

19 Key Essays on
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Changing our Lives**

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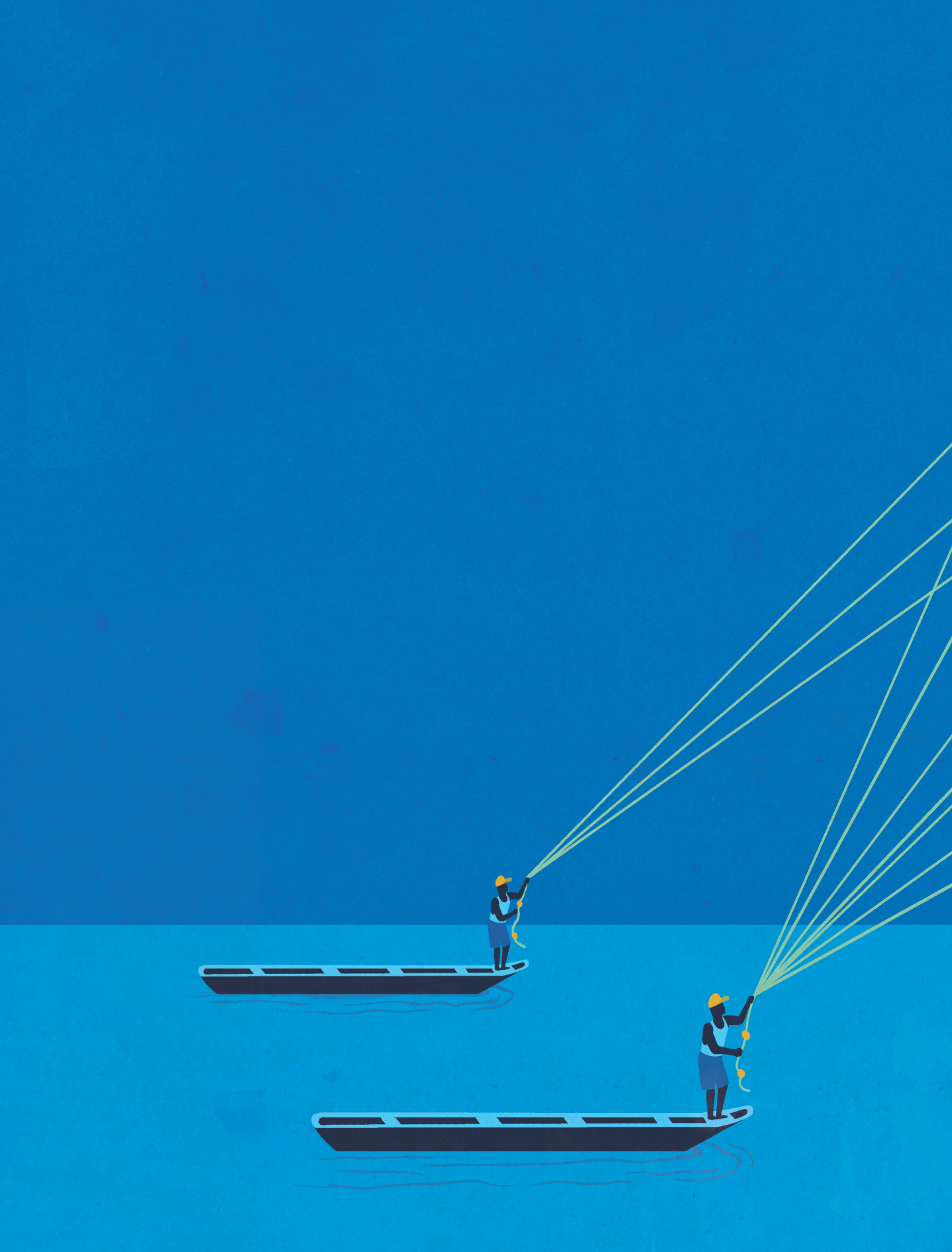
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The Impact of the Internet on Society:
A Global Perspective

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The Impact of the Internet on Society: A Global Perspective

