Information the Invisible Hand of Development and Progress

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Abstract. The economic, social, cultural evolution of the economic society it is based on the human´s being faculty of inventing and understanding different concepts and notions, on his spiritual activity, often materialized in goods. Beetwen the development of any kind of society and the creative activity of its members, the relation is direct proportional, being considered a real truth to say that nowadays the developed countries are considered to be that countries where the creativ and spiritual activity is appreciated, encouraged and protected in an efficient way. Economic development is a complex phenomenon..... Within society, people are perceptive to a system of general rules that provides incentives and constraints for human behavior. Institutions' and human action's mutuality, and also its economic and political implications, explain the essential importance of institutions in economic science and the institutional approach viability. In this articol I proposed to make an analise of the importance of information and the higher dependens of the technological sistems of the developed countries. The role of this paper is to observ the neccesity of informations in every sector of economy, the modalities of spreading the informationes.

Keywords: information, informational society, inovation, development, progress.

1. Introduction

The dependence of some developed countries, technological an economic speaking of computers network (ex: computers and network comunication used in the financial sector, transports sistem) affected the distribution of economic power, and can represent a weak point in the gravity center of stability of any country. This dependence created a vulnerable open door, unknown until now, that can have an catastrophal effect on the strategic economic system of any country.

The increasing use of computers netwok, the neccesary use of information, the telecommunication system across all over the world, made the information to be considered an economic resourse egual with capital and labour. It can be said, that we are living in an informational age, that can be characterized by an increasing necessity of information and communication. In the present society there is a constant interest for the perfection of volum and the quality of utilized information, for dominating and manipulating the informations, for knowing the process of obtaining and processing the dates.

2. The beginings of information

Our society is characterized by important changes in all the planes, the necesity of information, the information itself is overwhelming. Many authors consider that the present society can be called ¨the informational age¨, because the value of information can be estimated at least of

two dimensions: qualitative and quantitative of it. The informations are spreadind through a continuous circuit, through a multitude of procedures (analyse, briefing) and this way we can obtain new informations. For example leaving from dates we can obtain, briefing and analysing these dates, informations. Etimologicaly speaking, the word information comes from the latine ¨informeo¨, and the meaning was to instruct, to make, to plane, to imagine, to gave conture of an ideea. The information represents an oral or written formula who has the role to bring new ideeas, concepts, and can be understood like a measure of the sistem. So, we can understand that information is indirect proportional with the uncertainty, when we have little information, the uncertainty is very high.

The economic development of the society represents a change, and the change represents inovation, technological progres, making possible the durability of development and the economical competitiveness of any country. In the same time, the inovation an technological transfer represents solutions for finding an unswear for the economic problems and for permanent descovering the necessary techologies in the context of globalization. In the last period of time, we can hear talking about on information management, which has the role to define, describe, send, recept, storage, process, efficent refound and utilize of the information with the scope of reasing the efficiency, economical human actions of all kind of tipes.

In the beginings of the ´50 - ´60s, in the time when appeared the cybernetics, the informatics and management, everybody put the accent on the technical part of information and communication. Shannon, the author of the cantitative theory of information, said that: ¨to get information means to found something that nobody known before or to found something more about what they knew less.¨ Talking about the origin of informations, these can appear from nothing, they always appear through evolution and transformation of other informations, so we can talk about an age of informations we can work with and who can evolve: information-programes-users.

It is interesting the point of view, which describes the informations like a special good, which has a proccesing cost, a certain quality, utility, value and price. The utility it is given by a social necessity of information and by the capacity to satisfy its necessity. Through information, we can make an efficient replacemeant of the human and technical-material factors, realising a diversification of the human´s activities. Producing the information, represents an continuous and unlimitated procces, because information is practical inexhaustible and has un unicat character. This why we can say that what is precios, important now, can became unimportant tomorrow, without any value so we can say that the quality of information disapears.

