

The Digital Divide and Rule: Grappling with the New Rhetoric of Development

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The widening of the global "digital divide" challenges the advancement of "Information Societies." The utilization of the Internet among nations does not necessarily profit majority of world's people. Inquiries on who are using it and how it affects societies dominate the current discourses. There exists an imbalance in the magnitude and spread of access to the Internet between the Northern and Southern countries. For instance, developing countries absorb much of the bandwidth connections. Direct South to South connection is virtually non-existent. Consequently, the post-dotcom era provides a battleground for the technological and economic determinists in presenting the most feasible path to development. The former believe that there is a general pattern of technical progress, anchored on the neo-liberal strategy of technological diffusion, which serves as the 'messiah' of developing countries. Economic determinists, on the other side, are fixated on comprehending the economic underpinnings of the digital chasm. Amidst this debate, a "Third Way" surfaces along with the growing global consensus about the role of grassroots people and nongovernmental organizations. The 'hard-knocks' position prides itself as the panacea to the flaws of technological determinism and the 'rigidity' of economic determinists' reasoning.

The coming of Information Society has been likened to the profound movement from agrarian to industrial societies affecting whole aspects of economic, social, and cultural life. As in the past, the emergence of a new society creates new challenges and opportunities. Information and communication technologies (ICT) have the potential to help advance social development but, at the same time, they pose serious challenges—most notably, the "digital divide."

The Digital Divide

Digital divide is often characterized as the gap within and between societies in the access to information and communications networks; it's a divide between the so-called "information haves" and "information have-nots."

Table 1 shows the percentages of population in some countries that have access to the Net. Those with more than 50 percent of their population accessing the network are all developed countries. But not all

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Table 1. Percentage of population using the Internet in some countries

PERCENTAGE OF POPULATION USING THE INTERNET (%)	
Iceland	70
Sweden	68
Netherlands	61
USA	59
UK	57
Australia	54
South Korea	54
Taiwan	54
Canada	53
Finland	52
Singapore	52
Japan	44
Germany	39
France	28
Malaysia	25
Israel	17
Russia	12
Brazil	8
Philippines	8
South Africa	7
China	4
Indonesia	2
Thailand	2
India	1
Iraq	0.5
Vietnam	0.5
Ethiopia	0.02

Source: NUA 2003

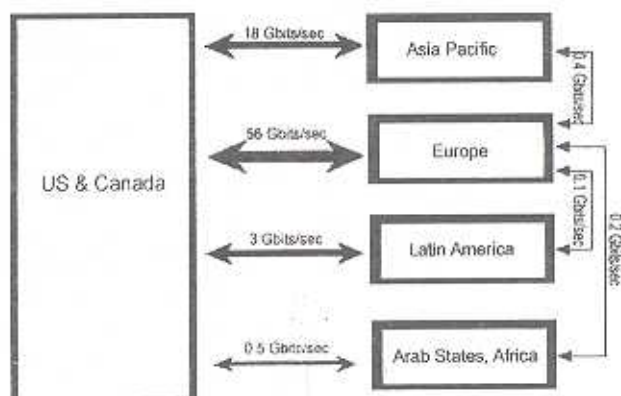
developed countries have populations adopting to the medium by at least 50 percent. Japan, Germany, and France are examples. This suggests that there are reasons other than financial capability in the deployment of technology.

In stark contrast with the high degree of access in developed countries are the single-digit (if not near zero) percentages of population access in the developing (like India, Iraq, Vietnam and Philippines) and least developed countries (like Ethiopia).

There are also differences in the magnitude of access. If the "information highway" is the appropriate metaphor for the Internet, then access entails using the widest available highways for some and narrower highways (if not just alleys) for others. In terms of geographic lag, the bandwidth connections capture the disparities (Figure 1). From North

America where network nodes are concentrated, Internet traffic moves to Europe at 56 Gigabits per second, in sharp contrast to US-Africa at 0.5 Gigabits per second. Direct South-South connection is virtually absent.

Figure 1. Bandwidth connection to and from North America

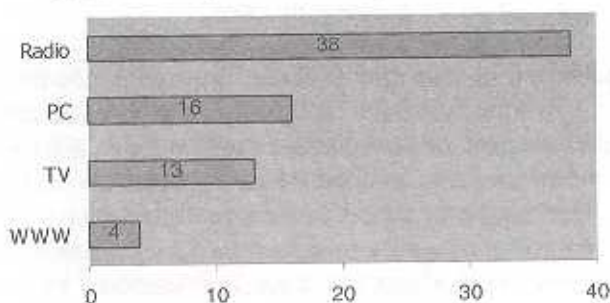


Source: ITU, 2001

Generally, the economically rich and those with strong state sponsorship top the list of high Internet connectivity, while the rest of world struggle to get barest electronic connectivity.