Introduction

The Internet is the decisive technology of the Information Age, as the electrical engine was the vector of technological transformation of the Industrial Age. This global network of computer networks, largely based nowadays on platforms of wireless communication, provides ubiquitous capacity of multimodal, interactive communication in chosen time, transcending space. The Internet is not really a new technology: its ancestor, the Arpanet, was first deployed in 1969 (Abbate 1999). But it was in the 1990s when it was privatized and released from the control of the U.S. Department of Commerce that it diffused around the world at extraordinary speed: in 1996 the first survey of Internet users counted about 40 million; in 2013 they are over 2.5 billion, with China accounting for the largest number of Internet users. Furthermore, for some time the spread of the Internet was limited by the difficulty to lay out land-based telecommunications infrastructure in the emerging countries. This has changed with the explosion of wireless communication in the early twenty-first century. Indeed, in 1991, there were about 16 million subscribers of wireless devices in the world, in 2013 they are close to 7 billion (in a planet of 7.7 billion human beings). Counting on the family and village uses of mobile phones, and taking into consideration the limited use of these devices among children under five years of age, we can say that humankind is now almost entirely connected, albeit with great levels of inequality in the bandwidth as well as in the efficiency and price of the service.

At the heart of these communication networks the Internet ensures the production, distribution, and use of digitized information in all formats. According to the study published by Martin Hilbert in *Science* (Hilbert and López 2011), 95 percent of all information existing in the planet is digitized and most of it is accessible on the Internet and other computer networks.

The speed and scope of the transformation of our communication environment by Internet and wireless communication has triggered all kind of utopian and dystopian perceptions around the world.

As in all moments of major technological change, people, companies, and institutions feel the depth of the change, but they are often overwhelmed by it, out of sheer ignorance of its effects.

The media aggravate the distorted perception by dwelling into scary reports on the basis of anecdotal observation and biased commentary. If there is a topic in which social sciences, in their diversity, should contribute to the full understanding of the world in which we live, it is precisely the area that has come to be named in academia as Internet Studies. Because, in fact, academic research knows a great deal on the interaction between Internet and society, on the basis of methodologically rigorous empirical research conducted in a plurality of cultural and institutional contexts. Any process of major technological change generates its own mythology. In part because it comes into practice before scientists can assess its effects and implications, so there is always a gap between social change and its understanding. For instance, media often report that intense use of the Internet increases the risk of alienation, isolation, depression, and withdrawal from society. In fact, available evidence shows that there is either no relationship or a positive cumulative relationship between the Internet use and the intensity of sociability. We observe that, overall, the more sociable people are, the more they use the Internet. And the more they use the Internet, the more they increase their sociability online and offline, their civic engagement, and the intensity of family and friendship relationships, in all cultures—with the exception of a couple of early studies of the Internet in the 1990s, corrected by their authors later (Castells 2001; Castells et al. 2007; Rainie and Wellman 2012; Center for the Digital Future 2012 et al.).

Thus, the purpose of this chapter will be to summarize some of the key research findings on the social effects of the Internet relying on the evidence provided by some of the major institutions specialized in the social study of the Internet. More specifically, I will be using the data from the world at large: the World Internet Survey conducted by the Center for the Digital Future, University of Southern California; the reports of the British Computer Society (BCS), using data from the World Values Survey of the University of Michigan; the Nielsen reports for a variety of countries; and the annual

reports from the International Telecommunications Union. For data on the United States, I have used the Pew American Life and Internet Project of the Pew Institute. For the United Kingdom, the Oxford Internet Survey from the Oxford Internet Institute, University of Oxford, as well as the Virtual Society Project from the Economic and Social Science Research Council. For Spain, the Project Internet Catalonia of the Internet Interdisciplinary Institute (IN3) of the Universitat Oberta de Catalunya (UOC); the various reports on the information society from Telefónica; and from the Orange Foundation. For Portugal, the Observatório de Sociedade da Informação e do Conhecimento (OSIC) in Lisbon. I would like to emphasize that most of the data in these reports converge toward similar trends. Thus I have selected for my analysis the findings that complement and reinforce each other, offering a consistent picture of the human experience on the Internet in spite of the human diversity.

Given the aim of this publication to reach a broad audience, I will not present in this text the data supporting the analysis presented here. Instead, I am referring the interested reader to the web sources of the research organizations mentioned above, as well as to selected bibliographic references discussing the empirical foundation of the social trends reported here.

