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(De)Politicizing Information Technology: Towards an Inclusionary Perspective

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ABSTRACT

Information Technology (IT) in/for development has become both a catch-all term and an attractive political slogan. In effect IT is hyped as a sort of 'magic wand' that is supposed to eradicate social deprivation and economic disparity almost instantaneously. Admittedly, IT has a key role in the construction of a better economy, society and empowerment of ordinary people in the developing countries. However, its uncritical promotion in communication about policy and political discourse –- without taking into account the social reality that exists in developing countries – is counter-productive. Politically, it enforces certain *closures* which also gives IT an 'apolitical' character, severely undermining diversity of opinions, the space for dissent and the need for democratic scrutiny, all of which are supposed to provide legitimacy for any public policy claiming to have problem-solving strategies. The paper – citing instances from south Asia and from Brazil for its innovative initiative in adopting an inclusionary path – asserts the need for concerted intervention by practitioners of the social sciences to expose and counter the *politics of depoliticization* that creep into the IT-centric imaginary of development.

'When the minister assures us that in near future we would chat with the American farmers about our crops he seems to have lost both his head and the pair of feet to new technology. He has lost his thinking capacity and cannot stand on the ground of his society.' (a farmer-respondent in India)

INTRODUCTION

The fact of the matter is that Information Technology (IT) has come to stay and shape our life in an unprecedented way. It is hardly possible to think of any other phenomenon that has such a formidable, lasting and profound impact. The coming of the Information Revolution, with IT as its infrastructural backbone, has been characterized by the steady ascent of information as the most critical element in development – which, broadly, is a bottom-up process of social transformation, backed up by capacity-building of people, not only in material terms but also in terms of the expansion and intensification of the webs of human relations[1]. In this idea of development information remains at centrestage. The quantity, quality and the nature of the information flow determine the degree to which development will take place. IT has a very important role in this context because it has not only revolutionized the generation, transmission, storage and retrieval of information in a manner that was unimaginable in the past, it also has made the vintage Baconian dictum – 'information is power' – come true. However, when the quantum of power associated with information is so great it invariably produces a lot of publicity-blitz about the transformational potential of IT. The pitch reaches so high as to infuse magical qualities into IT which then are expected to transcend existing problems and frictions in delivering a better society. This trend presents quite an opportunity for social scientists to evaluate IT's role-performance and to look for the *hidden transcript* vis-à-vis its celebration as the be all and end all of 'development'. Acknowledging the power and potential of IT I argue that when it comes to its seductive rhetoric – seeking to convince people about 'IT as the magic wand' – the hidden transcript has much to do with what can be described as the *politics of depoliticization*. This paper, through problematizing IT, calls for an inclusionary perspective in which its immense potential is recognized without, however, relying excessively on its presumed agency. A major premise of this paper is that a massive and extensive 'injection' of technology into societies marked by unequal and non-participatory structural relationships is a cosmetic and self-defeating endeavour that would do more harm than good for the developing world.

[1] While perceiving development in this manner it must be borne in mind that it also has the propensity to turn into a myth. However, I do not subscribe to the post-developmentalist urge to reject it in its totality, even as a concept.

MIRROR IMAGE OR MIRAGE?

Technology generally unleashes a specific kind of power to crush any skeptical and critical expressions and articulations about it. Expanding and enriching the tradition established by Lewis Mumford, Jacques Ellul and the Frankfurt School, Habermas (1984; 1987) in the present reminds us of a power-laden process by which our concerns for values, rights, freedoms and privileges are converted into issues and questions about cost and bureaucratic and technocratic efficiency. This process results, Habermas argues, in the colonization of our imagination, or technically, the *lifeworld* – is composed of activities in social spheres which among others are dedicated to the transmission of cultural norms and the integration of various social spheres. The colonization or technicization of the lifeworld invariably takes its toll – by threatening, minimizing and ending the traces of diversity, dissent, protest and resistance – not only in political institutions but also in aesthetic and expressive institutions. While he did not specifically deal with technology, for Habermas the central question was how can the power of technical control be brought within the range of consensus of acting and transacting citizens.

In our context, it is also important to mention Winner (1986: 98-117) who perceptively wrote about 'mythinformation', a concept intertwined with the animated discussion about the coming of the Information Society, a society which only serves the interests of select social groups seeking to promote computer systems. Winner also coined the revealing phrase 'technological somnambulism' which, by privileging technological agency, blurs normative visions of social reconstruction. Winner provides the much needed clue to the argument in this paper by explaining how technology has become a 'politeia' by gaining in institutional status. In an empirical study of Lesotho, Ferguson (1990) presents us with a remarkable model, the *anti-politics machine*, to explain how 'development' projects can effectively squash political challenges to the system, not just by enhancing administrative power, but by casting political questions as a 'technical problem'. The 'anti-politics machine', Ferguson notes, suspends 'politics' even in the most sensitive political operations 'at the flick of a switch'.

