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Buzzwords and indicators about the networked society: metaphor, vacuity or fraud?

Abstract:

Even though the notion of an information revolution is quite old, recent years have witnessed a proliferation of expressions and measures that tend to depict a radically "new" situation. This reflects in part genuine attempts at describing, explaining and popularizing phenomena that are themselves all but understood. Behind the scene, one may detect less commendable attempts at transforming ignorance into universal evidence or vested commercial interests into millenarian visions. Thus an urgent need of recovering the true sense of the words.

Agenda

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"Quo usque tandem Ca**TIC**lina abutere patientia nostra". Cicero – by proxy[i]

In most Latin languages TIC is the acronym for Information and Communication Technologies, ICT. With this forged quote we intend to set the tone for this paper. It does not pretend to be anything but an outcry. Breaking away from the advertising rhetoric that shapes contemporary discourses about the new society supposedly brought by the advent of ICT, should be regarded, in our opinion, as a basic requirement for information ethics to become a lived reality rather than remain a subject of scholarly enquiry.

One more revolution ?

The representation of humankind history relies more often than not upon milestones that are generally called "revolution". This word may in fact be a hidden tribute to the intrinsically conservative nature of human beings, through the implicit reference to celestial revolutions which bring the planets back to the very same post they originally occupied. The revolution that precede the one we are supposed to experience was the industrial revolution which is presented as follows (The Columbia Encyclopaedia, Sixth Edition. 2001):

> *"Dramatic changes in the social and economic structure took place as inventions and technological innovations created the factory system of large-scale machine production and greater economic specialization, and as the laboring population, formerly employed predominantly in agriculture (in which production had also increased as a result of technological improvements), increasingly gathered in great urban factory centers".*

Post-you-name-it

If there is obviously a noticeable wave of technological innovation, the dramatic changes in the social and economic structure are yet to be seen. The shift toward the service sector, though observed in both developed and developing economies[ii], may need further investigation. On the one hand the value created or social usefulness of many "service" activities are questionable signs of "progress" (e.g. more "security" businesses and employment due to growing insecurity generated by growing inequalities and urban concentration). On the other hand, especially in the case of "global" corporations, the reduction of blue collar employment in advanced countries, where the former have their headquarters, and are therefore included in the respective national accounts, reflects more the delocalization of production in emerging countries with cheaper labour. A phenomenon that was already witnessed in the European textile industry in the 19th century. At a time national boundaries are continuously loosing their reality in the structure and operation of companies, national accounting principles might need a radical revision. Before they lead to report that 50% of the world's wealth is produced in half a dozen countries whose workforce consist of a handsome CEO's and their aides. Bell's coming of post-industrial society may be no more than a venture in optical illusion (Bell 1973).

The illusion is even greater when workers in the services sector, especially those in clerical roles are promoted "knowledge workers" for the one and only reason that they take part in the information cycle, would it be with a large proportion of typos and mis-filings. The post-modern version of my old master's say that "Everything is in everything and conversely" might now sound "Nothing is in everything and conversely". One may at least suspect this is happening when hearing Peter Drucker (Drucker, 1994) say:

> *"Some knowledge work requires a fairly limited amount of knowledge examples are some paramedical technologists, the X-ray technologist, the technologist in the clinical laboratory, or the pulmonary technologist."*

This fairly limited amount of knowledge might indeed be far outweighed by the vast quantity of knowledge of any traditional healer in the Amazon communities. Projecting speculation at this level is only equalled by Pollock's art.

Thinking the new anew

A key feature of a revolution is that what comes after is radically different from what existed before, thus is completely "new". The cult of newness has apparently taken over any concern for the truth that was once meant to be an attribute of information. But this was before communication, read advertising, age and its associate "creativity", read art of manipulation. In contemporary advanced societies, most products are "new" every year, at least in their package or name.