Technologies of Freedom, the Network Society, and the Culture of Autonomy

In order to fully understand the effects of the Internet on society, we should remember that technology is material culture. It is produced in a social process in a given institutional environment on the basis of the ideas, values, interests, and knowledge of their producers, both their early producers and their subsequent producers. In this process we must include the users of the technology, who appropriate and adapt the technology rather than adopting it, and by so doing they modify it and produce it in an endless process of interaction between technological production and social use. So, to assess the relevance of Internet in society we must recall the specific characteristics of Internet as a technology. Then we must place it in the context of the transformation of the overall social structure, as well as in

relationship to the culture characteristic of this social structure. Indeed, we live in a new social structure, the global network society, characterized by the rise of a new culture, the culture of autonomy.

Internet is a technology of freedom, in the terms coined by Ithiel de Sola Pool in 1973, coming from a libertarian culture, paradoxically financed by the Pentagon for the benefit of scientists, engineers, and their students, with no direct military application in mind (Castells 2001). The expansion of the Internet from the mid-1990s onward resulted from the combination of three main factors:

- The technological discovery of the World Wide Web by Tim Berners-Lee and his willingness to distribute the source code to improve it by the open-source contribution of a global community of users, in continuity with the openness of the TCP/IP Internet protocols. The web keeps running under the same principle of open source. And two-thirds of web servers are operated by Apache, an open-source server program.
- Institutional change in the management of the Internet, keeping it under the loose management of the global Internet community, privatizing it, and allowing both commercial uses and cooperative uses.
- Major changes in social structure, culture, and social behavior: networking as a prevalent organizational form; individuation as the main orientation of social behavior; and the culture of autonomy as the culture of the network society.

I will elaborate on these major trends.

Our society is a network society; that is, a society constructed around personal and organizational networks powered by digital networks and communicated by the Internet. And because networks are global and know no boundaries, the network society is a global network society. This historically specific social structure resulted from the interaction between the emerging technological paradigm based on the digital revolution and some major sociocultural changes. A primary dimension of these changes is what has been labeled the rise of the Me-centered society, or, in sociological terms, the process of individuation, the decline of community understood

in terms of space, work, family, and ascription in general. This is not the end of community, and not the end of place-based interaction, but there is a shift toward the reconstruction of social relationships, including strong cultural and personal ties that could be considered a form of community, on the basis of individual interests, values, and projects.

The process of individuation is not just a matter of cultural evolution, it is materially produced by the new forms of organizing economic activities, and social and political life, as I analyzed in my trilogy on the Information Age (Castells 1996–2003). It is based on the transformation of space (metropolitan life), work and economic activity (rise of the networked enterprise and networked work processes), culture and communication (shift from mass communication based on mass media to mass self-communication based on the Internet); on the crisis of the patriarchal family, with increasing autonomy of its individual members; the substitution of media politics for mass party politics; and globalization as the selective networking of places and processes throughout the planet.

But individuation does not mean isolation, or even less the end of community. Sociability is reconstructed as networked individualism and community through a quest for like-minded individuals in a process that combines online interaction with offline interaction, cyberspace and the local space. Individuation is the key process in constituting subjects (individual or collective), networking is the organizational form constructed by these subjects; this is the network society, and the form of sociability is what Rainie and Wellman (2012) conceptualized as networked individualism. Network technologies are of course the medium for this new social structure and this new culture (Papacharissi 2010).

As stated above, academic research has established that the Internet does not isolate people, nor does it reduce their sociability; it actually increases sociability, as shown by myself in my studies in Catalonia (Castells 2007), Rainie and Wellman in the United States (2012), Cardoso in Portugal (2010), and the World Internet Survey for the world at large (Center for the Digital Future 2012 et al.). Furthermore, a major study by Michael Willmott for the British Computer Society (Trajectory Partnership 2010) has shown a positive correlation, for individuals and for countries, between the frequency and intensity of the use of the Internet and the psychological

indicators of personal happiness. He used global data for 35,000 people obtained from the World Wide Survey of the University of Michigan from 2005 to 2007. Controlling for other factors, the study showed that Internet use empowers people by increasing their feelings of security, personal freedom, and influence, all feelings that have a positive effect on happiness and personal well-being. The effect is particularly positive for people with lower income and who are less qualified, for people in the developing world, and for women. Age does not affect the positive relationship; it is significant for all ages. Why women? Because they are at the center of the network of their families, Internet helps them to organize their lives. Also, it helps them to overcome their isolation, particularly in patriarchal societies. The Internet also contributes to the rise of the culture of autonomy.