The hopes of bridging the digital divide, especially for technological determinists and other cheerleaders of technology, rest on the assumption that the present rate of technology penetration will continue and that barriers to access (if any) are only minimal. Figure 2 details the widespread acceptance of Internet compared with other media.

Figure 2. Widespread Acceptance of Technology Over Time:
Years from Inception to Reaching 50 million Users

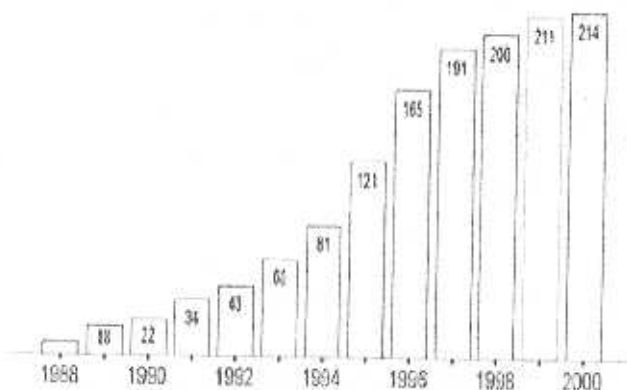


Source: The Economist, 1998

Compared with radio, personal computer, and television, which took 38, 16, and 13 years respectively to reach 50 million users, the worldwide web (Internet) took only four years to gain acceptance by 50 million users. However, the downside in this picture is that it took longer for the personal computer (PC), the dominant means of accessing the Net, to reach 50 million users than the television. So, as it is, access to the Web might have started with a higher base to begin with: PC users are inclined to get to the Net anyway. The leap from personal computer to the Net is not as high as the leap from radio to PC.

The wide spread of the Internet to various countries is another phenomenon to contend with (Figure 3). In 1988, only eight countries were connected to the US National Science Foundation Internet backbone. A decade later this had grown to 200, a 25-fold increase. By 2000, Internet is accessed from 214 countries.² Such spread, however, does not necessarily translate into usage for the vast majority of world's population.

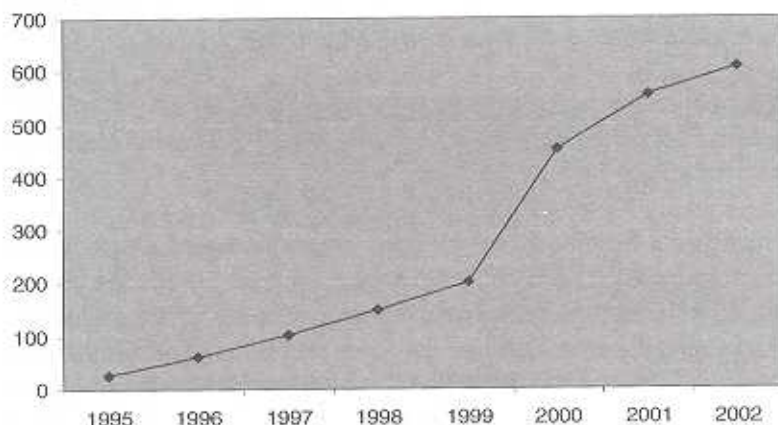
Figure 3. Spread of the Internet to Countries, 1988-2001



Source: ITU, 2001

In fact, even at that rate of spread in various countries, with an estimated 605.6 million people online as of September 2002², barely 10 percent of the world's total population access Internet. But credit it to the dot-com boom (now dot-gone!) in the late 1990s, there has been a surge of access from 201 million users in 1999 to 451 million in 2000, a 124 percent increase of usage (Figure 4). From 1995 (25 million) to 2002 (605.6 million), there is a 2,322.4 percent increase. Can this rate of increase be sustained to benefit developing and least developed countries

Figure 4. Number (in millions) of World's Internet Users from 1995-2002



Source: NUA, 2003

with the vast majority of their population unable to afford the barest resources needed to access the Net?

