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From Digital Divides to Digital Inequalities

Francesco Amoretti
University of Salerno, Italy

Clementina Casula
University of Cagliari, Italy

INTRODUCTION

Concerns about inequalities deriving from the penetration of new information and communication technologies (ICTs) have only recently become a widely debated issue in industrial societies. Until the 1980s the diffusion of ICT was mainly considered a matter of technological innovation regarding selected fields and limited territorial areas (such as the military and academic centers in the U.S.). Gradually, scholars started to point to the rise of an *information society* based on the production of information as the crucial resource to manage coordination and control of increasingly interconnected organizational systems (Masuda, 1981; Beniger, 1986; Toffler, 1990). The expression offered an alternative to the otherwise negative definitions used by scholars since the 1970s to identify changes occurring in Western democratic societies ('post-capitalism', 'post-industrialism', 'post-materialism', etc.) (Touraine, 1969; Bell, 1973).

The debate over the information society, enthusiastically greeted by some authors (Negroponte, 1995) and critically observed by others (Castells, 1996, 2001; May, 2002; Mattelart, 2003), witnessed since the mid-1990s widespread success in public and political debates (Thomas, 1996). In front of the fast and capillary diffusion of ICTs virtually to all sectors of private and public life, most Western countries' governments and international organizations have inserted within their policy agendas a reference to the unavoidability, if not desirability, of a radical shift to the new information age. The rhetoric accompanying those discourses often presents the expansion of the ICT sector—and especially the Internet—as offering citizens returns at both the individual and collective level, in the form of greater access to goods and services, increased levels of social and civic participation, and wider economic and working opportunities for all. Presented as a crucial means to participate in the new global information society, ICTs become recognized as a resource that should be fairly distributed among citizens, albeit on the basis of different arguments (ranging from social equity to economic efficiency or global development concerns), often leading to opposite conclusions on the scope for redistributive interventions (Strover, 2003; Selwyn, 2007).

BACKGROUND

The first framing of the issue of digital inequalities was in terms of a *digital divide* indicating the distance between the 'haves' and the 'have nots' in access to ICTs, mainly with reference to the Internet (NTIA, 1999). At the territorial level the analysis focused on the wide gap existing between most industrialized and Third World countries in access to ICTs (*global digital divide*), although it was also applied at the sub-national level (with reference to the disadvantages of peripheral or rural areas): in both cases existing gaps were mainly explained with reference to the unequal spatial distribution of socio-economic wealth between centers and peripheries. The measurement of *social digital divides* (i.e., gaps between the different social groups) was mainly considered within countries, because of the peculiarities of different socio-institutional contexts.

The widely registered existence of unequal access to ICTs was differently interpreted. We can draw an ideal type, analytically distinguishing three positions on the debate, ranging from a more to a less optimistic view, and consequently drawing an increasingly active role for policy intervention: (a) ICT diffusion may particularly favor disadvantaged groups; (b) ICT distribution becomes increasingly even with their diffusion; and (c) ICT diffusion follows and reinforces existing inequalities.

The first position holds an optimistic view both in terms of equal access to ICTs and the opportunities that free market developments in the ICT sector may offer in terms of redressing inequalities actually structuring societies at different levels. An example of this position can be found in the so-called *leap-frog hypothesis,* referring to the fact that poor countries investing in the latest ICTs may develop into an information society skipping some of the difficult stages (in terms of political, economic, and social problems) faced by developed countries that heavily invested in older information technology (Butler, 1999; James, 2001). Another example is offered by those arguments stressing the *death of distance* created by ICTs, in terms of improving the quality of life, particularly for disadvantaged individuals or communities in terms of offering new services (empowering inhabitants of peripheral or disadvantaged areas, women having to reconcile work and family) and enhancing civic participation (the *mobilization hypothesis* refers to the role of ICTs in helping

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citizens actually marginalized from their political system to get informed, organize, or engage in public life).