The key for the process of individuation is the construction of autonomy by social actors, who become subjects in the process. They do so by defining their specific projects in interaction with, but not submission to, the institutions of society. This is the case for a minority of individuals, but because of their capacity to lead and mobilize they introduce a new culture in every domain of social life: in work (entrepreneurship), in the media (the active audience), in the Internet (the creative user), in the market (the informed and proactive consumer), in education (students as informed critical thinkers, making possible the new frontier of e-learning and m-learning pedagogy), in health (the patient-centered health management system) in e-government (the informed, participatory citizen), in social movements (cultural change from the grassroots, as in feminism or environmentalism), and in politics (the independent-minded citizen able to participate in self-generated political networks).

There is increasing evidence of the direct relationship between the Internet and the rise of social autonomy. From 2002 to 2007 I directed in Catalonia one of the largest studies ever conducted in Europe on the Internet and society, based on 55,000 interviews, one-third of them face to face (IN3 2002–07). As part of this study, my collaborators and I compared the behavior of Internet users to non-Internet users in a sample of 3,000 people, representative of the population of Catalonia. Because in 2003 only about 40 percent of people were Internet users we could really compare the differences in social behavior for users and non-users, something that nowadays would be more difficult given the 79 percent penetration

rate of the Internet in Catalonia. Although the data are relatively old, the findings are not, as more recent studies in other countries (particularly in Portugal) appear to confirm the observed trends. We constructed scales of autonomy in different dimensions. Only between 10 and 20 percent of the population, depending on dimensions, were in the high level of autonomy. But we focused on this active segment of the population to explore the role of the Internet in the construction of autonomy. Using factor analysis we identified six major types of autonomy based on projects of individuals according to their practices:

- a) professional development
- b) communicative autonomy
- c) entrepreneurship
- d) autonomy of the body
- e) sociopolitical participation
- f) personal, individual autonomy

These six types of autonomous practices were statistically independent among themselves. But each one of them correlated positively with Internet use in statistically significant terms, in a self-reinforcing loop (time sequence): the more one person was autonomous, the more she/he used the web, and the more she/he used the web, the more autonomous she/he became (Castells et al. 2007). This is a major empirical finding. Because if the dominant cultural trend in our society is the search for autonomy, and if the Internet powers this search, then we are moving toward a society of assertive individuals and cultural freedom, regardless of the barriers of rigid social organizations inherited from the Industrial Age. From this Internet-based culture of autonomy have emerged a new kind of sociability, networked sociability, and a new kind of sociopolitical practice, networked social movements and networked democracy. I will now turn to the analysis of these two fundamental trends at the source of current processes of social change worldwide.

The Rise of Social Network Sites on the Internet

Since 2002 (creation of Friendster, prior to Facebook) a new socio-technical revolution has taken place on the Internet: the rise of social network sites where now all human activities are present, from personal interaction to business, to work, to culture, to communication, to social movements, and to politics.

Social Network Sites are web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system.

(Boyd and Ellison 2007, 2)

Social networking uses, in time globally spent, surpassed e-mail in November 2007. It surpassed e-mail in number of users in July 2009. In terms of users it reached 1 billion by September 2010, with Facebook accounting for about half of it. In 2013 it has almost doubled, particularly because of increasing use in China, India, and Latin America. There is indeed a great diversity of social networking sites (SNS) by countries and cultures. Facebook, started for Harvard-only members in 2004, is present in most of the world, but QQ, Cyworld, and Baidu dominate in China; Orkut in Brazil; Mixi in Japan; etc. In terms of demographics, age is the main differential factor in the use of SNS, with a drop of frequency of use after 50 years of age, and particularly 65. But this is not just a teenager's activity. The main Facebook U.S. category is in the age group 35–44, whose frequency of use of the site is higher than for younger people. Nearly 60 percent of adults in the U.S. have at least one SNS profile, 30 percent two, and 15 percent three or more. Females are as present as males, except when in a society there is a general gender gap. We observe no differences in education and class, but there is some class specialization of SNS, such as Myspace being lower than FB; LinkedIn is for professionals.

Thus, the most important activity on the Internet at this point in time goes through social networking, and SNS have become the chosen platforms for all kind of activities, not just personal friendships or chatting, but for marketing, e-commerce, education, cultural creativity, media and

entertainment distribution, health applications, and sociopolitical activism. This is a significant trend for society at large. Let me explore the meaning of this trend on the basis of the still scant evidence.

