(NEO) Geography before the Challenges of the Information Society, Cultural and Educational Impact. Perspectives for the Future

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Abstract:

The information society associated with the massification of new technologies is provoking a social change that is considered revolutionary by numerous scholars and researchers from different disciplines of the Social Sciences. Such a revolution would already be affecting all aspects of human activity, from politics to economy through to culture, social relationships, leisure time, or education. Geography, as a social science, is not left out of this new situation. Rather it is deeply influenced by the so-called Information and Communication Technologies (ICTs), not only in its methodology and work techniques but also in relation to the new epistemological and sociological questions that the new information society entails. From this last point of view mainly Social Geography faces the new challenge that now is happening at least in part in a new place, the cyberspace or virtual space.

Keywords: Information Society; Social Geography; Neogeography; Digital Divide; Cyberxclusion.

1. Introduction

Some recents terms in Social Sciences such as "the end of Geography" or " the death of distance", opposed to others as "the revenge of distance" or "the return of Geography", draw attention to an intriguing question: the effect of the information society on Geography.

The so-called Information Society is based on a whole series of technological, social and cultural transformations that have their origin in Information and Communication Technologies (ICTs) - informatics, telecommunications and microelectronics - and are provoking deep changes in our economic, social and cultural landscape to the point that many authors speak of a new stage of the capitalist economy (VILLANUEVA, 2005: 86).

In fact, this phenomenon is the last phase of what historians have called the Third Industrial Revolution, Scientific-Technical Revolution or Revolution of Knowledge (CHAVARRÍA, 1990). Preceded by the first and second industrial revolution based on coal and electricity respectively, it began after the end of the Second World War. The areas of knowledge supporting this revolution were nuclear energy, space research, telecommunications, robotics, genetic engineering and computer science. Undoubtedly it can be said that the advances obtained in some or all of the above disciplines have changed the world and have made it different from what mankind had known so far. It is enough to think on the transgenic products and the stem cell research in the field of biotechnology, or in space missions, manned or not, in the field of space research, to certify that the perception of the world of people born after the Second World War is so different from previous generations as to justify the epithet of "revolution" for this new era. A different matter is whether the consequences of these changes, as in the two previous revolutions, have spread throughout the world in a homogeneous way, their impact has been the same for all humanity, the access to new resources equitable or its disadvantages assumed by all in a fair and balanced manner.

2. Is Information and Communication Technologies a Revolution?

Of all the fields and disciplines that make up this new process of social change in the last decades one of them stands out from the others in terms of its social impact, not so much because of its greater advances or its greater relevance with respect to others as by a wider accessibility to their use by the public. We refer to what is already widely known as ICTs. By Information and Communication Technologies we mean "those computer and computer tools that process, synthesize, retrieve and present information represented in the most varied forms. It is a set of tools, supports and channels for the treatment and access to information, to form, record, store and disseminate digitized content "(DÍAZ, 2013: 42).

Its popularity derives from the easy access to them by broad strata of the population thanks to its low cost in relation to other of the aforementioned areas of investigation. While only the privileged can visit outer space or only a small group of specialists handle genes in the laboratory, new technologies derived from the use of ICTs and their different devices are increasingly used by millions of users.

But the popularity or massification of a particular phenomenon does not justify its revolutionary character. The use of new technologies by increasingly numerous sectors of the population only speaks of their massification but it does not allow us to attribute the potential to transform and renew social structures, to be the engine of change. It is necessary, therefore, to answer the question of whether this phenomenon really means a revolution, to what extent we are facing a qualitative historical leap and whether these technologies are the decisive factor of the same - although not the only one - as seems to certify the generalization and popularity of terms as "ICT revolution" or "digital revolution" (SALVAT, 2011).

It seems to be some unanimity in recognizing the technologies that are the subject of our analysis as capable of generating enough cultural, social and economic changes to be considered revolutionary. For this author there is a certain interdisciplinary consensus in the field of Social Sciences in relation to the fact that during the last part of the Twentieth Century the foundations of a new type of society were laid on new way to get knowledge, which has its material basis in a technological revolution (TORRENT *et* SELLENS, 2002).

