions for information³. Our intention, however, is primarily to approach the concept with simplicity, bearing in mind that “information society” is the focus of our exploration and not “information.” Starting our analysis with the most obvious step, let us look up the term in a dictionary first: we find several meanings of the word “information.” *Pallas Great Lexicon* Volume 9 reveals that the expression comes from Latin and it means “notification, report; to announce, to notify; messenger, educator, announcer.” (*Pallas Great Lexicon* Vol. 9) The *Thesaurus* offers the following meanings: “(1) instruction, guidance; report; (2) intelligence, data, news, a collection of facts; (3) *Com., Math., Gram.* in the theory of cybernetics: the properties of the matter reflected in signs; intelligence/news.”

The definitions of other thesauri do not offer radically different meanings from the ones quoted above, although some of them attempt to dress the expression up with niceties. The fourth edition of *The American Heritage Dictionary of the English Language* distinguishes seven different meanings of “information”:

1. “Knowledge derived from study, experience, or instruction.
2. Knowledge of specific events or situations that has been gathered or received by communication; intelligence or news.
3. A collection of facts or data: *statistical information.*
4. The act of informing or the condition of being informed; communication of knowledge.
5. *Computer Science.* Processed, stored, or transmitted data.
6. A numerical measure of the uncertainty of an experimental outcome.
7. *Law.* A formal accusation of a crime made by a public officer rather than by grand jury indictment.”

With the exception of the field-specific meanings we can conclude that “information” is an expression related to: experience, the communication of knowledge and experience, data, knowledge, learning, communication, and news. In certain cases “information” appears to be identical with these concepts (e.g. experience, data, knowledge, intelligence), in other cases it is the subject of them (e.g. instruction, learning, communication).

Even if these might seem too vague to grasp the essence of “information” as it exists, the triad of “data,” “knowledge,” and “communication” is sufficient to achieve our goal. What is the relationship between these concepts? In accordance with Drucker’s definition one potential relation is based on the idea that *the transformation of data to information necessitates knowledge.* (Drucker 1988) A number of definitions attempt to link information and communication too, which could be significant for the clarification of information society. Consequently, *communication is the transmission of information taking place in one particular context.* If we join these two approaches we acquire a picture of considerable nicety since the quartet of data, information, knowledge, and communication can be interpreted in their complexity. These four ideas cannot easily be distinguished from each other since, on a daily basis, there is an extensive overlap in their employment.

Michael Buckland sums up the conceptual interrelations in a chart in the introduction of his work on information systems:

1. Figure: The four aspects of information

	INTANGIBLE	TANGIBLE
ENTITY	Information-as-knowledge Knowledge	Information-as-thing Data, document, recorded knowledge
PROCESS	Information-as-process	Information Processing

³ Consult Martin’s (1995: 17-26) detailed summary on this.

Information-as-knowledge is exclusively subjective, it is linked to one particular person and gains its meaning in one particular context. As an entity, it is intangible but it can be communicated and also shared with others. *Information-as-thing* exists similarly to knowledge, yet it is recorded hence it is tangible; data also belongs here, that is recorded knowledge, since its employment requires the recognition of a certain context i.e. the structure of data recording, without which data could not be decoded.

The third group of information-exchange called *information-as-process* is essentially equal to the process of *becoming informed*, consequently, it links information-as-thing with information-as-knowledge. However, it can join two information-as-knowledge (*the process of cogitation*) or two information-as-thing entities (*data processing*), as well.

On analysing “information” one has to examine these groups and their components: knowledge, communication, data, information processing, thought, and other concepts of data processing.

2. Society

Defining “society” is apparently a much more simple task to accomplish, although it is problematic to define what we call society and what its relationship might be to a geographic unit, a nation, a language, a culture, the state and statehood.

A dictionary might be useful again here and this time a social science dictionary would be the most useful. *The Collins Dictionary of Sociology* defines “society” as follows:

1. The totality of human relationships.
2. Any human group that perpetuates itself more or less linked to one specific geographical region, holding its own *institutions* and *culture*; both tribes and nation states in the modern sense belong to this category.