Social networking sites are constructed by users themselves building on specific criteria of grouping. There is entrepreneurship in the process of creating sites, then people choose according to their interests and projects. Networks are tailored by people themselves with different levels of profiling and privacy. The key to success is not anonymity, but on the contrary, self-presentation of a real person connecting to real people (in some cases people are excluded from the SNS when they fake their identity). So, it is a self-constructed society by networking connecting to other networks. But this is not a virtual society. There is a close connection between virtual networks and networks in life at large. This is a hybrid world, a real world, not a virtual world or a segregated world.

People build networks to be with others, and to be with others they want to be with on the basis of criteria that include those people who they already know (a selected sub-segment). Most users go on the site every day. It is permanent connectivity. If we needed an answer to what happened to sociability in the Internet world, here it is:

There is a dramatic increase in sociability, but a different kind of sociability, facilitated and dynamized by permanent connectivity and social networking on the web.

Based on the time when Facebook was still releasing data (this time is now gone) we know that in 2009 users spent 500 billion minutes per month. This is not just about friendship or interpersonal communication. People do things together, share, act, exactly as in society, although the personal dimension is always there. Thus, in the U.S. 38 percent of adults share content, 21 percent remix, 14 percent blog, and this is growing exponentially, with development of technology, software, and SNS entrepreneurial initiatives. On Facebook, in 2009 the average user was connected to 60 pages, groups, and events, people interacted per month to 160 million objects (pages, groups, events), the average user created 70 pieces of content per month, and there were 25 billion pieces of content shared per

month (web links, news stories, blogs posts, notes, photos). SNS are living spaces connecting all dimensions of people's experience. This transforms culture because people share experience with a low emotional cost, while saving energy and effort. They transcend time and space, yet they produce content, set up links, and connect practices. It is a constantly networked world in every dimension of human experience. They co-evolve in permanent, multiple interaction. But they choose the terms of their co-evolution.

Thus, people live their physical lives but increasingly connect on multiple dimensions in SNS.

Paradoxically, the virtual life is more social than the physical life, now individualized by the organization of work and urban living.

But people do not live a virtual reality, indeed it is a real virtuality, since social practices, sharing, mixing, and living in society is facilitated in the virtuality, in what I called time ago the "space of flows" (Castells 1996).

Because people are increasingly at ease in the multi-textuality and multi-dimensionality of the web, marketers, work organizations, service agencies, government, and civil society are migrating massively to the Internet, less and less setting up alternative sites, more and more being present in the networks that people construct by themselves and for themselves, with the help of Internet social networking entrepreneurs, some of whom become billionaires in the process, actually selling freedom and the possibility of the autonomous construction of lives. This is the liberating potential of the Internet made material practice by these social networking sites. The largest of these social networking sites are usually bounded social spaces managed by a company. However, if the company tries to impede free communication it may lose many of its users, because the entry barriers in this industry are very low. A couple of technologically savvy youngsters with little capital can set up a site on the Internet and attract escapees from a more restricted Internet space, as happened to AOL and other networking sites of the first generation, and as could happen to Facebook or any other SNS if they are tempted to tinker with the rules of openness (Facebook tried to make users pay and retracted within days). So, SNS are often a business, but they

are in the business of selling freedom, free expression, chosen sociability. When they tinker with this promise they risk their hollowing by net citizens migrating with their friends to more friendly virtual lands.

Perhaps the most telling expression of this new freedom is the transformation of sociopolitical practices on the Internet.

Communication Power: Mass-Self Communication and the Transformation of Politics

Power and counterpower, the foundational relationships of society, are constructed in the human mind, through the construction of meaning and the processing of information according to certain sets of values and interests (Castells 2009).

Ideological apparatuses and the mass media have been key tools of mediating communication and asserting power, and still are. But the rise of a new culture, the culture of autonomy, has found in Internet and mobile communication networks a major medium of mass self-communication and self-organization.

The key source for the social production of meaning is the process of socialized communication. I define communication as the process of sharing meaning through the exchange of information. Socialized communication is the one that exists in the public realm, that has the potential of reaching society at large. Therefore, the battle over the human mind is largely played out in the process of socialized communication. And this is particularly so in the network society, the social structure of the Information Age, which is characterized by the pervasiveness of communication networks in a multimodal hypertext.