It is interesting to emphasize that we are facing a technological change and, as in previous historical processes, has inevitable economic, social, political and cultural consequences.

2.1 Cultural and Educational Impact

In the present article the focus is on the latter, trying to analyze the role that new technologies are already playing in the process of acquiring culture in the individuals, to later offer some of the keys that allow this process from a geographical perspective.

To the extent that culture is knowledge and ICTs are increasingly applied to it is questionable whether there is any possibility of articulating the new technologies in a specific body of knowledge adapted to a new cognitive model, or if the process of reproduction of this knowledge can be carried out with methods that we have already used with previous technologies. In other words, can new technologies bring us new methods of apprehending reality?

For many authors ICTs have changed the primary support of knowledge which in turn would radically change the ways of knowing and thinking. The access to information and the generation of knowledge takes place now through what is known as metalanguage. Also the content of the information is articulated now in the so-called hyperdocuments, which present three fundamental characteristics with influence on human cognition: multimedia information, a high degree of interactivity and a nonlinear structure (V Congreso Iberamericano de Cultura, 2013). What will be the effect on the brain structure and human thought are still unanswered questions. These doubts in turn raise new questions about the development of forms of brain-computer hybrid knowledge. Along with these hopeful visions there are also shadows to emphasize: poorly used new technologies can hinder access to knowledge. Thus for some authors the influence of audiovisual languages produces what has been called "the culture of moving image", which leads to perverse effects such as information overload and / or pseudo information. This results in the decrease and dispersion of attention, a "mosaic" culture, without depth, lack of structuring, superficiality, standardization of messages, and information conceived just as a spectacle (ADELL, 1997).

Reflection on these issues is important specially if we consider the use of new technologies in the processes of teaching and learning as the main method of cultural dissemination, because correctly employed they may be a window to show the world from the classroom, real or virtual, an element rich in information that is necessary to learn to critically appraise. Traditional teaching had as its fundamental objective the acquisition of knowledge; based on the processes of memorization teaching was taught collectively through a process in which the teacher acted as the emitter of knowledge and the student as the receiver. This type of teaching follows a traditional method for acquiring knowledge. In contrast, in the information society the fundamental objective of education is to provide the student with the tools to be able to build their own knowledge from the one previously acquired through the experience and learning.

This methodological disparity immediately raises the interesting question of the difference between information and knowledge. The mere availability of information does not guarantee the acquisition of knowledge. It is necessary that the student supported and guided by the teacher is able to "learn to learn", this mean access to information, understand it, highlight fundamental ideas, structure them, and develope a critical view on the matter. The student becomes the center of the learning process, is the one that builds the knowledge through the support and guidance of the teacher. In this context the use of learning environments and methodologies that allow students to learn and turn information into knowledge is of great importance. ICTs are appropriate elements for the creation of these environments by teachers, supporting constructive and collaborative learning (RENÉE, 2006). They also present other advantages compared to the resources used in traditional teaching. Most of them are directly related to the intrinsic characteristics of the ICTs and among them it is possible to emphasize:

- Varied information. It is possible to collect a great amount of information on different areas. This allows the student to perform an analysis of this information that allows him to assess its quality and credibility.
- Instructional flexibility. The learning process may be different depending on the student, being adapted to the different needs that appear in the classroom.
- Complementarity of codes. Multimedia applications which use various communication codes allow students with different skills and cognitive abilities to make better use of the learning they perform (VILLANUEVA, 2010).
- Increased motivation. Several studies show that students are more motivated when using ICTs. This may be an effect of novelty, partly because of the greater attractiveness of multimedia presentations over traditional ones, but also because of a greater degree of student involvement in their learning process.
- Collaborative learning. The proper use of ICTs in work teams can enhance collaborative and cooperative activities among students as well as collaboration with other centers or institutions via online.
- Educational innovation. The new society uses new technologies that favor new methodologies. Although it is not a cause-and-effect relationship it is clear that teachers who are aware of new technologies tend to look for new ways of teaching and new didactic methodologies, more appropriate to the current society and the knowledge and skills that students must develop for their adaptation for the adult world (BOZU *et* CANTO, 2009).