3. Information today

In our days, the information, like a rezult of human intellectual creation is one of the most important sources, which assures the efficient unfolding of the activities in any sector. The informations are present in everybody´s life under different forms: inventions, inovations, studies, documentaries, softs, organizations systems, projects – all of these forms of informations offers an oportunity – important development in the/our society where we are living. Producing the information can be realised through different activities of scientific investigations, founding and proccesing the informations. In general the society can be characterized through riseing the competitiveness useing the information in all the sectors of activity. So we can affirm that the informations represents a vital resourse, it doesn´t ends, it multiplicates,...information can be seen like a special good, ecological and volatile and in the same time represents a maxim value concentration in a minimal volume.

An other important characteristic of information is given by the system from where the information cames; if the system doesn´t evoluate, transform, the information given by this system is minimal. We can affirm that information can be defined like a special good, so we can talk about an information market, market which represents one of the most important and dynamic market, so it is necessary to talk about the protection of the intellectual property useing legislation and specific rules. The informations are circulating and they are send, this circulation it is posible useing the internet, scientific communication sesiones, exhibitions, publications, technical documentations, date bases. The development of informational market depends of informational environment made of: written press, special magazines, patents, exhibitions, internet direct communications, posters, advertisments. Sending the information means first of all communicating and any communication brings information, because to communicate means to inform. The communication doesn´t represents only a modality to inform, a simple exchange of informations, it represents a much complex process which means not only information, mean in the same time the understanding of this information and it´s semnification.

The information represents power and it´s manipulation has to be done in the scope of realising the surplus value. More recent technologies have started to enable a similar transformation of our experience of space. Transport enables us to travel much greater distances than our forebears. News media give us information about events in distant lands (or even distant planets). More recently, Virtual Reality and the Internet have started to introduce more strange experiences. There is a need to develop ever-more complex modes of topological reasoning - what is connected to what, what is accessible from where, what is protected from whom, how can this be stretched or squeezed into that.[8]

Many discussions about technology and technology change are handicapped by a simplistic set of notions about technology. (Technology is often seen as a mass of devices. As more and more devices are invented and launched, at apparently increasing speed, so we feel overwhelmed by technological "progress".)

"In our time, things are not even regarded as objects, because their only important quality has become their readiness for use. Today all things are being swept together into a vast network in which their only meaning lies in their being available to serve some end that will itself also be directed towards getting everything under control." [William Levitt, Introduction to Heiddegger, The Question Concerning Technology]

"Goods that are available to us enrich our lives and, if they are technologically available, they do so without imposing burdens on us. Something is available in this sense if it has been rendered instantaneous, ubiquitous, safe, and easy." [Albert Borgmann, Technology and the Character of Contemporary Life]

The informational society represents an expresion of informational age. We must realise that information becames an fundamental and strategical resource, egual with capital, which represents the most important resource of industrial society. The informatics and communications can reduce the economic and social disparities. Conform EITO (European Information Technology Observatory,) the development of new softwares and services control all most 45% in the TIC (The Infrmation and Communication Technology) sector and they have the gratest rate of increasing (9% per year). The investments in this sector for development of new softwares are very small compared with other industries, the software products having a big value, but esentialy intellectual. So, the production of software represents an important resourse for any nation, with small investments can be generated big incomes. The software industry represents a strategic sector in which the national creativity can be used with minimal investments, with maximal advantaje for organization and leading of different national economic sectors, with important posibilities of exporting.[9]

It is our duty to offer an alternative to the new generations allowing to the technical intelligence to participate to the world production of informatical programes. If the liberty of expresion is/represents a right guaranteed by any democratic Constitution, if the right of information and freedom of spreading the informations, are known by any citizen , the right of intellectual property personalize in an effective way the quality of good of our intellectual work.[5]

The great tendince of world globalization of informations and cultural goods, created in the same time, the neccessity and the premises of a fast homogenization of legislation in this sector.

What allows the United States to remain the world's center of innovation is cultural experimentation and the free exchange of ideas. The Constitution spelled out clearly America's commitment to intellectual property, granting Congress the power to "promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries."

4. The evolution of tehnology

But the story behind the story is a little more complicated, and modern champions of intellectual property would be wise to look more closely at how the American system operated in its first 50 years.[10] Evolutionary theorists interpret change in terms of ¨progress¨ (an improved state of affairs) and usually regard progress as inevitable.