The ongoing transformation of communication technology in the digital age extends the reach of communication media to all domains of social life in a network that is at the same time global and local, generic and customized, in an ever-changing pattern.

As a result, power relations, that is the relations that constitute the foundation of all societies, as well as the processes challenging institutionalized power relations, are increasingly shaped and decided in the communication field. Meaningful, conscious communication is what makes humans human. Thus, any major transformation in the technology and organization of communication is of utmost relevance for social change. Over the last four decades the advent of the Internet and of wireless communication has shifted the communication process in society at large from mass communication to mass self-communication. This is from a message sent from one to many with little interactivity to a system based on messages from many to many, multimodal, in chosen time, and with interactivity, so that senders are receivers and receivers are senders. And both have access to a multimodal hypertext in the web that constitutes the endlessly changing backbone of communication processes.

The transformation of communication from mass communication to mass self-communication has contributed decisively to alter the process of social change. As power relationships have always been based on the control of communication and information that feed the neural networks constitutive of the human mind, the rise of horizontal networks of communication has created a new landscape of social and political change by the process of disintermediation of the government and corporate controls over communication. This is the power of the network, as social actors build their own networks on the basis of their projects, values, and interests. The outcome of these processes is open ended and dependent on specific contexts. Freedom, in this case freedom of communicate, does not say anything on the uses of freedom in society. This is to be established by scholarly research. But we need to start from this major historical phenomenon: the building of a global communication network based on the Internet, a technology that embodies the culture of freedom that was at its source.

In the first decade of the twenty-first century there have been multiple social movements around the world that have used the Internet as their space of formation and permanent connectivity, among the movements and with society at large. These networked social movements, formed in the social networking sites on the Internet, have mobilized in the urban space and in the institutional space, inducing new forms of social movements that are

the main actors of social change in the network society. Networked social movements have been particularly active since 2010, and especially in the Arab revolutions against dictatorships; in Europe and the U.S. as forms of protest against the management of the financial crisis; in Brazil; in Turkey; in Mexico; and in highly diverse institutional contexts and economic conditions. It is precisely the similarity of the movements in extremely different contexts that allows the formulation of the hypothesis that this is the pattern of social movements characteristic of the global network society. In all cases we observe the capacity of these movements for self-organization, without a central leadership, on the basis of a spontaneous emotional movement. In all cases there is a connection between Internet-based communication, mobile networks, and the mass media in different forms, feeding into each other and amplifying the movement locally and globally.

These movements take place in the context of exploitation and oppression, social tensions and social struggles; but struggles that were not able to successfully challenge the state in other instances of revolt are now powered by the tools of mass self-communication. It is not the technology that induces the movements, but without the technology (Internet and wireless communication) social movements would not take the present form of being a challenge to state power. The fact is that technology is material culture (ideas brought into the design) and the Internet materialized the culture of freedom that, as it has been documented, emerged on American campuses in the 1960s. This culture-made technology is at the source of the new wave of social movements that exemplify the depth of the global impact of the Internet in all spheres of social organization, affecting particularly power relationships, the foundation of the institutions of society. (See case studies and an analytical perspective on the interaction between Internet and networked social movements in Castells 2012.)

Conclusion

The Internet, as all technologies, does not produce effects by itself. Yet, it has specific effects in altering the capacity of the communication system to be organized around flows that are interactive, multimodal, asynchronous or synchronous, global or local, and from many to many, from people

to people, from people to objects, and from objects to objects, increasingly relying on the semantic web. How these characteristics affect specific systems of social relationships has to be established by research, and this is what I tried to present in this text. What is clear is that without the Internet we would not have seen the large-scale development of networking as the fundamental mechanism of social structuring and social change in every domain of social life. The Internet, the World Wide Web, and a variety of networks increasingly based on wireless platforms constitute the technological infrastructure of the network society, as the electrical grid and the electrical engine were the support system for the form of social organization that we conceptualized as the industrial society. Thus, as a social construction, this technological system is open ended, as the network society is an open-ended form of social organization that conveys the best and the worse in humankind. Yet, the global network society is our society, and the understanding of its logic on the basis of the interaction between culture, organization, and technology in the formation and development of social and technological networks is a key field of research in the twenty-first century.