Concern for the importance of information, at that time the scientific and technical one, in the

transformation of society, and the need to manage it, can be traced back in the Mediterranean world, at least to 1895 with the establishment of the "Institut International de Bibliographie" (international bibliographic institute) by Paul Otlet and Henri La Fontaine, if not to the first Alexandria library. Around the middle of the XXth century the proliferation of scientific information gave rise to the concept of an information explosion. The latter might however have been mostly the effect of a demographic explosion in the ranks of scientists, academics and engineers. As a matter of fact Alexander Mikhailov and co-workers (Mikhailov et al., 1969, p. 8) noted:

> *"Thus it appears that the basic external characteristic of what is now know as the "information explosion", namely a rapid quantitative growth of scientific, technical and other literature, was already manifest 2000 years ago."*

The only newness rest thus with the ICT. A group denomination that, thanks to the convergence of digital media, includes not so recent technologies as fixed telephone, photography, radio and television. And a set of technologies that rely upon quite old techniques of expression, especially language, script and writing. Given the time frame required for significant social transformations, on the one hand, and the fast pace of evolution of the digital technologies, on the other hand, it may well be that they would have disappeared – at least in the form we know them today - long before a radically new world has taken shape. Without mentioning the ICT dependence upon electricity, and the uncertain prospects for energy supply in the coming century.

A dog or a Gamma plus [iii]?

What is intriguing in most political discourses about the "new" era, and even more in the indicators supposed to represent it, is the absence of the human being as an independent and self determined entity. As if the modern human being was entirely conditioned and depicted by its use of ICT. Gender, age, literacy, education, profession, etc. come in the picture only as predictors and determinants of ICT use. While the media change, it is always people that express themselves and communicate within the different groups and according to the different rituals and modes that are appropriate, as Colin Cherry emphasised long ago (Cherry, 1971, p. 5).

One can find a number of striking new forms of communication as a result of the use of present ICT, for instance the altered language used in SMS. But communication by fax had also its particular rules. Both have disappeared but same people are still there. The notion that modern human beings would be quite different from their predecessors is a somewhat abusive interpretation of evolution. Especially when one takes into account the time frame. Compared to the years that separate homo erectus from homo faber, the distance between the 1866 users of the telegraph and the contemporary hackers is indeed insignificant. Yet is over these millions of years that human intellectual and communication abilities have been developed. "Pre-historic" patterns are still quite apparent in our behaviour (Menou, 1966, p. 43).

As long as the cyberworld will remain populated by the kind of human beings we know today, living their real lives in the kind of society we know today, the much heralded radical transformation will remain hardly perceptible. When most social interactions will be mediated through "intelligent machines", that won't presumably be called computer networks anymore, according to centrally prescribed protocols, thanks to nanotechnology devices implanted in the body of human beings that have been genetically "enhanced", the situation will be different and totally new, except for the readers of Aldous Huxley.

X-Soc

Does the name of the thing makes a difference ? It is not less intriguing to observe the semantic variations around the possible name for the present, or supposed, time, age, era, in which we have the privilege of living. The hesitations regarding the appropriate name for the time portion reflects the hesitation about the very nature of the transformation. Is it a transformation of the industrial society, that otherwise continues, or is it a new socio-economic structure, thus a new age. As for the preceding ages, only historians will be able to make an informed decision in a still remote future.

If you can't name it ...

Some decades ago the choice for the contenders of a new age was between an information or a communication age. The focus on ICT has sort of indirectly evacuated the problem by putting emphasis upon the technologies that support both. At the same time this permitted to forget about the complex relationship between information and

communication and their social, economic and cultural roots. Perhaps because of the vexing ambiguity of such a designation, and more likely because of the higher attractiveness of other expressions, we have seen flourishing a number of other words, such as knowledge, learning, networked, intelligent, smart, cyber, etc. supposed to indicate what is the main characteristic of our times, their ultimate principle and goal. As if any society had ever wanted to be known as the stupid society. As if information and communication were not the very basis of any society, or even more generally of living organisations.

