

## Preface

Emerging technologies, such as social networks and interactive Web applications, have played a vital role in the way we communicate. These technologies are fundamental in reducing the digital gaps among users. *Advanced Research and Trends in New Technologies, Software, Human-Computer Interaction, and Communicability* presents scientific, theoretical, and practical insight on the software and technology of social networks and the factors that boost communicability. By highlighting different disciplines in the computer and social sciences, this reference is essential for practitioners, researchers, and scholars invested in the current studies, as well as for future generations in the field of ICT (Information and Communication Technology).

However, the technological advance must not make us lose sight of other social and human factors, which may interfere negatively with the development of the sciences for the common good of all mankind. There are values and essential principles that must be defended more than ever in the new millennium, where technology switches from evolution to revolution in seconds, everyday, in myriad research and development labs. These values constitute the safeguard of the peoples who historically have contributed to improving the quality of life of their denizens.

One of the key words in the constitution of the nations of the American continent is freedom. That notion interpreted in those lands is synonymous with equality as one can see reflected in the stanzas of many of their national anthems. It is a word that not only shelters all the deeds of millions of inhabitants from Alaska to Tierra del Fuego but also grants a special dignity to all those born in the New World. Freedom and equality are two mainstays, which again are connected to a third keyword, fraternity. The origins of this notion—fraternity—are already latent in the Declaration of the Rights of Man and of the Citizen (*Déclaration des droits de l'homme et du citoyen, French Revolution 1789*). In the 20th century, another keyword would follow, solidarity. These four words are the cardinal points of a very special weathercock: Dignity, whose north is freedom and which guides all the inhabitants of the Americas on a daily basis. When one of their members is unfairly attacked, automatically those four winds are activated which go through the American continent. A proof of all of this is the current book, aimed at the latest theoretical and practical breakthroughs of the formal and factual sciences (Bunge, 2001).

The compilation of the current educational and scientific material is the fruit of the solidarity showed by a group of people located in a very special avenue, Chocolate, in Hershey (Pennsylvania), USA, in the face of the unfair attacks of the everlasting and immune parochialism of the Old Continent. A parochialism immune to the change of millennia, especially when it comes to the triad “education/research/industry-trade” as will be shown further on. From that city with a very famous sweets factory, our call for help was not only attended to, but in a timely way masterful solutions have been found thanks to an exceptional human team who lead their actions according to the four cardinal points mentioned above. To each one of those members my infinite gratitude, and also the whole space that surrounds our planet.

In our days, McLuhan's global village is going through a dilemma between expansion and those who are opposed to it, through patterns of behavior typical of the dungeons in the Middle Ages. In other words, on the one hand we have a free, horizontal, and democratic expansion, which supports the access to the multimedia online information and the diffusion of knowledge without any distinction between the users of the different interactive systems, and regardless of the geographical place where they are located. On the other hand—and in total opposition—are all those groups that reject the age of the expansion of communicability, through myriad destructive strategies. Their actions, which weaken the interaction between users and new technologies, boost the digital divide and generate a set of educational antimodels. The latter are exported to the emerging countries.

It is important to bear in mind that education, together with healthcare, are the essential cornerstones of all developed societies from an economic point of view. Those values are threatened by the destructive actions of those groups, and we can read about their consequences daily in the press of the countries of the South of Europe: Universities that do not have a sufficient academic-scientific level, a high number of unemployed, generations of young people who do not study or work, massive migration of the young, with and without a university degree, and a long etcetera.

In short, the actions and the patterns of behavior of those small groups establish an evident parallelism with those denizens of the Garduña (n.d.), whose origins go back to 1412 in Toledo (Spain). However, in the second decade of the new millennium they are destroying our fundamental cornerstones for a correct intersection of the formal and factual sciences. It is enough for them to put a simple post online on a corrupt Website in summer to destroy non-profit associations, professor groups, scientific publishing houses, etc., actions that are totally unpunished in the rest of the scientific community. This immunity is due to the fear of denouncing those unworthy and destructive actions that contradict the main principles of the epistemology of the sciences.

The motivations of those patterns of behavior in an academic context are variegated: the immutable relationship master-slave or superior race-inferior race, in those lands where the origin of the people or their surnames have not evolved a jot since the Middle Ages, regarding as slaves all those who do not belong to the local Garduña, imposing wild mercantilism in the educational and scientific sector, taking hold of the professional personality of their work colleagues, fostering stalking, mobbing, academic bullying, etc., behavior patterns that are totally opposed to the original ideas of Marshal McLuhan.