The rapid growth of the Internet has been the source of unbridled enthusiasm among technological determinists and cheerleaders of the technology. This has, however, mostly kept some people from paying attention to the social gaps that come with the use of the medium. Availability of the Net to people does not necessarily entail its active utilization.

While access is an important measure, it also matters who are using the Internet, under what circumstances, for what purpose, and how its use affects society in non-technological terms.

The Digital Divide as a Social Gap

The digital gap, no doubt, has to do with the profound technological change in society. Yet, in characterizing the divide *solely* as one between those with and without access to sophisticated communications network, it understates how the gap is conditioned by traditional social divisions like class, income, education, gender, age, ethnicity, and socio-geography. A 1999 study, for instance, profiles the average Filipino Internet user as a 27-year-old, bachelor-degree holder male.³ Although more recent but cursory data indicate a shift towards a younger demographic profile of

Internet users in the Philippines, and isolated cases of females marginally outnumbering males (like in the UK) have been reported, young, middle-class, educated males continue to dominate the Web.

Information technology has systematically excluded low-income, less educated people, the old, many ethnic minorities, and those far from cities and telecommunications infrastructures.

Urban-rural distinction would figure prominently, especially in the Philippines where 70 percent of Filipino Net users is in Metro Manila and 30 percent is in the provinces.⁴ Even in Europe, there's a socio-geographic gap in network access; countries in Southern Europe have less computer and Internet penetration than their Northern European counterparts.

In the USA, ethnic differences figure as Asian-Americans outnumber Latinos (who in turn outnumber American blacks) in Internet access. Asian Americans are ahead of Hispanics and African Americans in adopting to the use of the Internet.⁵ Some observers, however, believe that such complication in Net access is attributable to income and education. Asian Americans have relatively better income and education than Americans of other ethnic origins.

Consistently worldwide, education appears as a significant factor in people's adoption of information technology. Educational inadequacies pose as a disabling condition to access to the technology. As William Drake, director of the Project on the Information Revolution and World Politics at the Carnegie Endowment for International Peace, puts it, "access to education and technological training is a fundamental prerequisite of the transition to knowledge societies".⁶ Access to the technology presupposes functional, if not technical, literacy.

The dominance of a certain language on the Net is another compounding factor in the digital divide. In July 2000, 2.9 million links to secure servers were in English, constituting 89.5 percent of the total connections (Figure 5). German follows with 31,785 links, French with 30,954 links, Spanish with 26,512 links, and Japanese with 22,856 links. Thus, only about 10 percent of contents on the Web is non-English.⁷ English is the Net's Esperanto. This situation conditions the dependence of some countries like the Philippines mainly on the US in the access to contents of the Internet.

Figure 5. English vs. other languages used in the Internet
in terms of links to secure servers



Source: OECD, 2001

If the dominance of the English language on the Net is indeed an anomaly, the Net itself is more anomalous in the development of nations. While developing countries account for 85 percent of the world's population, they represent only 20 percent of Internet users.⁹ Their virtual exclusion from the emerging Information Society is not only due to their technological disability but also because traditional social barriers in terms of class, income, education, gender, age, ethnicity, and socio-geography persist in their societies. The digital divide is as much social as it is technological.

Of Bridges and Development: Two Positions

Two broad approaches to bridge the digital divide have emerged: "technological determinism" and "economic determinism." Both have nuances ranging from the simplistic to the sophisticated, but they seem to gravitate towards two major tendencies: (1) the digital divide could be bridged from the "supply side" of technology—the availability of the technology determines its use; (2) the digital divide is ultimately an economic gap; erase the economic gap between the rich and the poor, and you'll erase the gap between the "information haves" and "information have-nots." If these competing tendencies sound familiar, it's because of their conceptual affinities with the development discourses (or "rhetoric" in a non-pejorative sense) of neo-liberalism and economism.

The most simplistic, but nonetheless persistent, approach to the digital divide is summarized in the technocratic slogan, "Build the infrastructure first, and the use will follow."⁹ While this is simplistic and oblivious to non-technological barriers we have outlined above, the position is resurrected in technocratic schemes which aim to implement

plans (say, computerization) from “top to bottom” of a bureaucracy. It usually comes at high human cost, operating on the unwarranted assumption that the seemingly benign introduction of a technology like computer automatically translates into the improvement in productivity, efficiency and well-being of people concerned.