A name for the place

The same semantic confusion noted about time can be observed about space. It is sometimes implicitly assumed under the generic expression of society. What perpetuates the abusive alignment of all societies on the planet, and all segments of these societies on the most "advanced" ones. Even though a significant proportion of people on this planet have yet to be connected to telecommunication and power networks[iv]. When the traditional words of country or nation are qualified on the basis of the respective Gross National Product level one may fear that a number of socio-cultural realities have become negligible. The situation is even clearer from this stand point when these expressions are substituted by the word economies. The latter being probably the politically correct form, so far, for market.

The poesy of autopoiesis

A further step in dematerialization is reached with such expressions as networked economies, cyberspace, virtual world or simply The internet. Here we are finally freed from old-fashioned constraints such as geography, transportation economics, language, class differences, social inequities or other contingencies. The world that counts is made of the connected ones who all speak ASCII and do cool things on the net. As Geoffrey Kirkman and Jeffrey Sachs (2001) put it:

> *"Many of the world's poorest countries are poor in part because they are isolated – cut off by mountain ranges, desolate land barriers, country borders with neighbours – and thus outside the global flows of goods, finance and ideas. But with the new information and communication technologies, the historical barriers of geographic isolation and distance from markets are no longer as daunting."*

At this stage a new world is thus idealised as an autopoietic organization[v] as it pleases its promoters. More than facts and their analyses, all is a matter of belief, as Kirkman and Sachs (ibid) said:

> *"There can no longer be any doubt about the importance of every economy plugging into global information and communication networks."*

Experiencing the way ICT are used in the many services of which each of us has the privilege to be a happy customer, one may however become a bit circumspect regarding the rising effectiveness of ICT based business processes. A recent study of ICT use by NGO's in Ecuador (Borja 2004) showed that 78% of them use computers daily, 19% of them have all their machines connected to the Internet and 31% connected to a local area network. In all countries most small businesses which are the bulk of the productive sector still make a limited use of ICT. A study of small enterprises in Tanzania (Mungunasi, 2000) found that 23%, 12% and 67% of Manufacturing, Services and Tourism SMEs respectively declared regular use of access to the Internet and 16%, 12% and 23% respectively regular use of spreadsheet analysis. This should lead to reconsider even the more cautious expressions such as "information intensive" (e.g. Moore and Steele, 1991) or "IT based economy" (e.g. Miles, 1988), or even "new economy" (Statistical Office of the European Communities, 2000) at least from a world-wide perspective.

Penetrating happiness

Since the appearance of the first measures and models of the "information society" in the early sixties e.g. by Fritz Machlup (Machlup 1962), literature on the subject has steadily grown. However the variety of theoretical backgrounds, special scopes and concerns make any attempt at a classification somewhat vain. If one considers the more recent wave of studies, three subsets might be distinguished among the documents in the public domain: subject specific studies, e.g. E-commerce or E-Government, descriptive studies and data collections, such as those of the International Telecommunications Union, and E-Readiness studies that pretend to offer a comprehensive review of a country's preparedness to the global networked economy.

What is measured ?

The scope of the measures deemed necessary, not only for Governments, is quite well presented in the report of a recent UN meeting (UNECE, 2004, p. 7):

> *40. In order to support their policies, Governments need indicators enabling them to assess the extent to which their countries are prepared to implement the new technologies (ereadiness), to observe the progress of implementation (e-intensity) and to measure the impact (e-impact) of their development on the course of business and on the population.*

In other words the penetration of ICT is clearly the focus. The assumptions behind this perspective being that:

a) ICT use brings progress, in particular economic growth; and

b) The positive effects of use far outweigh the negative ones (it the latter are at all considered).

Of course a number of side considerations are eventually added, such as the infrastructure and social environment. But the supporting evidence is basically a tautology. The richest country being the more active users of ICT, more use of the latter is going to bring a country closer to richness. However the same could have been said for any other technological development. For instance the more cars the richer. The more typewriters, the richer. The more pencils, the richer. Where does the actual knowledge creation come into the picture. Yes, the more scientific literature output, the richer. And conversely. What are witnessed are two side of the same coin, the effects of the accumulation. Accumulation by whom at the expenses of whom? Anything new on this front?