Although “society” is one of the most significant and often cited terms in sociology, the second definition is the main cause of a lot of difficulties and provokes debate over its meaning. While modern societies may be distinguished in political, economic, cultural, and geographical respects - they may have also developed a sense of nationhood - the empires and tribes of earlier times cannot be defined simply like this. Consequently there are disagreements about whether or not they should be considered as societies at all. Empires provoke the question whether or not they can be regarded as unified societies, while tribes – due to their size and population – can hardly be defined as societies.⁴

Currently the criterion for a community to be defined as a society was the potential for their members to interact with each other: what counted was the frequency and scale of these interactions. Even in the most isolated societies there must exist some communication among its members, otherwise they could not be called societies. Another criterion for recognition of a society, besides those above is whether its cultural and institutional continuum could be sustained in the course of its history.

⁴ Anthropologists might dispute this.

However, the most recent sociological trend shows a different direction. Society as a basic concept may no longer be the key to getting to know our world since the examination of single societies may divert our attention from other interactions taking place between and beyond societies such as multilateralization or globalisation.

3. Information and society as one

We are now aware of the meaning of both the ideas of information and society. The question that arises is: what might they mean as a unified concept? Depending on our understanding of the two terms, one might visualize a society in which information and related phenomena (knowledge, communication, data, information processing, thought, and data processing) gain unprecedented significance. Where they occupy a central role which determines human relationships and social reproduction and continuity, spatial ties, institutions, and culture and the idea of the nation state. Presuming there must be a frequency of interactions (social interrelations) for any society to exist, then information society may bring virtual changes in this field: at a much lower cost, in a much easier manner, allowing many more people to interact with each other.

However, there is one lesser important aspect that should not be forgotten that is that the compound of the two terms information and society does not work similarly in every language. Depending on the language the concept itself either differs from the already accepted idea or it coincides with the original meaning. In Hungarian, for instance, “information” turns into an adjective denoting “informational society.” In English, however, the compound is composed of two nouns, which means that the term works by the simple juxtaposition of the words⁵. This differentiation must be recognised since the concept does not simply name “the society of information” but also denotes an attribute of society. Thus for a proper understanding of the term one should bear in mind that “information” functions as an adjective here, and means “informational” not merely “information”.

The concept of information society instantly raises another question; namely, the supposition that every single society can be considered “informational.” Information is an indispensable pillar for the proper functioning of any society and social subsystem; it has played an active part in the process of every social formation, and in shaping industrial and agricultural societies historically, before our present time. This critical observation is often raised against the contemporary appropriation of “information society”. The critics point out that this use of the concept neglects the fact that without information (knowledge, data, thought, communication etc.) there is no society and never was. While undoubtedly true, since all societies necessitate information flow, yet none of them were called “informational” by contemporary critical thinkers or historians. None of the previous societies were so extensively influenced by the communication, reception, processing, recording, decoding, and flow of information as ours are. The re-evaluation of earlier societies provides contrasts with modern characteristics of present day societies which differentiates them sharply from the past. Theorists from specialist perspectives, field of interest, orientation, and mode of thinking indicate these differences in five realms: technology, occupation structure, the operation of economy, spatial structure and finally, culture. These fields will be briefly discussed in what follows.

⁵ In Finnish, however, the situation is even more complicated. The term “informaatio” exists, though the word “tietoyhteiskunta” is widely adopted instead, which is a word for word translation of “knowledge society” in Hungarian. Manuel Castells’ and Pekka Himanen’s book on Finland’s information society, *The Finnish Information Society Model (Suomen tietoyhteiskuntamalli*, Castells-Himanen, 2001), reflects upon this shift of terminology; in English to signify the concept “information society” was used (Castells-Himanen, 2002). In Finnish to denote “information” the word “knowledge” (tieto) is used; no wonder that “informatics” is tietotekniikka (“knowledge technique”), whereas “computer” is tietokone (“knowledge machine”). Most languages adopt the word of Latin origin “information,” while the Finnish example is an exception. (“Information society” proper comes from Japan ‘joho shakai, johoka shakai’—as the later chapter by László Z. Karvalics elaborates on it.)