The theorists define progress in terms of successive stages of technological development, frequently portrayed as ¨revolutions¨ leading to historical ¨eras¨ defined by this or that technology: ¨the age of machinery¨, ¨the age of automation¨, ¨the atomic age¨, ¨the space age¨, ¨the electronic age¨, and so on - terms which tend to be used with approval by technologists and with disdain by humanists. Such tidy stages misleadingly tend to suggest that new technologies replace old ones. What is more common is an interplay between newer and older media which may involve subtle shifts of function. Television didn't replace radio or the cinema, and computers seem unlikely to replace books. Harvey Graff adds that history cannot be easily reduced to simple linear ¨progress¨: there are ¨variable paths to societal change¨ (Graff 1987, p. 35).

Far-reaching social ¨effects¨, both optimistic and pessimistic, have been claimed for many communications technologies before our current computer-based ¨information technology¨. The so-called ¨I.T. revolution¨ (which tends to be presented as the ¨final¨ communications revolution) can be seen as having been preceded by the ¨writing revolution¨ and ¨the print revolution¨, and as only the latest phase of an ¨electronics revolution¨ which began with telegraphy and telephony. And all of these technologies can be seen as information technologies. During the eighteenth century the idea that history involves virtually continuous progress became popular among the educated classes. Lewis Mumford summarizes a doctrine of progress common among eighteenth century thinkers: ¨those who favoured progress simple-mindedly believed that evils were the property of the past and that only by moving away from the past as rapidly as possible could a better future be assured¨ (Mumford 1971, p. 199).

Social progress rapidly came to be equated with technical progress, often expressed as the conquest of mind over matter or as the head saving the hands. However, the very visible nature of change led to technology being generally accorded a high status in the nineteenth century, and it was then that an associated belief in perpetual economic growth arose. Such writers often note our increasing dependence on mechanical devices and machine-like features of

current human behaviour as evidence of an increasing symbiosis of human beings and machines.

Carroll Purcell refers to a mystical, ¨semi-religious faith in the inevitability of progress¨ (Purcell 1994, p. 38). As he puts it, ¨the notion is that a kind of invisible hand guides technology ever onward and upward, using individuals and organizations as vessels for its purposes but guided by a sort of divine plan for bringing the greatest good to the greatest number. Technological improvement has been the best evidence for progress so far¨ (ibid., p. 39). This is a surprisingly widespread popular myth.
Many of us would agree that technical solutions tend to introduce new problems. But faith in the past involves romanticization no less than faith in the future. Romancing the future or the past involves denying present realities. [11]

"Nature is filled with affirmations about the cycles of time. The seasons wax and wane throughout the year. Birth, growth, death, and rebirth occur in unending cycles. Likewise, long-range chapters in human development give way, during brief periods of intense change, to a new ¨era¨ or ¨age¨ in which different aspects of human nature are emphasized. These are concepts intrinsic to Maya as well as Buddhist and Hindu religion. In comparison, the Judeo-Christian worldview espouses a doctrine of linear time, with a distinct beginning and a distinct, apocalyptic end. What is amazing about the basic tenets of the Maya worldview is that they are shared by religions currently followed by over half the planet." (John Major Jenkins -*Maya Cosmogenesis 2012*)

Technological progress is caused by a process of Darwinian natural selection that works on the whole society. Technology allows a society to survive natural disasters, defeat enemies in war, and develop the natural resources available to it more fully. All these give it an advantage over any society that doesn't do these things. Cultures that encourage their members to work for technological progress survive better than those that don't.

This particular cycle contains the seeds of its own destruction: technological advancement on a primitive planet like Earth invariably causes the human population to increase to the point where exploitation of natural resources seriously upsets the planet's ecological balances. Most people on Earth are now aware that a population bomb is ticking toward explosion.