Whose race is that one?

More often than not the figures that are supposed to depict any of the above mentioned situations are presented in the form of country rankings. Like headlines for the evenig news on the FOXiest channel, the good news are who won the race, who is in the top league, how many ranks were gained since last report and these sorts of things. The answer may be inferred from the many statements regarding ICT and "competition". In the above mentioned report (UNECE, 2004, p. 7) one finds for instance the following statement which replicates innumerous instances of similar narratives:

> *38. All countries are concerned by the new technologies. They create new conditions of competition in numerous markets. They provide high-impact access possibilities for consumers and the public.*

This puts an useful counterpoint to the repeated affirmation that what is indeed at stake is "the people", as reassured in the first point of "Our common vision of the information society" in the Declaration of principles of the World Summit of the Information Society (2003). Or is it "homo economicus"? According to a KPMG report (KPMG 2000):

> *"The general view is that* e*ICT*[vi] *has the* potential *to benefit developing countries. It can be seen as moving the world economy closer to an economic ideal of perfect competition. This is a result of reduced costs, increased competition and an improved price mechanism. In this sense* e*ICT can be viewed as reinforcing the process of globalisation which, in neo-classical free market theory, should increase overall welfare."*

Thus, in fact, what we are told about is how deep, far and fast ICT is penetrating the various countries. What led us to call these forms of tachometric analyses "TachICTometrics" (Menou, 2001, p. 1). If there is one area where the benefits of ICT deployment can be quickly cashed, it seems that is in employment, according to a recent declaration of the U.K. Chancellor (Morgan, 2004):

> *"It is precisely because the public sector has invested £6bn in new technology, modernising our ability to provide back-office and transactional services, that I can announce, with the detailed plans departments are publishing for the years to 2008, a gross reduction in civil service posts of 84,150 to release resources from administration to invest in the front line," said Brown, unveiling his spending plans for the next three years."*

Extase-stistics

What is astonishing at a time all socio-economic phenomena are considered under the prism of "globalization", on the one hand, while the many discrepancies, if not divides, within and among

countries are widely acknowledged, on the other hand, is the persistance of the country as a basis for data collection and analysis. What implies that one country equals one country, therefore Belize and Brazil are the same thing.

Are we all equal ?

We are therefore told that there are x Internet users per 100 habitants in a particular country. The notion of Internet user is quite vague but this is not the major bias. When it comes to using the Internet 100 inhabitants of a country are not equal to 100 inhabitants of any other country even in the seme region or income group. Many other factors are at play in delineating the size of the subset of potential users. To name a few: age and gender distribution, income level, literacy, availability of power and telephone, cost of access, etc.. Likewise some physical characteristics may make it far more cumbersome and expensive to install and maintain appropriate infrastructures in countries that are huge, with low population density in vast areas, with high mountains, deserts or rain forests, with exposure to natural risks, etc. Not to mention a number of socio-cultural constraints that may initially exclude some groups from the use of ICT. In this respect Maria Edith Arce and Cornelio Hopmann (2002) throw many useful considerations in their study of E-Readiness of Nicaragua. Until the relevant variations are accounted for in defining the basic unit of measurement that is the "country", the data that are presented will continue to be an abstraction.

Growth mistakes

Since the early analyses of the information economy, calls have persistently been made for the statistical categories and data elements to be adjusted to the new conditions and special characteristics of information activities and intangible goods. A number of attempts have been made, with limited results, and efforts are currently underway[vii].