The second position interprets the diffusion of ICTs as following a 'natural path', already undertaken by other mass media (telephone, radio, TV). Initially access to the new technology is restricted to an *élite,* with a large divide between the 'haves' and the 'have-nots', but with time its increasing penetration within society progressively reduces gaps. The *normalization thesis* is based on the idea that a series of factors linked with the development of technology (increasingly lower costs, user-friendly access, differentiated contents) will create a saturation in the market allowing 'have-not' groups to access innovation. From this view, the role played by processes of liberalization of the ICT sector, reducing the digital divide due to increased competition in the telecommunication market, is often praised (OECD, 2001; Dutta & Mia, 2007). However a limited contribution to governmental action is also allowed as far as it enhances this path, through policy measures aiming to facilitate the development of the ICT sector (infrastructure building, facilitated connections in schools and other public institutions, introduction of digital alphabetization in education programs) and market liberalization (regulatory actions to grant free competition).

The third position, identifiable with the *stratification thesis,* argues that there is a strong positive relation between distribution of access to ICTs and the main social inequalities related to different variables: economic wealth, education, gender, location, age, and ethnicity (Norris, 2001). This perspective revives the *knowledge gaps model* (Tichenor, Donohue, & Olien, 1970), in that it argues that the segments of population with the higher socio-economic status tend to have easier access to ICTs, and thus to knowledge, than those with a lower status and that, with time, this increases distance between the two groups. From this perspective governmental action will be fundamental in devising policies to reduce digital divides, specifically targeted for disadvantaged groups (for instance with specific services for SMEs or rural communities, or vocational training courses for women or the elderly). The inclusion of the 'digital divide' issue in the policy agendas of most Western governments during the 1990s has also been related to the wider emphasis on social inclusion legitimized by 'New-Left' governments at that time in power in the wealthiest countries (Selwyn, 2004).

THE INCREASING COMPLEXITY OF DIGITAL INEQUALITIES STUDIES

The differences between the positions enounced reveal an increasingly rich and complex picture of the debate on inequalities and ICTs, as their diffusion further develops and a body of data and literature goes more thoroughly into the matter (Van Dijk & Hacker, 2003).

The first position has the merit of having emphasized the relevance of investing in innovation, information, and knowledge as crucial sectors for a development considered not only in terms of growth, but also as a fairer distribution of resources at the global and social level. In so doing, it builds upon initial enthusiasm on the potentials of ICT, considered as an intrinsic democratic medium because of the logic of its networked structure, leading to a reduction in social differences and space-time coordinates. However the rhetoric over the democratic potential of the rising information age must be tempered by the reality that its effects are benefiting a limited part of the world's population (OECD, 2001; Norris, 2001). Findings also suggest that the countries with strongly developed information societies are those that invested heavily in early communications infrastructures and reaped economic benefits that propelled them forward in development (Howard, 2007).

The fact that the age curves usually show increasing access of younger generations to ICTs, due to the lowering of diffusion costs of the technology and the growing digital alphabetization of societies, has been interpreted as a confirmation of the 'normalization thesis' (Moschella & Atkinson, 1998). The thesis, arguing that the diffusion of technologies is followed by spillover effects and positive externalities, builds on the analogy with the case of radio and television. However, while the abilities needed to use the 'old media' are quite intuitive, they are more demanding in the case of ICTs. To avoid falling in a technological determinism fallacy, the study of digital inequalities also must consider how, beyond access, the use of ICTs relates to the different social groups and institutional contexts considered (Wilson, Wallin, & Reiser, 2003; Carter Ching, Basham, & Jang, 2005).

The third position contributed to the identification of a plurality of digital divides related with social inequalities, showing that they need to be considered from a multidimensional perspective (Bertot, 2003). However, its reference to an idea of 'strong media' has as its main drawback the assignment of a relatively passive role to social actors, which does not allow acknowledgment of the relevance of exceptions (as in the case of gender divides, the movement of *cyberfeminism* or data relative to women's overtaking in some countries; Plant, 1996; Tsaliki, 2001). Those difficulties seem to be related to the main limits of the initial framing of the debate on inequalities and ICTs. On the one hand id the reference only to 'access' to ICTs, considering information as something physical that one can easily accumulate or redistribute, as in the mathematical model of communication (Shannon & Weaver ,1949). On the other hand is the consideration of inequalities only in terms of 'haves' and 'have nots', referring to an ideal concept of 'simple equality' as a distributive condition inadequate to address the issue of inequality with reference to a plurality of social spheres (Walzer, 1983).

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