Alongside these undoubted benefits the use of ICTs for educational purposes faces possible risks that influence negatively the acquisition of knowledge.These include:

- Pseudoinformation. Being able to access a large amount of information does not mean being better informed or trained. It is necessary therefore to provide the student with tools that allow him to discriminate the relevant information from which is not, as well as to distinguish the information with tendentious or manipulative purposes.
- Information overload. Internet offers the possibility of obtaining a lot of information in a short space of time so it is possible that the student does not have the time to be able to reflect and internalize the relevant information, resulting in some cases information overload and cognitive saturation. This would hinder learning (RIBAS, 2001). To avoid this negative effect, students must be aware of this process so that they can establish a timing or synchrony between external information and their cognitive mental processes. It is also advisable to provide students with tools that facilitate the analysis of information for a better understanding and internalization of the same - for example, conceptual maps. Finally this saturation, which almost every person has ever felt when surfing the internet, should lead the multimedia programmers to design educational applications with a profile that facilitates learning and understanding of relevant concepts, creating structures that do not lead to cognitive overload or poor understading.
- Technological dependence. Another of the risks of the application of ICTs, as J.M.Sancho indicates (1995), is the fact that with the use of computer systems in education, sometimes it is given greater value to "knowing how" versus "knowing what", with consequent deficiencies in the construction of meanings, autonomous learning, understanding and learning to learn. Only an appropriate use of technological means at the service of education and the construction of knowledge will avoid this technological dependence. Only in this way will the means and resources used be subordinated to the educational process, not vice versa.

Regardless of these advantages and disadvantages none of this can be carried without taking into account the fact that the role of specialists in educational processes will be fundamental in the next few years to analyze the conditions in which the educational event must happen and how ICTs should be integrated in it so that the information society is translated into the knowledge and learning society. In this line of discourse are important the contributions of J.A. Marina, distinguishing between information society, learning society and society of the intelligence:

i) Information Society is a communication system made possible by: a) cheap, open and global communication networks; b) rapid procedures for access to communication and for the preparation of information; and c) massively updated databases.

ii) Learning Society is a cultural system that needs in order to survive individuals involved in an ongoing process of lifelong learning to maintain social welfare and economic progress.

iii) Intelligence Society is an operative concept that is defined by the idea of joint intelligence. Groups as self-referential systems of communication, interaction and affective relationships, increase or decrease the capacity of individuals to solve problems, develop creative capacity or achieve higher levels of welfare (MARINA, 1999).

It is clear that education professionals can not be left out of the changes that the information society is already provoking in the teaching and learning processes. If transformations are to take place in our models of structuring knowledge, teachers and educators should not (and can not) be left out of the analysis and study of such changes and in the articulation of the solutions to problems that may arise. Some of the main aspects that can be analyzed regarding this teaching contribution are the following:

i) The evolution of computers has made it possible to have ever more powerful and versatile tools. Particularly relevants regarding the implementation of them in education are the following:
- Lower cost with higher power.
- More friendly and simple environments.
- Multimedia information process.
- Internet access and telematic services.

These characteristics improve the computer instruments with great possibilities of use in the classroom, specially since the cost of the devices and the software associated with them is within reach of almost all pockets. The examples of this are generous -as a sample the progressive substitution of printed materials on paper (textbook, activity book, etc.) by digital ones- in personal electronic devices. There are more and more educational centers at all levels and areas that use tablets, smartphones and digital whiteboards in their daily classes and activities for the performance of teaching work. This is an unstoppable phenomenon because, apart from its advantages from the pedagogical point of view, it also entails a lower cost of educational materials for families, students and teachers.

ii) In spite of the effort made to allocate more resources to the computerization of educational centers, the problem of the integration of ICTs in education is not so much in relation to the physical equipment of computers as in relation to the use done during the educational process, and the influence that they will have on the organizational structure of the centers. Despite the fact that ICTs resources have been rapidly assumed for the management of schools this influence has been very limited in pedagogics, mainly due to their intrinsec characteristics and teacher's reluctance (CABERO, 1998). In this sense the integration of the computer in the educational system in many cases supposes a change in the ways of teaching and in the values and roles that have prevailed for centuries.