We can only make progress in our understanding through the cumulative effort of scholarly research. Only then we will be able to cut through the myths surrounding the key technology of our time. A digital communication technology that is already a second skin for young people, yet it continues to feed the fears and the fantasies of those who are still in charge of a society that they barely understand.

Selected Bibliographic References

These references are in fact sources of more detailed references specific to each one of the topics analyzed in this text.

Abbate, Janet.

A Social History of the Internet.
Cambridge, MA: MIT Press,
1999.

Boyd, Danah M., and Nicole B.
Ellison.

“Social Network Sites:
Definition, History, and
Scholarship.” *Journal
of Computer-Mediated
Communication* 13, no. 1
(2007).

Cardoso, Gustavo, Angus
Cheong, and Jeffrey Cole (eds).
*World Wide Internet: Changing
Societies, Economies and
Cultures.* Macau: University
of Macau Press, 2009.

Castells, Manuel.

*The Information Age: Economy,
Society, and Culture.* 3
vols. Oxford: Blackwell,
1996–2003.

———. *The Internet Galaxy:
Reflections on the Internet,
Business, and Society.*
Oxford: Oxford University
Press, 2001.

———. *Communication Power.*
Oxford: Oxford University
Press, 2009.

———. *Networks of Outrage and
Hope: Social Movements in
the Internet Age.* Cambridge,
UK: Polity Press, 2012.

Castells, Manuel, Imma Tubella,
Teresa Sancho, and Meritxell
Roca.

La transición a la sociedad red.
Barcelona: Ariel, 2007.

Hilbert, Martin, and Priscilla
López.

“The World’s Technological
Capacity to Store,
Communicate, and Compute
Information.” *Science* 332,
no. 6025 (April 1, 2011):
pp. 60–65.

Papacharissi, Zizi, ed.

*The Networked Self: Identity,
Community, and Culture on
Social Networking Sites.*
Routledge, 2010.

Rainie, Lee, and Barry Wellman.

*Networked: The New Social
Operating System.*
Cambridge, MA: MIT Press,
2012.

Trajectory Partnership (Michael
Willmott and Paul Flatters).

*The Information Dividend: Why
IT Makes You “Happier.”*
Swindon: British Informatics
Society Limited, 2010. [http://
www.bcs.org/upload/pdf/
info-dividend-full-report.pdf](http://www.bcs.org/upload/pdf/info-dividend-full-report.pdf)

Selected Web References

Used as sources for analysis in the chapter

Agência para a Sociedade do Conhecimento.

“Observatório de Sociedade da Informação e do Conhecimento (OSIC).” http://www.unic.pt/index.php?option=com_content&task=view&id=3026&Itemid=167

BCS, The Chartered Institute for IT.

“Features, Press and Policy.” <http://www.bcs.org/category/7307>

Center for the Digital Future. *The World Internet Project*

International Report. 4th ed. Los Angeles: USC Annenberg School, Center for the Digital Future, 2012. http://www.worldinternetproject.net/_files/_Published/_oldis/770_2012wip_report4th_ed.pdf

ESRC (Economic & Social Research Council).

“Papers and Reports.” Virtual Society. <http://virtualsociety.sbs.ox.ac.uk/reports.htm>

Fundación Orange.

“Análisis y Prospectiva: Informe e España.” Fundación Orange. <http://fundacionorange.es/fundacionorange/analisisprospectiva.html>

Fundación Telefónica.

“Informes SI.” Fundación Telefónica. http://sociedadinformacion.fundacion.telefonica.com/DYC/SHI/InformesSI/seccion=1190&idioma=es_ES.do

IN3 (Internet Interdisciplinary Institute). UOC.

“Project Internet Catalonia (PIC): An Overview.” Internet Interdisciplinary Institute, 2002–07. <http://www.uoc.edu/in3/pic/eng/>

International Telecommunication Union.

“Annual Reports.” http://www.itu.int/osg/spu/sfo/annual_reports/index.html

Nielsen Company.

“Reports.” 2013. <http://www.nielsen.com/us/en/reports/2013.html?tag=Category:Media+and+Entertainment>

Oxford Internet Surveys.

“Publications.” <http://microsites.oii.ox.ac.uk/oxis/publications>

Pew Internet & American Life Project.

“Social Networking.” Pew Internet. <http://www.pewinternet.org/Topics/Activities-and-Pursuits/Social-Networking.aspx?typeFilter=5>

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