Schools of social science

Frank Webster's work published in 1995 synthesizes the 1960s and 1970s **information society theories** in order to analyse the concept and its characteristics within the context of social science. These theories designate the potential directions of what might be a comprehensive research project, which can clarify the concept and exploit these theories as starting points for further exploration. Webster's typology is the following:

I. Technology

From the technological perspective we live in an information society since information and telecommunication technologies play a constantly expanding role in all fields of social existence, which has shaken the foundations of social structures and processes and resulted in massive changes in politics, economy, culture, and everyday life.

Most of the attempts made to define information society approach the idea from a technological point of view hence the central question of such explorations sounds like: What kind of new information and communication technology was constructed in recent decades that determined the infrastructure of information society?

Several other issues need clarification, as well. How are these technologies brought to life? Does their application fulfil their originally intended purpose? How are they distributed in society? Are they widely accepted or, conversely, are they rejected?

The most important question, however, is the one that focuses on the relationship between technology and society. This is a matter that at first may seem too theoretical but on second thoughts, turns out to be fundamental. What is the optimum technological impact on social life that can achieve a *qualitative change*? Are we justified in relying on modernizing political initiatives and the theories of futurologists who claim that technology is the only means to change social procedures and the functioning of society, when their objective is to expand the use of technology in the public sphere?

2. Occupation structure and economy

Studies of occupational structure and economy⁶ show that we live in an information society because, when we have passed through the agricultural and industrial stages, the information sector and information oriented jobs dominate the economy.

Two historically reputable schools of social science attempt to distil explanations based on changes to data on the means of production and occupation structure. Their protagonists pose the following questions: How have the proportions of employed workers changed in the industrial and service sectors in recent decades? How have their performance and the knowledge they use changed qualitatively? Have the so-called informational occupations begun to dominate production? Does the computer play an essential role in production? Who are the most influential participants and investors in this new world? Can a convergence that is a fusion of telecommunications, the media and computers be occurring?

⁶ We simplify two of Webster's typology here and fuse them into one unit since the central subjects of their interests are relatively similar.

The question is similar to that which we posed by the technological approach: What is the point at which we can claim that the logic of capitalism, that is, its structure of production has *qualitatively changed*? Is the often cited “new economy” indeed so different from the old one? Where is the turning point? Can we identify the point at which the former was replaced by the latter?⁷

3. Spatial structure

As the spatial theorists see it we live in an information society because through the use of information technologies and globalisation physical space tends to lose its determining function. People are participating in networks that determine such social processes as production, division of labour, discussing politics for example.

It is well accepted historically that the changes that occurred in medieval feudalism, the emergence of modernity, and the appearance of civil societies are all linked to urban settlement since towns were not dominated by feudal structures. Theories which are centred on the dramatically altered spatial structures of information societies focus on the exploration of towns and the network of urban settlements which survived as alienated remnants, and as enclaves in the milieu of the industrial societies. They focus on these issues in their analyses: In what manner do the human attachments to space change? Does the world follow the logic of networks? Does global society exist? Can it come to life? What is the inherent logic of global networks? Who belongs to them, and why do they wish to do so? What kind of social and economic capital is needed to gain access to a network and how can membership then be maintained? What are the innate social relations of the network, and what part do the new information and communication technologies play in those relations⁸?

4. Culture

Since our life is infiltrated by the globalised, extensively digitalized media culture that has become the primary means of providing sense and meaning for us and predominantly determines our life style, the cultural perspective may also claim that our society is informational.