iii) Morevover there are several factors that have a direct influence on the process of integration of ICTs in the educational process whose success depends largely on its correct application. The most obvious are the following:

- Institutional policies and projects that give resources and dynamism to the integration of ICTs in education.
- Facilitators of the process that encourage and promote innovation through ICTs.
- Innovative teachers trained in ICTs and their pedagogical use.
- Recognition by the educational authorities of this effort in innovation by certain centers and professionals.

In short, the importance of institutional support to schools should be increasingly in the support of teachers and students. Beyond the endowment of resources there are on the one hand, teacher training needs that must be solved, and on the other hand, issues related to the design and production of materials valid for teaching and learning processes. And the key issue of the use of computer and audiovisual media in education falls squarely on specific uses and not on the means themselves. For many teachers implementation of new computer technologies in the educational world is a challenge, but learning is basically to achieve the integral development of the person, preparing it for the world that corresponds to live. Accordingly to this the introduction of computer technology in education would aim to prepare students for their adaptation to the technological world in which they are immersed and computer literacy should be one of the objectives of basic education. But as Cabero says: "the concept that usually tends to be handled as computer literacy is that the student dominates some programming language, which I think is a mistake, since computer literacy must pursue broader objectives: training in a general culture of the various activities that can be carried out by computer, training in specific uses of information technology, training in its use as a tool for problem solving, data processing and analysis, training in the culture of computing, limitations of computers, ability to manage different programs ... "(CABERO, 1998: 123). It arises the need of an educational system conceived as provider of a first access to computer equipment and software so

that students learn to use technology. But in addition it is emphasized that this phase of learning "basic" technology must continue with the "use to learn". The student will be prepared to use the technology as a tool that allows him to find information and communicate, integrating this methodology of work in the innovation process of the education system itself.

Finally, in a complementary way to its use in the educational process, new information technologies have meant important changes in social dynamics so it is necessary to pay attention to their impact on the dynamization of the cultural sector, especially in the ways to consume and to produce information, in the change in the concept of user, and in the creation, projection and development of cultural projects. Also for cultural production new technologies associated with social networks and web 2.0 and 3.0 -blogs, podcasts and wikis among others - allow to generate tools of creation, knowledge, participation, etc., where the type of communication is no longer unidirectional but bidirectional or rather multidirectional. The user now decides whether to form an active part of a given project or initiative. Many of these technologies have been developed in a collaborative way and enable networking expanding not only participation but also the spaces for discussion. In this way the user goes from being a simple consumer of information to being a producer of it. A different matter is the quality or scope of such works and projects, ranging from initiatives at local or neighborhood level to research projects of an international nature. But ICTs in addition to platforms from which new digital cultural projects can be promoted are also a valuable resource for disseminating them.

Moreover, for various reasons (lack of training, costs, mistrust, etc.) the cultural sector is not always doing so well. Efforts must be made to find the complementarity taking advantage of traditional resources (magazines, newspapers, TV programs) in combination with the new possibilities offered by ICTs: massive contents, interaction with the user, collaborative work, etc. Institutions, cultural industry, collectives, publishers, music producers, cinemas, theaters, museums, videogame creators, etc., are increasingly opened up to the possibility of networking and using such tools or platforms. We live in the era of instantaneity in which the degree of satisfaction of society is measured in terms of immediacy, and ICTs operate under this dynamic. It must be recognized that the world's information and cultural contents are already moving and circulating increasingly through networks. Assuming that this process is irreversible the possibilities of application of the new technologies in the cultural field are basically three:

- Instrumental, through the digitization of cultural objects of all kinds and its distribution via the web.
- Informative, through a virtual communication between citizens, scientist, artists, etc., by means such as Facebook, Twitter, etc.
- Creative, through the formation of networks establishing connections and contacts between different cultural sectors.