The *modus operandi* of certain characters of the academic sector who fluctuate between the real and the virtual of the new technologies are exceptionally described by Tomas Maldonado (1992). Now those characters of the Garduña, without being real experts in said technologies, not only manage to survive the passing of time, but they even expand due to the European subventions they get. Subventions that allow them to interrelate among themselves, through pseudo-scientific projects. The use of the term "pseudo" is due to the fact that in reality they are mere rehashes of other works made outside the European borders or plagiarized or carried out by "slaves of the lower race." All those who do not belong to the local, national, or international Garduña, or who do not accept those nefarious *modus operandi*, be it for ethical reasons or professional motives, are automatically classified as enemies, who must be destroyed. Some examples are described in several sections of the current book. In short, those examples will show how directly and indirectly, a myriad local, regional, national, European subventions, etc., have served, serve, and will serve to boost the owners of the Figure 1. The control of the authorities is equal to zero in these cases.

Figure 1. The financial crisis of Southern Europe has made apparent a series of failings in the educational system and in the university structures, which are periodically commented on in the media that make up McLuhan's global village. For example, in A: "Those with a recent degree who neither work nor study rise to 69%" ([www.elpais.es](http://www.elpais.es)), and B: "No Spanish campus reaches the 200 first places in the ranking of Shanghai" ([www.elpais.es](http://www.elpais.es)).



Efficient control should exclude all those who systematically receive money and mothball the projects, without ever following the future lines of research promised at the time the proposals were submitted to get financial funds; it should detect the professors or researchers who cannot research in an autonomous way and whose works are all co-authorships; it should inspect those universities where favoritism turns the students into professors disguised as administration staff; it should eliminate the outsourcing to third parties to carry out the approved project; it should prevent the interference of the industrial or entrepreneurial world with the academic formation of masters, training courses, continuous training, etc.; it should prohibit that the business associations or industrial syndicates from being the spokesmen or the prime guidelines for the signature of agreements with foreign universities, etc. This latter point is very serious because the interference of the industrial world in the formation of the engineering, graduate degrees, Masters, PhDs, etc. violates the freedom that the public universities in Europe are intended to have. In addition, when these industries—for the purpose of increasing their financial profits in a geometric or exponential way—decide to transfer their manufacturing activities outside the province or region where they are located, they destroy the homes of thousands and thousands of workers, workers who have been trained exclusively for the activities of those industries or firms and therefore have an extremely specialized or vertical training. Those workers lack the skills that would allow them a fast

adaptation to the new requirements of the global market, which are obtained through academic programmes where the theory and the practice are well balanced and up to date with the ICTs. Unfortunately, many programmes do not have a comprehensive view of the real world. For example, we can see in Figure 2, section A: “Work, 64% percent of Italian students are ready to migrate. Where to? France, Swiss, and UK” (www.ilsole24ore.com); section B: “In the second semester of 2013 unemployment is 12%, and among the young it raises to 39.5%” (www.ilsole24ore.com), and section C: “Temporal evolution of the total number of Spanish unemployed, since 2005 until 2013, whose total surpasses the 6 million of the active population in Spain (6,202,700), and the 58.43% are long term unemployed. In the low right angle of the graphic can be seen that the 43.32% have a PhD, and 48.82% have a higher education (university degree) but without a PhD” (www.elpais.es).

The next set of rhetorical questions shows how the law of silence coming from the Garduña prevails, leaving us with questions without logical answers: How is access to lifelong posts for university teaching possible for individuals who do not have academic training nor any experience in the topics they must teach or who openly manifest xenophobia? How is it possible that the university endogamy goes beyond family links making up an endless semiosis of friendships of the relatives? How is it possible that there are meteorite students in public, private, and hybrid universities who in less than a decade accumulate six diplomas with various degrees including PhDs without having any affinity to their matter, and holding at the same time high ranking jobs in private businesses? How is it possible that a university grants PhDs in four years to people who cannot even speak the official language of the state? How is it possible that the director of a Doctoral thesis never helps her/his students or publishes jointly

*Figure 2. The super specialization of the short European degrees has drastically contributed to increasing the number of the unemployed, with partial or poor university training in the face of the real challenges of the global market in the new millennium*

The screenshot displays the homepage of the Italian newspaper *Il Sole 24 Ore*. The top navigation bar includes sections like **ITALIA & MONDO** and **IMPRESA & TERRITORI**. Two main news articles are highlighted:

**(A) Lavoro, il 64% dei giovani italiani pronti ad andare via. Dove? Francia, Svizzera e Inghilterra**  
 This article, dated April 2, 2013, reports on a survey by the Center for Research in Social Work (CERS) showing that 64% of Italian youth are willing to migrate. The top destinations are France, Switzerland, and the UK. The article also mentions that 37% have sent their resumes abroad and 25% are looking for work, with the internet being the primary source of job information.