The key issues may however lie elsewhere. In first place even though lip service is paid to ICT contribution to people's happiness, the bottom line remain with their contribution to economic growth. Most data related to ICT diffusion are in fact highly correlated to income levels, and correlated between them. As Ilkka Tuomi puts it nicely (Tuomi, 2004):

> *"If we argue that the growth accounting studies reveal something essential about the impacts of ICTs, the justification has be based on some intuitive knowledge about the expected research results, which enables us to decide that the errors made in growth accounting studies do not really matter in practice."*

The alleged disappearance of ideology in the contemporary societies may in reality be the smokescreen behind which the universal church of liberalism is pushing its faith. Those who may object to the word "faith" in this context may wish to observe the both the language of the present Lords of the universe and their resistance to the doubts cast upon the validity of the dogma. An interesting point in case is intellectual property rights whose effect on innovation is discussed in a recent article by Stuart Macdonald who reminds that in the pharmaceutical industry, research and development costs are estimated at 12% of revenues, administrative and marketing costs at 30% (Macdonald 2004).

With a minimum of common sense, one may in fact begin by questioning the sanity of the dominant Weltanschauung which calls for endless economic growth in a world whose main resources are not renewable. What indeed should be looked for is ways to secure an overall zero growth or even a sustainable de-growth, within a process of redistribution from those who have too much to those who have don't have even the most essential. Even when such views are presented through an articulate scientific discourse as is the case with the works of Nicholas Georgescu-Roegen (1995) they surprisingly do not permeate much of the policy and opinion making spheres.

Smart cloudsters

Knowing who is crunching the numbers may bring some light into the process of representing the information society.

Data sources

Because of the newness and dynamic nature of ICT and their reflection in economy and society, a good deal of the data are not part of the established statistical collections. It is thus natural to seek alternative sources. Many industry organizations, marketing and consulting firms are currently collecting such data. In doing so they may be more interested in cros-checking their views than discovering the reality. Even if there is some legitimacy in such a process, within certain limits,

the situation becomes a bit embarassing when such data are mixed with official ones and published by statistical offices. They thus appear to the inattentive reader as having the same neutrality and rigour, as the other productions of the issuing office have, in principle.

Another vexing problem arises with the otherwise useful qualitative data with regard to both their sources and the combination of such soft data with hard data. It may be legitimate for instance to account for the business friendliness of the policies of government that were put in place as a result of democratic (in principle) votes. However when these data are the opinion of a panel of CEO from multinational companies, one may have some doubts about their objectivity. Especially when no complementary opinion is sought from leaders of civil society organizations. The number of legislation passed to soften rules applied to businesses and the size of public direct and indirect subventions might anyhow help consolidate the picture. The "Executive opinion Survey" regularly conducted by the World Economic Forum plays not only a key role in the Global Competitiveness Index, as explained below, but also in the Networked Readiness Index of the Global Information Technology Report (World Economic Forum, 2004 a & b):

> *« Indeed, one of the fundamental objectives of the* Global Competitiveness Report *is to evaluate the potential for the world's economies to attain sustained economic growth over the medium and long term. With this goal in mind, the World Economic Forum developed the GCI. The index is based on economists' understanding of the determinants of the complex process of economic growth and development. Again, our understanding is far from perfect. In fact, we learn new things every year as new development experiences teach us new lessons and as new data become available. But our existing knowledge can be used to evaluate the growth potential of a country by combining available data and the Executive Opinion Survey conducted annually by the WEF into an index that we call the GCI. »*

The volatility of such kind of data led other analysts to exclude them, as in the ITU Digital Access index, whose presentation (ITU, 2003) mentioned:

> *"It deliberately omits variables subject to qualitative judgment such as the regulatory environment. "Market structure and degree of competition are open to levels of interpretation," explains Minges. "We purposely exclude qualitative factors - to avoid subjective bias in the calculation."*

Self service

As a matter of fact it is interesting to note the smooth migration of the Global Information Technology Report. It started as the production of a prominent academic entity, the Center for International Development of Harvard University, with collaboration from the World Economic Forum. The following year it had become a publication of the latter with academic contribution from a major business school, INSEAD, and the World Bank Infodev program. This institutional evolution may be the reason why the first issue is priced 23% more than the following one, in spite of the obsolescence of ist contents. One can see in this case an interesting application of the concept of smart clusters, strategic alliances, public-private partnerships and other wonders of post-modern governance. Except that, like for the place of their wives in the biography of great men in history, civil society is once again forgotten.

