Cooperation, Cohesion, Competition: where do Information and Communication Technologies stand?

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1. Introduction

The amazing innovation that Information and Communication Technologies (ICT) have undergone continuously over the last twenty to thirty years rank them uniquely among the factors that contribute to winning the race for competition that characterized the end of last century and the first years of the third millennium.

ICT became increasingly present in all aspects of modern life, bringing about impressive changes as they provided speedy and trustful communication among people, organizations and societies, supporting the fast pace of living and contributing as never before to conquer distances and bring people together.

Nevertheless, and contrary to such positive impacts, technological evolution is perhaps the largest contributor to a global partition between rich and deprived societies. Because it has produced a digital division between people, leaving behind all who do not cope with the rhythm and demands of a fast moving society, based on information and knowledge as the main driving forces of sustainable economies.

How ICT **can** help close the gap that it itself has created and continuously enlarges is something modern societies have to think of, in order to build a more egalitarian society in the future.

2. The digital divide

It is a matter of no arguable discussion that ICT have been a fundamental driving force in the recent years' evolution of the most competitive societies and organizations. Recent advances in the so called Information Society, the steady and definitive path towards the Knowledge Society, the ever growing dimension of the Internet and everything it represents and provides,

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have contributed to an increasing velocity of changes in the way we live, work and relate to each other. In European terms, the “Lisbon Strategy“ has supported ideas, projects and funds concerning the pursuing of these high aims, with the clearly established purpose of turning Europe the most competitive economy of the world, built upon knowledge, information and supported by the widespread use of Information and Communication Technologies.

These achievements unfortunately hide another face of the coin: whoever stopped or advanced at a smaller speed, throughout these recent years, is now much far behind than when this revolution started. Regretfully, the knowledge society being built does not allow its front-runners to stop, look aside and pull those that were getting a little late. This is a marathon, where only the first seem to have the right to win the prize.

The modern society is facing a paradox: the technology that enables and drives innovation, growth and welfare, the very same technology that, when available and used, supports global and permanent communication and collaboration, allowing for information to disseminate, is leaving so many behind, either in the poorer countries, outside the group of the privileged few, but also inside this very small group of innovative societies. The digital division is a fact, whether we are talking of under developed countries, or inside the club of the richest. The other side of this paradox relates to the simple observation that information and communication technologies themselves provide all that’s necessary to not leave the outsiders behind: it allows for knowledge dissemination and widespread information access that would, if adequately achieved, eliminate the digital division and promote global cohesion.

In fact, an adequate level of access and a sufficient ease of use of these technologies would solve most of the problems modern societies are facing.

3. The challenges

If this is true, what are the major problems that have to be faced? There are in fact several flavours of problems, but essentially they can be related to **two** different aspects of the same problem: the need to invest in training and to provide for broader technology access.

3.1. Training

One of the biggest challenges to deal with, if we really want to solve the problem of digital division, is the need to train people, to bring those apart from technology and knowledge to the field where the game is played. There is a huge need to train people, teach them the very basics of how to use the technology, the language of nowadays communication paradigms. The greatest challenge, however, lies in the fact that, if we want to reach all those that need training, technology itself provides the best means to do it. How so, if this is true, can we expect to ever solve the problem? How can we use ICT to teach those that were left apart and behind the technological, cultural and societal revolution that prevails in these days? What exactly should be taught, if most of the competence relies in the adequate use of what technology provides than in the technology itself? What new or modified methods should we bring into play, so that everyone, even the most unaware, can become a part of this new global social order and take her/his share of the welfare that technological evolution provides? In fact, if they are aside from this reality, the problem lies even lower than this: how to reach them?

3.2. Technology access

The digital division is very tightly connected to the existence of different levels of technological dissemination between populated cities and unpopulated rural country: networking, whether standard or wi-fi based, as well as broadband covering, are not similarly available in both these kinds of regions.

This is an important part of the global problem, as it contributes to increase the difficulty to establish a starting basis to construct the more equal society knowledge should account for. In fact, those that need grater support and training in the use of technology are those that do not have an easy access to it. In this vicious circle, the mill doesn’t stop, and only political and strategic decisions can assist the will of those that are sincerely worried with the fact that modern society excludes from it large amounts of people that, by some reason, not necessarily of their own responsibility, have been kept aside from social evolution and comfort.

4. The values of the technology

Contrary to this adverse scenario, Information and Communication Technologies undoubtedly contain the attributes and appeal that makes them the most interesting means to achieve a

global cohesiveness and equality, providing an amazing medium and opportunity to contribute to a more equal society, as far as knowledge and information can support it.
ICT have contributed to eliminate cultural and language barriers, they possess an irresistible youth appeal, allowing to grow in youngsters, from very small ages, a taste of innovation and its challenges, the consciousness of a global world, breaking physical distances and contributing to a new sense of belonging and sharing.

Cooperation is a fact among those that grew surrounded by technology. Competition among them is a must, supported by strong, even if virtual, relations built around innovative perspectives of social communities, where each one will challenge all others, at the same time competing and collaborating, giving all others the trump cards and the game tricks, so that the game itself becomes more defiant, in a permanent circle of recognition (competition to victory) and challenged evolution, towards the growth of some sense of community (cooperation to cohesion).

This can become the basic paradigm for a large community of nowadays info-excluded, urging us to devise a strategy to bring them to the family of info-sapiens, allowing for their full integration into the knowledge society: the use of the technology as a platform to put people in a cooperative environment, where competition comes as a means to develop individual skills and competences, in a positive way, to achieve cohesion among all participants as a final goal.

5. Conclusion

We must state this as a collective goal, and consequently we need to devise ways to eliminate the digital divide, promoting global information access to achieve sustainable information and knowledge dissemination.

The key values of such a strategy can be recalled:

- Cooperation: **A**ny global (we can even talk of European-wide) strategy towards a non-exclusion knowledge society needs to be based upon the cooperation among richer and less evolved countries. It must join together the Universities and enterprises, both public and private, through valuable partnerships, which will provide all the necessary efforts to be furnished to raise collective and individual values;

- Cohesion: **T**he objectives of such a strategy must be well defined and understood, politically supported and widely accepted, at the various levels of society, if one is to stay in course of action for the long time required to achieve such impressive aims. Thus, cohesiveness is the key to reach further and establish the grounds for a stable growth, leaving none behind;
- Competition: **S**imple facts about modern economics constantly demonstrate the need for societies to continuously evolve, in order to provide their members consistent levels of well-being. In the global technologically supported world we live in, success is reserved for the fittest. Competition for resources is a base rule of the game and societies must focus on education for competition, requiring a probably huge effort to enhance the average level of technological acquaintance.

Information and communication technologies provide the tools to recover lost time, allowing us to skip phases and getting us faster to the objectives here established. Distant learning or telework are two of the newer realities that technology introduced. They have to be taken into account for future developments of the way we treat training and people's ability to contribute to the richness of their societies as well as their own.

Many steps must yet be taken and much effort needs to be sustained, but fundamental in this strategy is the fact that technological development by itself **cannot** be the goal. If societies want to evolve, their core resources remain their people, and whatever efforts are pursued, one should **bear** in mind some simple truths: every person left aside is a loss, each person recovered is a win. No matter how or what technologies are used to help build it, the knowledge society is a people's one. Technology should be looked **on** as the vehicle, not the driver.