Another expression of the tech-determinist approach to bridging the digital divide is subtly lodged in the argument promoting the Net infrastructure via the neo-liberal strategy of competing market forces. As Clay Shirky writes for the techno-lifestyle magazine *Wired*, “if the world’s poor are to be served by a better telecommunications infrastructure, there are things that need to be done now: privatize state telcos, introduce real competition, reduce corruption. Economic dynamism is a far better way to lay lines than any amount of erroneous and incomplete assertions on behalf of the poor.”¹⁰ Shirky was reacting to an inaccurate claim that half of the world’s population has not even made any phone call—something that could have been true in early 1990s but certainly not today. The closing of the digital gap, as neo-liberals perceive it, is a direct consequence of a free market where—allegedly—people’s income and standard of living increase and technology products are made available. It is only a matter of time before everyone on earth gets wired; technical progress, according to the determinist, is an inescapable necessity. The deterministic technological discourse, as Andrew Feenberg outlines, gravitates towards these two points:¹¹

1. The pattern of technical progress is fixed, moving along one and the same track in all societies. Although political, cultural, and other factors may influence the pace of change, they cannot alter the general line of development, which reflects the autonomous logic of discovery.

2. Social organization must adapt to technical progress at each stage of development according to ‘imperative’ requirements of technology. This adaptation executes an underlying technical necessity.

Development is propelled by technology and it can’t be stopped. As Jon Katz of *Wired* Magazine believes, “neither technology nor the essential human desire for change can be suppressed.” For the technological determinist, because of extraneous factors like control of the market, society is simply making a brief stop-over before it’s going to leap over the digital divide.

On the other hand, economic determinists approach the digital divide from the perspective that all social chasms are determined by economic conditions: "Remove the underlying economic basis of the digital divide, and the gap disappears." In practice, this approach to the digital divide oscillates between undermining the seriousness of the gap and ignoring it altogether. Nothing could possibly be more serious than the gap between the rich and the poor, and if there is indeed a "digital divide," it is reducible to the economic gap. According to the economic determinist, while there may be non-economic barriers to access, they easily yield once major economic hurdles are overcome.

The cost of computer and Internet access is often cited as the economic nature of the digital divide. The gap in computer ownership and Internet access between lower and higher income groups is such that the latter always have access to information technology than the former. Only 20 percent of those with incomes less than \$15,000 have access to a computer at home; less than 13 percent of them have Internet access. In contrast, about 50 percent of those with incomes greater than \$25,000 own computers; over 45 percent of them have Internet access.¹² While income indeed is a major barrier to access, economism tends to ignore that age and training, among other factors, are major hurdles for people to *actually* access the Net, even if they have high disposable income. Nor does access mean continued use, as Net users drop out of frustrations with content, skills, social support, or with the technology itself. Economism subordinates the digital divide to the gap between the rich and the poor, although it is clear that the rich, too, are hampered by some barriers to actual access and meaningful engagement of the technology.

If the deterministic economic position takes Net access as following from the availability of the infrastructure, economism is not diametrically opposed to technologism. Their difference lies in their assumptions: technological determinism relies on a "free market" to generate the technological infrastructure that bridges the digital divide, whereas economic determinism—when it acknowledges the digital chasm—depends on structural initiatives from the state to wish away the issue.

By no means are all these distinctions and categories neat and tidy, especially when the discourse is tied to social development. They provoke ambivalence, especially among those who are ideologically noncommittal. "Digital divide" and "Information Society" are nascent concepts screaming

to be understood, and their definitions would at times depend on who's defining them.

Some sectors question whether these terms are, in the first place, useful in addressing pressing human needs. Do they really describe the prevailing global changes in social structures and processes? Communication Rights in the Information Society (CRIS), a London-based international organization that help coordinate civil society representations in the World Summit on Information Society, maintains that these terms are not ideologically neutral. Propelled by neo-liberal economic schemes of free trade, privatization, deregulation, and structural adjustments, these concepts play a key role in advancing the hegemony of global powers. In particular, "information society" makes possible the rapid movement of capital and goods, linking corporate centers in the South with markets in the North.¹³

No doubt, "Information Society" is an ambiguous development. To some, it brings opportunities of communication and resources otherwise unavailable outside the online information networks. To others, it presents further threat of alienation from resources, human labor, and communities. The public tend to be divided on the issue between the techno-triumphalism of neo-liberals and technological determinists on the one hand and rejectionist pessimism of economic determinists on the other. Grappling independently with the development of information society and its concomitant problems provides even harder intellectual and practical challenges.