**(B) Nel secondo trimestre disoccupazione al 12%, quella giovanile risale al 39,5%**  
 This article, dated August 30, 2013, reports that the unemployment rate in the second quarter of 2013 reached 12%, an increase of 1.5 percentage points from the previous year. Among young people, the rate rose to 39.5%.



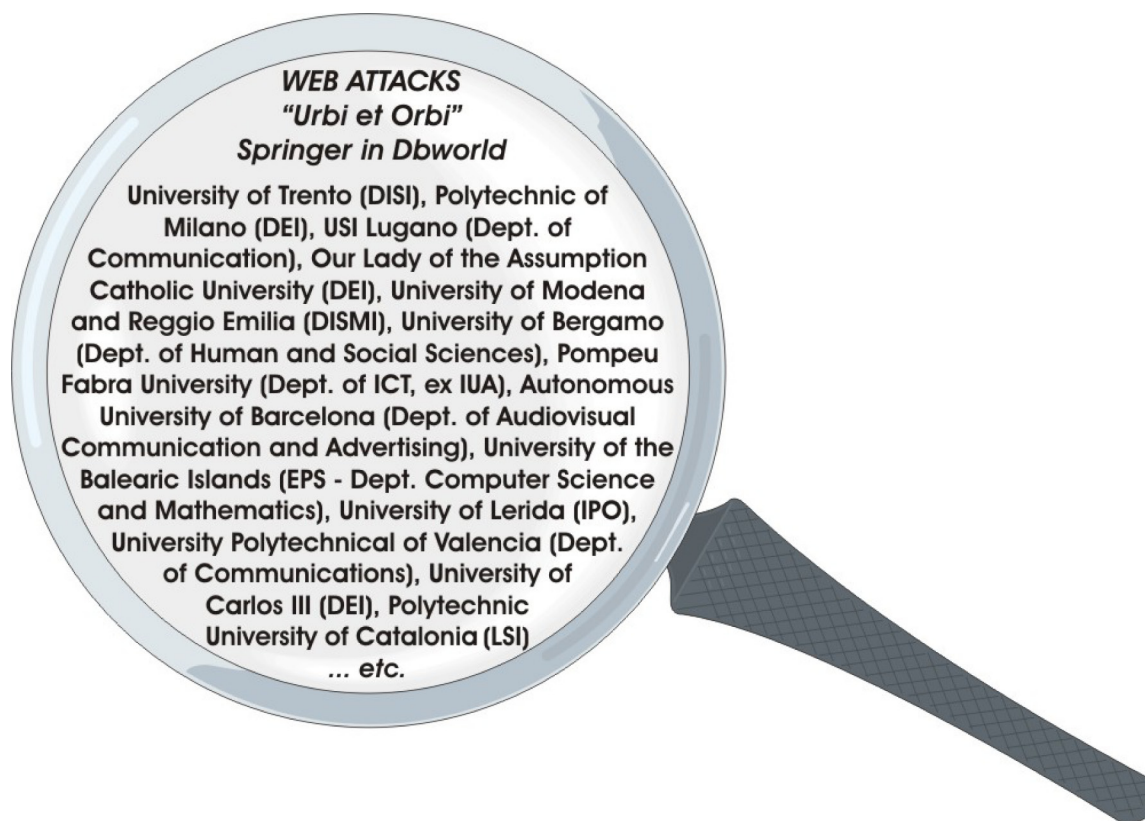
a work with reference to the thesis that allegedly she/he is directing? How is it possible that PhDs are given when the candidate has individual scientific publications in associations or high-level publishers? How is it possible that the EU subsidizes publishers that invoice millions of Euros, training the future scoundrels and terrorists of the sciences? How is it possible that the national and international smearing campaigns of professional mudslinging are not only unpunished in front of the law, but they are accepted as normal in the local and international scientific community? How is it possible that from the private sector they try to rule in an authoritarian way the activities of scientific diffusion in the public field and vice versa? How is it possible that the stalking, mobbing, academic, and scientific bullying is extolled and covered by associations of international prestige in the sectors of communication, electronics, computer science, etc.? How is it possible that corrupt local associations since their origins are protected by prestigious international associations of the ICTs sector? How is it possible that individuals with a high academic training have such unworthy behavior in the new millennium but they are awarded by local and/or international scientific community? Obviously, this listing could be widely expanded. So far a brief sample of what is called the “Garduña factor” has been presented in the education of the ICTs, the ways of structuring the educational sector of a state, the transfer of the technology from the university to the businesses and industries and vice versa, research and development, distribution of financial resources, etc. In short, we have been showing the negative influences in the advancement of the sciences.