The *Velvet Revolution* broadcast in 1989 was regarded as a milestone marking the beginning of a new era in which the function of the media shifted from mere documentation of events to their very production. An excellent example of this took place when the Berlin Wall fell and the television crews chased people back onto the walls because their earlier camera shots were not satisfactory. The question instantly arises: How and why did the cultural influence of the media increase to such an extent? Theories attempting to explain the cultural aspects of information society describe such a global cultural context that may be adopted universally as a referential framework for the media. This approach claims that the media enjoy a unique status in the age of information and that they are the most prominent determining factors of social relations.

One would naturally ask whether life exists beyond media culture or not? Does the illusory game of signs have any connection to reality? The catchphrase of the information age is “virtual reality” which reality very often turns out to be more fundamental than the world that created it.⁹

⁷ The issue of occupation structure and the white-collar revolution is elaborated by László Z. Karvalics.

⁸ The theme of altered spatial relations is evaluated by Bence Kollányi.

⁹ The phenomena related to digital culture are synthesized by Árpád Rab.

5. Manuel Castells' theory in a nutshell

Castells tries to answer all these questions in one complex theory. His profound description of the new information age attempts to show the way out of the theoretical maze of the value driven, strongly prejudiced, intricate information society. He proposes a conceptual model of a network with which the most recent phenomena of modern societies can be explored. His acknowledged social scientific work has been widely acclaimed academically. At the end of the 1990s he finally legitimised the information society as an academic field of research. Manuel Castells' three-volume opus (1996, 1997, 1998), as reflected in the title (*The Information Age*), is the first comprehensive scientific work amply supported by secondary sources, data which originates new concepts.

Castells argues that the information society is the new mode of human existence, in which the production, recording, processing, and retrieving of information in organized networks plays the central role. There is no evidence, however, that such a society exists. Again, Castells' argues that it is legitimate to point to a newly created mode of communal existence, if quantitative changes (e.g. more computers, a wide range of TV channels, extensive information flow) result in *qualitative* changes with respect to social interaction. The novelty of a society cannot be established exclusively by our acquisition of new goods or phenomena such as the dotcom companies bubble in the economy. It is not this which denotes the renewal of the economy; this is simply the old system gathering some new participants. However, where we see the regeneration of prior processes through the creation of new expectations, which transform the accustomed logic of social interactions (cf. its culture, customs, political system, production system etc.) then we may claim a change. This fundamental change that creates information society is the transformation of the structure of society.

Castells describes the comprehensive transformation of the whole of society in his trilogy. Information and communication technology provides the infrastructural background which is financially supported by the new heavily globalised network economy. A predictable consequence of this transformation process is the growth of social insecurity, a weakened capacity for prediction and plan-making, as well as the appearance of new social inequalities that create a "fourth world" of outcasts. Networking is the new logic, the new organizing principle of society. The rule is simple: those belonging to the network exist, while the network outcasts are non-existent. Since humanity is basically a self-centred entity, with its identity defined by one particular location and culture this process generates immense tension. Individual workers and the human labour force, in general, cannot pursue the constant wandering of capital and hence, job opportunities, on a global level. The tension ignited by the conflict of the Net and the Self serves as a life force for the new society. Real spaces are taken over by the "space of flow" where things of significance and value fluctuate incessantly. This leads to the birth of "real virtuality" in a cultural sense, where the virtual and reality merge and reflect upon each other.

The growth of tension is also reflected in social movements. Some of these (religious fundamentalists, for instance, among other reactive movements) withdraw into traditions and religious values regarding stability, and lack of change as something precious. Others, (anti-globalisation proactive groups) turn against the network society, ironically enough, exploiting the latter's own means of globalised technology and culture. "Global criminal economy" presents another difficulty that societies have to face, and to make things even worse, in certain countries such crime is entangled with the legal political power. This circumstance in the end is something that poses a threat to the entire globalised world.

The workings of the globalised information society eventually have its impact on everyone. However, not every individual participates in the construction of the new mode of living, in the same way as not all of us become part of the network.

Summary

The primary aim of this introductory chapter was to synthesize the essential facts and ideas regarding the information society. Firstly, we were introduced to the introductory discourses on specific topics. Next, we defined the concepts of “information” and “society” individually, and then examined what happens if we join the two terms. What is the result of merging them in a compound term “information(al) society.”? Finally, we examined the more prominent social science perspectives that developed in the 1960s and 1970s and explored the process of “informatization” of society.