It must be recognized that ICTs expand also the perspectives for the cultural field, requiring it to design creative strategies that impact dynamically the ideas and contents offered to the public, requirements that of course must also be applied to the traditional printed media.

3. An Opportunity for Geography

At this point it may be asked what role the Social Sciences, in particular Geography, can play in deepening the positive aspects of the information society on culture and education and in correcting the disadvantages and problems that it causes. This role can only be considered effective –from the poinf of view of Geography- if it is carried out from critical positions, by Social Geography, because only thus it is possible to offer innovative and inclusive perspectives, only in this way is possible to spread social knowledge, working for the recognition of access to it as a right. Final aim would be to achieve "a decentralized collaborative service that promotes new alternatives of dissemination and distribution of social knowledge produced, promoting open access to research results and debates in the field of Social Sciences" (CLACSO, 2015: 27). To achieve this purpose means necessarily to face some questions:

1) How will new technologies affect Geography?

The undoubted impact of the new technologies on the discipline may include new questions: how will Geography manage in cyberspace? Will the internet contribute to crediting or discrediting it? Teachers, researchers, students and users of Geography will have to answer these question as the influence of the information society becomes general.

2) Does Geography have something to contribute to this new information society? Social Geography has always been interested in the social impact of technological advances and their spatial repercussions. Therefore, if from Geography space is considered, as a social space, determinant for the explanation of the activities that are developed in it, why not study the impact of new technologies with geographical methods, in this case from the perspective of Social Geography? (SENDRA, 2005). But if this new space in which we move is also virtual, the tools with which to study the phenomenon may have to be different from those traditionally used until now.

3) Will Geography be able to renew itself and adapt to the new times? Geography is, again and like the rest of the Social Sciences, facing the challenge of responding adequately to the novel approaches of all kinds (sociological,

epistemological and ontological) that the information society generates. If the renewal of Geography, as suggested in some instances on the internet regarding the term "neogeography" (GOODCHILD, 2009), has to come through the massive use of tools that, although with a strong geographical component (Google maps, Flickr, etc.), are used mainly by users without any geographic formation or scientific pretension then the already mentioned "death of Geography" may not come from the disappearance of distances but from a banalizing interpretation of the discipline.

3.1. Virtual Reality and Geography

On the one hand it is proclaimed that new information and communication technologies - such as the internet and mobile phones- mean that daily problems related to space have disappeared (NEGROPONTE, 1995). After all the great dream of overcoming distance seems to have become a reality, since people live surrounded by easily accessible and global networks that allow to carry out innumerable activities in any place. Even at home, sitting in front of the computer anyone can buy items, talk to distant friends, or handle business matters, no matter where the office is located geographically.

The opposite view is less idealistic, but probably more adequate. Because when we consider the role that Geography must play in this new information society - at least from branches of geographic thought concerned with the social aspects of space production - a first evidence is that the global network is not accessible to all or in all places (BALLESTERO, 2002). For this the infrastructure wiring and antennas should be available in any place, but the reality is that where there is no connection to such a network the access is not possible. In addition, even if it were possible not everyone would be able to use the service or could pay for it. In fact millions of people in the world are clearly in a situation of "digital indigence" (NEGROPONTE, 1995) and their geographic location can be defined quite accurately. An unfavorable social and economic substrate, due to low levels of education or wages, and the lack of coverage in rural or underdeveloped areas of the planet limit digital access to many people.

There is also another aspect of virtual space, in relation to Geography, which should be taken into account simply because not everything can be done on the internet. Some things can not be transmitted over the network. They can not be written but they are in any case critical when regarding human communication. Just thinking on the gestures, impressions, moods and environments that accompany our social interactions, to certify that the so-called Computer Mediated Communication (CMC) is in some respect substantially different from traditional face-to-face communication (WALTHER, 1995). This fact has important implications for Social Geography. For example, our political activity is undoubtedly a specific and important type of social communication and that communication changes substantially when it is mediated through the new technologies. A different question is whether this technological mediation improves or not our social relations and our way of participating in social, political, cultural and economic life.