Offering a judicious mix of the conceptual and empirical dimensions, Avgerou and McGrath (2007), in their study of Information Systems (IS) vis-à-vis the development, deployment and the use of the IT, draw upon the Foucauldian perspective on power and knowledge to throw light on the relations of power and technical rationality. They point out that such an

understanding facilitates our understanding in two major ways: first, by paving the way for realistic expectations of the ways, and the extent to which professional interventions may steer the IS innovation process; and second, by developing "our" capacity for assessing the potential effects that IS innovation may have in different social circumstances. The way through this situation has been outlined by Habermas in terms of the public sphere, a space for rational deliberative actions. However, Habermas theorizes the structural transformation of the public sphere in terms of the westcentric reality and the western bourgeois society. This is to be distinguished from the reality that exists in the 'non-western' developing societies in which a vibrant public sphere faces many constraints even before its emergence and growth.

Notwithstanding these insights by their western counterparts, social scientists in developing societies have left the 'official' IT-hype and the associated politics of depoliticization largely unexamined. With few notable exceptions, some of which will be discussed subsequently, the critical literature, amidst the prolific congratulatory literature on IT, has remained mostly confined to the analysis of 'defects' either in 'deployment mode' or in the 'implementation process' or in both. The problem perhaps lies in information itself being conceptualized and analyzed in a way that brings closure to this kind of investigation. Tracing the epistemological roots of such closure we can refer to the notion of *classificational information* suggested Maruyama (1980: 28-29) – the idea that a specific kind of information has an objective meaning which is universally understandable *without reference to other kinds*. Consequently, a typical 'economic perspective' on information evaluates it as the most powerful factor of production and the most valuable resource. A typical 'social perspective' relates information and IT to enhancing consciousness about one's own ability among members of society. A typical 'cultural perspective' would call for the promotion of information values for a reorientation of individual and collective values. In a typical 'political perspective" information would be hailed as an enabling force and IT as the empowering infrastructure. The common basic epistemological assumption in all these 'segmented' perspectives is that the universal circulation of information, backed up by the astounding reach and power of IT, is sure to expand the universe of 'development', leading to the birth of a whole new world.

When IT is perceived in a superficial manner, seeking to lend legitimacy to policy by hiding its problems and crises from the public arena, the hype sets in. Communicative actions are discouraged and minimized by policymakers and it is projected, by way of manufactured

consent, that more and more IT will lead to more and more development. As a result, IT becomes a sort of mirage whereby the Information Super Highway is reduced to the *Information Super Hypeway* (Preston, 2001). The solution lies in a more rigorous and intense perspective, *political* in the broader sense, in which the possible routes to utilization of IT power can be related to the specifics of the society concerned. It would certainly visualize a better world, but not without raising and exploring an answer to an uncomfortable but extremely relevant question – if IT has magical potential, for whom is it supposed to serve?

The answer to the question seems rather obvious. Is it not the case that IT is meant *for all*? In a way it is, but the question must be read in the context of the digital divide that exists not only between the developed countries and their poorer counterparts but also within the developing societies themselves. While in the international arena the developed countries boast of having firmly rooted 'information societies', within the developing countries themselves, there are at best, only 'pockets' or 'beach-heads' of information societies, and worse still, widespread information-famines, with some vital features of development remaining out of reach of the majority of people. In India, for instance, despite many claims about IT deployment here and there, information remains a scarce resource for many. Thus, the lack of appropriate information results in the loss of lives of hundreds of fishermen who sail the sea completely unaware of impending disaster; it has also led to the suicides of thousands of farmers who lack relevant information about the market viability of their crops. As long as technology is accorded priority over information in the technocratic discourse such events will continue to occur frequently. Thus, a former bureaucrat, seemingly oblivious to the connotations of the words 'buzzword' and 'slogan', writes (Dey 2000: 302) in a congratulatory vein:

> True, e-governance…is the ultimate buzzword in the world. It sound like ultimate win-win. Suddenly, the slogan has caught on. [...] Imagine hundreds of queue-weary citizens flocking to internet kiosks for everything. […] They are soon going to be the ground reality. […] Andhra Pradesh is on the highway to 'governing the e-way'.

I will subsequently consider the fate of Chandrababu Naidu who was steering Andhra Pradesh to the superhighway of e-governance. It is important here to note that the key figures in the discourse communities, beyond the official policymakers, also fail to rise out of the technicist orbit celebrating the 'IT power'.