Scientists are predicting that this rape of the planet's resources will destroy the Earth's biosphere and cause the extinction of the human species, or, at the least, destroy technological civilization. Others are more optimistic. They predict that almost everyone in the underdeveloped countries will die of plagues and famines, but that the advanced nations will survive the crisis with most of their population and technology intact.¨(*War in Heaven* (Griffith, 1988), See notes on the chapter "Elementals")

5. The consequences of tehnological development

We all know of ancient civilizations that arose, developed to a certain point, and then collapsed. Archeological anomalies reveal a deeper picture of far more ancient societies that are excluded from conventional histories.

Each society has to develop the use of electricity, nuclear energy (with its possibility of destruction of the society), radio astronomy, warfare... Never mind that we do not know how the pyramids were built, and that we could not build them today. Never mind how the continent of Antarctica under the ice cap was mapped. Never mind that remote viewing has been used successfully by our intelligence services but ignored by the science establishment.

Technological progress is seen as a path, one-dimensional, with milestones on it, that everyone traverses if they have the intellectual equipment to do so. [12] The key to the Industrial Revolution was technology, technology is knowledge, writes Mokyr. "The rate of technological development has been deeply affected by the fact that people who studied nature and those who were active in economic production have been, through most of history, by and large disjoint social groups."

This political diversity promoted greater freedom of thought among merchants, scientists, and other thinkers, who would often simply pick and up leave if the government of one place displeased them.

History, according to Mokyr, shows that "technological progress in a society is by and large a temporary and vulnerable process, with many powerful enemies with a vested interest in the status quo or an aversion to change continuously threatening it. The net result is that changes in technology, the mainspring of economic progress, have been rare relative to what we now know human creativity is capable of, and that stasis or change at very slow rates has been the rule rather than the exception."

"Technological progress inevitably involves losers, and these losers...tend to be concentrated and usually find it easy to organize," notes Mokyr. "Sooner or later in any society the progress of technology will grind to a halt because the forces that used to support innovation become vested interests. In a purely dialectical fashion, technological progress creates the very forces that eventually destroy it."

Candle makers, after all, cannot be expected to hail the invention of the electric light bulb, nor hostlers the advent of automobiles, nor canal-boat owners the building of railways, nor TV broadcasters the laying down of cable systems.

Mokyr notes that, historically, "technological progress has a better chance in the long run in free self-organizing market societies than in command economies." The defining political conflict of the 21st century is shaping up to be the battle over the future of technology.

"But the achievements made possible by new useful knowledge in terms of economic well-being and human capabilities have been unlike anything experienced before by the human race. The question remains, can this advance be sustained?" That is indeed THE question for the 21st century. [13]

Conclusions

¨*Noting* that scientific and technological progress has become one of the most important factors in the development of human society, t*aking into consideration* that, while scientific and technological developments provide ever increasing opportunities to better the conditions of life of peoples and nations, in a number of instances they can give rise to social problems, as well as threaten the human rights and fundamental freedoms of the individual,

Noting with concern that scientific and technological achievements can be used to intensify the arms race, suppress national liberation movements and deprive individuals and peoples of their human rights and fundamental freedoms,

Also noting with concern that scientific and technological achievements can entail dangers for the civil and political rights of the individual or of the group and for human dignity,

Noting the urgent need to make full use of scientific and technological developments for the welfare of man and to neutralize the present and possible future harmful consequences of certain scientific and technological achievements, Recognizing that scientific and technological

progress is of great importance in accelerating the social and economic development of developing countries,

Aware that the transfer of science and technology is one of the principal ways of accelerating the economic development of developing countries,

Reaffirming the right of peoples to self-determination and the need to respect human rights and freedoms and the dignity of the human person in the conditions of scientific and technological progress,

Desiring to promote the realization of the principles which form the basis of the Charter of the United Nations, the Universal Declaration of Human Rights, the International Covenants on Human Rights, the Declaration on the Granting of Independence to Colonial Countries and Peoples, the Declaration on Principles of International Law concerning Friendly Relations and Co-operation among States in accordance with the Charter of the United Nations, the Declaration on Social Progress and Development, and the Charter of Economic Rights and Duties of States;

Solemnly proclaims that:

1. All States shall promote international co-operation to ensure that the results of scientific and technological developments are used in the interests of strengthening international peace and security, freedom and independence, and also for the purpose of the economic and social development of peoples and the realization of human rights and freedoms in accordance with the Charter of the United Nations.
2. All States shall take appropriate measures to prevent the use of scientific and technological developments, particularly by the State organs, to limit or interfere with the enjoyment of the human rights and fundamental freedoms of the individual as enshrined in the Universal Declaration of Human Rights, the International Covenants on Human Rights and other relevant international instruments.
3. All States shall take measures to ensure that scientific and technological achievements satisfy the material and spiritual needs for all sectors of the population.
4. All States shall refrain from any acts involving the use of scientific and technological achievements for the purposes of violating the sovereignty and territorial integrity of other States, interfering in their internal affairs, waging aggressive wars, suppressing national liberation movements or pursuing a policy of racial discrimination. Such acts are not only a flagrant violation of the Charter of the United Nations and principles of international law, but constitute an inadmissible distortion of the purposes that should guide scientific and technological developments for the benefit of mankind.
5. All States shall co-operate in the establishment, strengthening and development of the scientific and technological capacity of developing countries with a view to accelerating the realization of the social and economic rights of the peoples of those countries.
6. All States shall take measures to extend the benefits of science and technology to all strata of the population and to protect them, both socially and materially, from possible harmful effects of the misuse of scientific and technological developments, including their misuse to infringe upon the rights of the individual or of the group, particularly with regard to respect for privacy and the protection of the human personality and its physical and intellectual integrity.
7. All States shall take the necessary measures, including legislative measures, to ensure that the utilization of scientific and technological achievements promotes the fullest realization of human rights and fundamental freedoms without any discrimination whatsoever on grounds of race, sex, language or religious beliefs.

8. All States shall take effective measures, including legislative measures, to prevent and preclude the utilization of scientific and technological achievements to the detriment of human rights and fundamental freedoms and the dignity of the human person.
9. All States shall, whenever necessary, take action to ensure compliance with legislation guaranteeing human rights and freedoms in the conditions of scientific and technological developments.¨[14]

¨In the age of information, the knowledge represents the supreme power.¨

So....through the complexity of the phenomenons which involves the development of the informational society, phenomenons which must be understood and administrated, for creating new cultures of knowledges and studing in the conditiones of utilising of new tehnologies, researching-development and tehnological inovation, active participation of academic community, (researching, education and cultural institutions) becames important too. The rights of citizens and consumers in the informational society have new dimensiones and can be found in different forms.

Looking farther, the IT tehnologies converges into computerizated concerns, integrated into informational and communicational systems. Nowadays a company must have various canals of communications, everyone with different audiences, internal projects orientated through the exchange of information client-partner, using phone, fax, e-mail etc.

Electronic commerce assures a new integration of informations in defferent processes, the final scop beeing the creation of a complete image of business life. The processes are much fasters and the interaction between clients and partners generates in an automatical way other exchanges of informations that cand be used in business strategies and decisiones in the future.

Allowing new and much faster methods to enter and coordonate our lifes such as: mobiles, satelite TV, internet, fax.....are only a few instruments or weapons that coordinates everybodys life and every single day.

References

1. *Peter F. Drucker, Managementul viitorului, Editura ASAB, Bucuresti, 2004 ;*
2. *Drugus Liviu, Curs de managementul informatiei, Bucuresti, 2005 ;*
3. *Muchielli Alex, Arta de a comunica, Editura Polirom, Iasi, 2005;*
4. *D. Popescu, Arta de a comunica, Editura Economica, Bucuresti, 1999*
5. *Runcon Miruna, Introduction in ethics and legislation of press, p 186;*
6. *N. Stanton, Comunicarea, Editura Societatea stiinta si Tehnica, Bucuresti, 1995.*
7. *Zamfir Catalin, O analiza critica a tranzitiei, Editura Polirom, Iasi, 2004.*
8. *http://www.users.globalnet.co.uk/*
9. *www.kappa.ro/idgro/cworld*
10. *www.chronicle.com*
11. *www.aber.ac.uk/media/Documents*
12. *www.openseti.org/Progress.*
13. *www.reason.com/news*
14. *www.unhchr.ch/html/menu*