It can be concluded that it will always be important for people to meet face to face in geographical space. And this need can not be met with new technologies, at least not always. But in addition, unlike to what is often thought, new technologies are not a substitute for our traditional forms of communication but a complement: "the variation of extensibility in relation to race, age, gender, and other socially significant categories link biographies of the microscale with certain social processes at the macroscale" (ADAMS, 1995: 268).

These and other issues are already substantially modifying the social function of Geography. The innovations of the information age give us completely new geographical experiences that we subconsciously internalize as we navigate through cyberspace. But cyberspace is not a real space but imagined, a mental creation. We just feel like we are surfing cyberspace when we jump from one website to another or we visit sites that are distant and unfamiliar, or others that are close and well known. This non tangible space can and should also be explained in geographical terms because both things - cyberspace and real space - without being exactly the same are not opposed but complementary realms (BIRNIE *et* HORVATH, 2002).

Geography is already playing a very different social role since the arrival of new technologies. After all, wifi or mobile phones were created to overcome the Geography. People buy items to browse the internet and communicate from anywhere and with anyone. Offshoring also makes it possible to work anywhere in the world. But on the other hand the manufacturers and suppliers of this type of services need Geography to develop them. Therefore Geography still seems to be important for those technologies that try to surpass it.

If the questions raised, so far together with others that will apppear in the future, are a matter of debate for citizens, this debate is a need among geographers, researchers, teachers and students of Geography.The interest of geographers in technology is not new. There has always been interest in the Social Sciences about how geographic space changes when a more efficient technology is assumed. The models of distribution of technology in space have also been studied. Now the new object of study for Geography are the spatial implications of the "information society". It will therefore be interesting to study what are the necessary conditions in the geographic space for the combined operation of the material and virtual worlds and what are the interactions that are established between both. As already mentioned in relation to the CMC both worlds do not oppose but complement each other in three possible ways: substitution of each other, collaboration between them and finally mutual recombination (LATOUR, 1993).

Of course the geographical space is not only the physical/virtual environment. It also includes the economic, social, political, legal, and cultural landscape. New technologies have really changed our lives to the point of becoming the most powerful factor of geographical space change nowadays. The new communication technologies have extended the possibilities of social, economic and political relationship for anyone who has access to the internet. The world has become much larger, from neighborhood or city to planetary life, probably with the only limit of the language. And if this is true for individuals even more for companies and institutions. This new reality makes bigger the difference between the physical/virtual world in which we live and the psychological, social, and economic world in which people increasingly interact each other.

However, given the critical and social approach that is sought in this article, it is not possible to leave aside the issue mentioned above: the interactions between virtual and material worlds are, to some extent, a luxury that can only be considered accesible for a part of mankind. For the rest, the virtual world simply does not exist because they are, in the most dramatic cases, part of authentic cyberspace "black holes" (ALONSO, 2001). It is then necessary to show from Social Geography the causes and effects of this situation: these spaces of cyberexclusion and cybermargination raise serious doubts about the benefits of the information society at least as this has been conceived so far. New technologies are a right but for millions of people in the world such a right does not exist (HWANG, 2006). When analyzed in detail it is also found that the absence of such a right overlaps others more basic -such as education, democracy or child protection- which are not also fulfilled in vast regions of the planet. From this point of view cyberexclusion may be considered as one link mre in a chain of geographic inequalities that exist today on the planet, an authentic north-south digital divide (JORGENSEN, 2006).

For Social Geography such situation must be denounced and fought. And it is at this point where the neogeography phenomenn (the contributions of individual or community users with the intention of denouncing, proposing alternatives, or combating through activism situations of injustice) reveals itself really interesting and useful.

4. Conclusion

Using the contributions of neogeography it is possible to combat global geographical inequalities. On the one hand showing the interests that underlie the intention to maintain cybersexclusion as a new type of geographical inequality, on the other hand showing the ways in which new technologies can help to combat it (in the form of cyberactivism) and the groups that benefit from them. Finally also proposing alternatives to the one-dimensional vision of the virtual world according to which there is only one possible interpretation of it.