Any organization has the right to defend its interests and present its views. What is troubling in present virtuous circles is that one has the greatest difficulty understanding who is who, who speaks for whom or what, and more importantly who at the end of the day has the legitimate authority to authentify the basis upon which decisions are going to be made.

Draw me a sheep

Where thus is the Little Prince who will bring us back to reality and at the same time unleash our true dreams? Whether or not it is an "information society", today's society is sure not a wisdom society, nor a society in which there is a clear, and effective, boundary between information and propaganda.

It seems quite obvious that ICT like any other technology can bring positive effects upon the welfare of human beings. It may as well be far too early for us to be able to articulate what the pros and cons might be, especially because of the concentration of ICT use among the happy few on the planet. Nevertheless we would be well inspired to return to Jacques Ellul's warnings (Ellul, 1964):

> *"In our cities there is no more day or night or heat or cold. But there is overpopulation, thraldom to press and television, total absence*

> *of purpose. All men are constrained by means external to them to ends equally external. The further the technical mechanism develops which allows us to escape natural necessity, the more we are subjected to artificial technical necessities. . . The artificial necessity of technique is not less harsh and implacable for being much less obviously menacing than natural necessity."*

The above mention of the media is opportune. We heard a lot of pleas for the educational promises of television. We are now hearing the same kind of discourse about the economic, social and cultural promises of ICT. The latter will nevertheless operate within a world in which as Stuart Macdonald (ibid, 2004) says:

> *"The drivers of a modern economy are public relations, advertising and the media: presentation and spin are crucial."*

In this respect a quote from the President of the major TV channel in France, which won the competition for the privatisation of the earlier public channel on the justification that their offer was the best from a cultural stand point, might be appropriate. Mr. Le Lay, President of TF1 said (Libération 2004):

> *"The job of TF1 is to help Coca-Cola, for instance, to sell its product. .../... For a TV commercial to be received, the brain of the TV watcher should be receptive. Our programs have as a vocation to make it available: that is to say to entertain, to relax, to prepare it between two messages. What we sell to Coca-Cola is time of this receptive human brain."*

The same brain will make use of ICT. No need for further comment. "Ite missa est"

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[i] Freely adapted from the famous « Quo usque tandem abutere, Catilina, patientia nostra? » Oratio in Catilinam Prima In Senatu Habita. http://www.utexas.edu/depts/classics/documents/cat1.html . Retrieved July 14, 2004

[ii] We use these expressions for lack of better ones and on the assumtion that they are somehow understood by all in spite of their inappropriateness.

[iii] Combining here the famous say «On the Internet no one knows you are a dog » and one of the demographic groups in Huxley's Brave new world.

[iv] In 2001, Low income countries had an electricity consumption of 317 KWh per head against 8,688 for OECD countries in 2000; Low income countries had 32 telephone connections (fixed or mobile) per 1000 inhabitants against 1,116 in OECD countries (same years).

[v] « an autopoietic organization constitutes a closed domain of relations specified only with respect to the autopoietic organization that these relations constitute, and thus it defines a space in which it can be realized as a concrete system, a space whose dimensions are the relations of production of the components that realize it. (Maturana and Varela, 1979) ». Web Dictionary of Cybernetics and Systems, Retrieved July 25, 2004, http://pespmc1.vub.ac.be/ASC/AUTOPO_SPACE.html

[vi] "new economy ICT developments and in particular the internet (*e*ICT)" (KPMG 2000, p. 4).

[vii] e.g. the STILE (STatistics and Indicators on the Labour Market in the E-economy) project http://www.stile.be, or the Partnership on Measuring ICT for Development set up in 2004 by ITU, OECD, UNCTAD, UNESCO Institute for Statistics and UN Regional Commissions (ECA, ECLAC, ESCAP, ESCWA).