Discourses of Development, Development of Discourses: Towards a Third Position

The holding of the UN-sponsored World Summit on Information Society¹⁴ in Geneva this year and in Tunis (in 2005) will precipitate the global recognition of the digital divide as a serious social problem. There is an increasingly global realization that development is impossible if the digital divide is not bridged. It is the imperative of nations to close the gap between the "information haves" and "information have-nots," as the access to information networks is increasingly becoming a social, economic, and political requirement. Discourses of development from a whole range of stakeholders—technocrats, neo-liberals, commercial companies, activists, academics—would compete to appropriate the emerging rhetoric

of "Information Society." This development would mean voluminous papers and press releases, briefs, websites and conferences. For stakeholders of social development, it would be more challenging to shift through the overload of information and watch out for the dangers of technological and economic determinism.

On the one hand, there are the forces of the development establishments and the "development experts" from the usual suspects like World Bank policymakers and corporate-sponsored aid institutions who would bring their tough love to the digitally disenfranchised. Economic and technological progress and social development are impossible without painful adjustments in the market. Using cold economic calculus, they approach from one side of the bridge by aggressively promoting the consumption of electronic goods.

If taken uncritically and advanced aggressively, "information society" entails unhampered penetration of information commodities into communities which otherwise would not need them (at least not at the rate champions of information technology would have the whole world believe). This poses the danger of "electronic colonialism" that McPhail describes as "the dependency relationship established by the importation of communication hardware, foreign-produced software, along with engineers, technicians, and related information protocols, that vicariously establish a set of foreign norms, values, and expectations which, in varying degrees, may alter domestic cultures and socialization process."¹⁵ The "digital rule" by suppliers and distributors of information goods is, in fact, at hand. In this scenario, Information Society becomes the locus of electronic colonialism.

On the other hand, there is a reductionist approach that denies the digital divide as a distinct social gap. Information society in this approach is an intellectual fiction perpetuated by technocrats and marketers of technology goods. However, a wholesale dismissal of "Information Society" and its attendant development projects may deny people of access to technological tools that they can meaningfully "own up." Its denial is ideologically delusional.

There is the possibility of a "hard knocks" third position—an equally uncompromising approach that runs through the gamut of the social practice and theorizing by many grassroots activists and nongovernmental

organizations around the world. This third position is a critique of technological determinism. It also veers away from the inflexibility of economic determinism, but at the same time re-emphasizes the traditional social gaps that condition the digital divide and exacerbate human misery.

The "hard knocks" approach advances its own discourse of development by recognizing that society is increasingly built around the interaction between social and technological changes. More importantly, it explores the potentials of wired communities and individuals in sustainable human development. Rather than embrace information technology uncritically, this position looks for an antidote to tendencies of new technologies to override traditional social practices, connections and values. In fact, some of these technologies that Information Society engenders can be focal tools and practices that facilitate an environment congenial to holistic human development.¹⁶

If people choose to engage technology in ways that affirm their aspirations and interests rather than be "drugged" by the technological fantasies and utopian promises of the determinists, Information Society can be a welcome development. But the greater challenge of Information Society is to help provide the communicative infrastructure that generates more of these focal tools and practices. While technological and economic determinisms stand in the way of human development, the third position poses as both an intellectual and a practical project of all stakeholders of information society to overcome the digital divide and rule. ❁

Endnotes

1 International Telecommunications Union, 2001.

2 NUA, 2003.

3 Arroyo, D. 1999).

4 Lallana et al, 1999:16.

5 OECD, 2001:22.

6 Drake, 2000.

7 OECD, 2001:23.

8 *Economist*, 2000.

9 I first heard these very words from some university administrators and most notably from the head of the short-lived Office of the Vice President for Information Technology of the University of the Philippines.

10 Shirky, 2002.

- 11 Feenberg, 1991:122-3.
- 12 Quay, 2001.
- 13 CRIS, 2002.
- 14 There was the World Summit of Sustainable Development in Johannesburg in 2002 that could have taken up many important concerns for the World Summit of Information Society. The digital divide (if unaddressed), for instance, seriously affects prospects of sustainability in social development projects. For some reason, they have not been taken up in the Johannesburg Summit and the UN has determined that there has to be more World Summits. But as World Summits go: lots of talk, lots of tea...
- 15 McPhail, 1987:18.
- 16 Compare Borgmann, 1984.

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