However, all those scientific dysfunctions can generate positive aspects such as the set of selected works for a whole year in several international conferences, workshops, and symposia: Software and Emerging Technologies for Education, Culture, Entertainment, and Commerce (SETECEC 2012) and Advances in New Technologies, Interactive Interfaces and Communicability (ADNTIIC 2012), Human-Computer Interaction, Tourism, and Cultural Heritage (HCITOH 2012), Communicability, Computer Graphics, and Innovative Design for Interactive Systems (CCGIDIS 2012). The research presentations and papers of those events make up the current academic-scientific book. This book does not contain 100% of the submitted works. The partiality of the set is due to the attack received in the summer vacations of 2012 from Heidelberg, Trento, Milano, Barcelona, Valencia, Madrid, Mallorca, Lerida, etc. (Figure 3) through the Dbworld (n.d.) Website – ACM SIGMOD, among other communication media.

Now, aside from this explanation, each of these international events has been respected; they have been grouped into different sections, and obviously, among them there are several common denominators, such as: software, quality metrics, heuristic evaluation, the use of avant-garde hardware, the design of online and offline multimedia interactive systems, interfaces, communicability, education, human-computer interaction, computer graphics, computer animation, cultural and natural heritage, tourism, Web 2.0, Web 3.0, etc. Some of these topics are repeated in different international events making up a kind of isotopy, although all of them are directly and indirectly related to computer science, quality of communication, design, human-computer interaction, multimedia, telecommunications, robotics, and the social sciences.

In the first section, there are those research works of First International Conference on Software and Emerging Technologies for Education, Culture, Entertainment, and Commerce (SETECEC 2012) in Venice, Italy, whose main and secondary topics are aimed at education, entertainment, trade, mobile multimedia, and the social networks, among others. Each one of them has been outstanding not only for the originality of the proposals but also for a high degree of compatibility with the goal of the current conference. A conference that over time we hope may constitute a kind of compass for all those interested in going deeper into each one of the cardinal issues of the event.

Figure 3. Garduña factor for online attacks



The second section groups the favorably evaluated proposals in the oral presentation, including the splendid demonstrations in some cases of the second edition of the International Symposium on Communicability, Computer Graphics, and Innovative Design for Interactive Systems (CCGIDIS 2012) (Valle d'Aosta, Italy). Said demonstrations refer to the kernel of communicability, the latest breakthroughs of computer graphics, and the trends in interactive design, whether for the traditional or for the new interactive devices related to multimedia, virtual reality, mixed reality, augmented reality, etc. This new edition of the international event has allowed the consolidation of some lines of research of the previous event and incorporated a few new ones to the topics list in keeping with technological evolution.

The third International Workshop on Human-Computer Interaction, Tourism, and Cultural Heritage (HCITOH 2012) (Venice, Italy) constitutes the origin of our experience in organizing international gatherings. In this event, the human-computer interaction, cultural heritage, and tourism triad has been bolstered by a second goal, the definition of strategies. Strategies keen on a future where creativity is the backbone of computer science, qualitative design, and communicability. These goals have been reached once again through the selection made of all the works that we have received and of which only 33% have been approved very satisfactorily. This means that the workshop is highly selective and measures up to our average of approval in each one of the events, which is between 25% and 37%. The opening of the event in Venice deserves a special mention in the current section. Once again, it was made by Professor Dr. Kim Henry Veltman (Virtual Maastricht McLuhan Institute, The Netherlands), whom we thank again for his admirable and masterful lesson from the pedagogical point of view and the contents presented under the title “Beyond an Internet of Things.”

The fourth section denotes how from Argentina a constantly increasing amount of research and development works are submitted by myriad professors, students, and local and international researchers. Over time, it can be seen how the new generations guided by real professionals of university pedagogy have set on their rails again the locomotive of the advance of the formal and factual sciences. Starting from the latest advances in the new technologies, the intersections with the design of the interface and the communicability of the contents are analyzed, contents specialized in the social networks, the Web 3.0, tourism, health, e-commerce, and 2D, 3D, xD design, in the Third International Conference on Advances in New Technologies, Interactive Interfaces, and Communicability (ADNTIIC 2012).

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