In this process, which Geography schools are especially involved? Fundamentally three: Social Geography, Humanist Geography and Geography of Perception. All three can be enriched by contributions coming from neogeography, but at the same time all three can collaborate with the emerging neogeogaphy phenomenon (each one from their centers of interest) to the solution of the geographical inequalities. As a result of this fusion it would be possible to speak of a future social neogeography, humanistic neogeography and neogeography of perception respectively (BALAGUER, 2016). But in doing so the very concept of neogeography will also be enriched itself and will change its meaning, methodology and aims.

From this fusion arise new approaches and possibilities for Social Geography and the role that may play in the society of the XXI century paying special attention to the following aspects:

i)   Review of the geographical schools mentioned above regarding the phenomenon of neo-geography. If new technologies are a revolutionary phenomenon it is necessary to discover to what extent and how they affect Geography, how Social Geography can be affected by them, and to what extent it will be necessary to revise it according to this new situation ; "The use of theories and concepts, aimed at solving the current social problems at a local and global level, is now more essential in this scientific and informational technical environment that abstracts a false reality and tries to reduce to simple numbers complex problems of the society. A serious socio-spatial study must solve these problems by considering them always as a permanent and interconnected dialectic and temporal relation "(BERAÚN, 2006: 376).

ii) Show the influence of ICTs on geographic research, its revision and renewal. What is valid for the previous point is also valid for the latter. It is already a fact that new technologies are used in a massive way in geographic research. However, the implications of such use may not have been sufficiently reflected. New technologies not only provide easier access to information that can be used and a greater possibility of dissemination and exchange of results, they can also imply a more or less deep revision of the research process in Social Geography and the rethinking of their subjects under the influence of the information society: "Geographers have had to discover many unknown lands. In the Twentieth Century, once man had reached the poles and was able to explore and discover the entire surface of the planet, they dared to penetrate into another unknown earth, which is built inside the mind, investigating the personal geographies, the mental maps and the spatial images that are produced, and that end up affecting the

geographic behavior. Today we find two new geographies that need to be explored and studied: a geography of the internet on earth; another, the geography of cyberspace "(CAPEL, 2010: 37).

iii) Explore the possible contributions of Social Geography to the development of neogeography. This implies that it is also necessary to travel the way back. A lot of computer applications are based on geographical contents and many others are possible thanks to the contributions made by geographers. Therefore how Geography can contribute to the development of new technologies is something that must also be analyzed.

iv) To study the socio-economic component of ICTs from a geographical point of view. Geography is a social science and as such should try to shed light on the social, economic, political, etc., components that underlie the information society in its relationship with the territory and access to resources. In particular the problem of the so-called "digital divide", the huge differences in availability and access to new technologies considered as a resource, deserves to be analyzed in depth.

v) Defend the Geography of the intrusion of other disciplines. The appropriation of subjects belonging to Geography by other scientific disciplines is not a new phenomenon. The supposedly more "scientific" character of other subjects compared with the Geography has largely favored this. Geography, perhaps because of its synthetic and humanistic orientation, has been more reluctant to offer such an image. The new situation created by the new technologies can be an opportunity to revert this situation, but also, at least for Human Geography, to claim its social character (GONZÁLEZ, 2011).

vi) To claim the scientific and academic nature of Geography in opposition to simplistic interpretations. That the new technologies, and especially the internet, have made accessible to broad layers of the population geographic tools circumscribed until now to the academic field is a fact that can not be discussed. This circumstance, in principle positive because of its features of democratization of knowledge also hides worrying nuances: the generalization of the use of geographic tools can not be considered, as from some instances seems to be suggested, geographic knowledge, since it lacks the necessary scientific rigor.

In short, the information society has changed the world and therefore also Geography, which necessarily will have to adapt to this transformation if it does not want to see its field invaded by other disciplines, or worse, pseudodisciplines. The generalization of the ICTs and the globalization offer to Geographywide possibilities of development but also great challenges to assume. Showing such changes exploring opportunities and threats and presenting them in a coherent way is possible and necessary.

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