In regard to the information society we laid out three introductory discourses that may help the layman to formulate essential questions. Since the subject of our interest is often identified with information and communication networks, and primarily with the Internet, our most significant task was to propose that fears and preconceptions may be misleading, and moreover, without any rational basis. Additionally, these might also hinder a better understanding of information society, instead of helping us to get closer to the core of our problem.

We also introduced the alternative namely, the traps which we may fall into by glorifying technology, engendering it with a redeeming, infinite power which is capable of offering a solution to all kinds of difficulties; not to mention the naïve expectation that it will have a universally earthshaking effect.

The third discourse summarised the debate between the technophiles and technophobes. Thus, we drew attention to the tendency to hazard extreme simplifications regarding technology’s social impact, especially so, if we depict our future either in the form of a totalitarian state with control being imposed on us, or one in which we experience a world of excessive freedom. We introduced the technorealists’ manifesto that offers a kind of “solution” to all these overheated fears and expectations. They urge us to handle technology realistically: as primarily, a means that should be neither glorified nor condemned, yet we must decide how and for what we use it. Yet, this demands that we cannot stay neutral on this issue.

By clarifying the concepts of “information” and “society” we attempted to gain a more profound understanding of the information society proper. We can conclude that the distinguishing feature of the information society lies in its informational character, and in information related processes and phenomena taking their central position in it. Thus we needed to examine what makes this particular society different from those that preceded it since information flow is an indispensable component of every single society.

Social theorists have developed several avenues of scientific research in order to evaluate the novelty of this social formation. Introducing these approaches we collect all potential phenomena that justify the proposition: our era is the age of information, a newly named “informational” age. The most distinctive differences are as follows: the all-pervasive availability of information and communication technologies; the reconfiguration of the occupational structure and of economic production; the revaluation of the information sectors and information related working facilities; the all encompassing growth of networks and globalisation that reduces the necessity for physical space for the first time and, finally, the positioning of culture, especially media culture prominently in the limelight.

The chapter ends with a brief synthesis of the theory put forward by Manuel Castells, the most acknowledged information society scholar. For Castells the new age is characterized by the unifying effect of network systems, primarily in the economy, but similarly for a tension generated by the clash between individual and group identity within the cultural sphere. As a result of this tension, the operation of certain institutions which are indispensable to the collective existence becomes unstable from level of the state to that of the

family. This process is restructuring the whole of society while at the same time it ensures our lives are increasingly unpredictable.

Revision questions

1. What basis is there for popular misconceptions concerning the Internet? To what extent are they justified?
2. What visions of the future are presented by the Orwellian or Athenian scenarios for the future politics of the information society?
3. Who are the technophiles and technophobes? How can the technorealists be defined? Which category do you consider you belong to based on your attitude and views on technology?
4. Define the concept of information society in your own words. What would you emphasize primarily? In what sense does this society differ from others that preceded it?
5. What kind of social scientific approaches does Frank Webster distinguish in his research on information society? What reasons do these different approaches give for our lives being embedded in the information society?

Key terms

Information: The term originates in Latin and has a complex meaning closely related to facts, the communication of facts, data, knowledge, learning, communication, news. In certain cases “information” appears to be identical with these concepts (e.g. fact, data, knowledge, news), in other cases it is the subject of the aforementioned notions (e.g. instruction, learning, communication). (The transformation of data into information requires knowledge, whereas its conveyance necessitates communication.)

Information society: A new form of social existence in which the storage, production, flow, etc. of networked information plays the central role. (There are several other definitions of the concept.)

Information society approaches: Research principles of social sciences originating from the 1960s and 1970s which offer different explanations to the reasons leading to the development of information society and accounts of its major features (technological, occupational, economic, spatial, cultural).

Technorealism: makes efforts to assess the social impacts of technology objectively taking into consideration positive and negative effects.

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