It seems that social scientists and activists in the developing countries – even those who otherwise have made pioneering contributions to society – periodically go overboard when it

comes to *IT power*. A typical example is Professor Muhammad Yunus, the founding director of the Grameen Bank of Bangladesh who has gained international recognition, including the Nobel Peace Prize, for his spectacular role in providing micro-credit to the poor. In his book *Bangladesh 2010,* Yunus (2000) argues that Bangladesh, one of the poorest countries in the world (often derisively described as the 'basket case'), is on the verge of radical and magical transformation through the introduction of IT. As he writes (2000: 56):

> Thanks to IT, time has come to do away with the distinction between city and village. One can work in any city in any country of the world by being in the village […] there would be no difference between the girl or boy working in New York and the girl or boy working in Patuakhali district in Bangladesh.

Yunus (2000: 62-63) goes further and attempts to imagine an IT-led restructuring of the polity in Bangladesh:

> The concepts of the State and the government would be radically changed. There would be an organization by the name of government, only to maintain a historical tradition. Elections would perhaps be held as sort of celebration but there would be little role for the head of the State. He would only be there to receive salute in the children's parade. The government would only exist formally. […] Collective decision on any matter would be taken by people instantaneously by electronic means.

There are several reasons why I refer to Yunus's 'dream' Bangladesh. First, and most obvious, it reveals the extent to which IT, with an obsessive stress on homogenization and instantaneousness, stretches our imagination, the degree to which we are ready to sacrifice commonsensical interpretations of reality for the utopia. The last quote comes particularly close to the technocratic ideas of *Computopia* and the *Automated State* in which the state is perceived in terms of highly sophisticated and widely distributed electronic circuitry. Second, Yunus's IT-sourced imaginary, which views the grassroots level transformation of rural Bangladesh as a 'manifestation', rather than as a 'pre-condition' to technological change, has unleashed intense criticism from some social thinkers in his country. Rahman (2000: 238-47) makes a scathing critique of Yunus' *Bangladesh 2010 scheme* in general and more specifically of Yunus's argument that the "spread of telephone connections would pull Bangladesh out of economic disaster". Mentioning that such a scheme reminds him of the aphorism "The more man dreams, the less he believes", Rahman (2000: 40-41) observes:

> Whereas an excessively strong organization [the State] prevents Professor Yunus from progressing further, is it not an absurd dream that in a thoroughly inequitable society he would be able to change the life of huge number of common people through the Internet and other [information] technologies? […] Does new technology necessarily eradicate the distance among people? Has the lady owning a phone in rural Bangladesh been able to bridge the gap between her and the owner of a phone in Dhaka? […] We need not remind Professor Yunus that while on the one hand, certain social conditions have to be fulfilled to utilize technology, on the other hand, it is also the case that such process relates to the economy, the ruling class and even class-based equations.

Interestingly, in what may not be a coincidence Yunus's IT imaginary comes extremely close to that of Negreponte, formerly of the MIT Lab, but better known for his promotion of IT-driven society. Negroponte's great dream is to equip each child in the third world with a laptop as this is supposed to be a means of education, entitlement and empowerment. If Yunus had Rahman as his 'adversary', Negroponte has Winston (2007: 170) who wryly states:

> I would suggest that here Negroponte becomes a Marie Antoinette, but, instead of advising the French 18th century poor to eat cake as a substitute for bread, he proposes letting the South's huddled masses have little computers rather than life's other more obvious necessities.

These debates may occur in specific locales, be it Bangladesh or the USA, but they have great relevance for any developing society. Let us substantiate the point using a specific instance. In India, the publicity-blitz of so-called e-governance in the Indian federated state of Andhra Pradesh was orchestrated by the former chief minister, 'cyberdreamer' Chandrababu Naidu, while the state remained in the lower rung of the human development index. Alhough the critics of his IT policy, which was thoroughly urban-centric, were ridiculed by his admirers as 'laggards', the IT hype, mainly generated by policymakers like Naidu also cast a spell on others, including the media. As the following excerpt reveals, Naidu developed an unparalleled media image

> Chandrababu Naidu is a dreamer – the master of the grand statement, the painter of the grand vision. By 2020 […] his state […] will be a land of thriving industry, flourishing agriculture and a vast service sector. **Poverty will be a faint memory**. A spinner of yarns? Not really. The AP chief minister is only trying to get the people and the administration to think and act big, like himself […] The cyberdreamer has shown the impossible can be done. Electronic governance, for instance. **The critics said that it was too farfetched, that it was elitist. Today…they have been proved wrong**. (Businessworld, 1999: 23 – emphasis added)

Naidu eventually was overthrown by the vast rural electorate many of whom, struggling in dire poverty and underdevelopment, were completely untouched by the high-end IT revolution. The vanishing distinction between the city and the countryside that Yunus visualizes so enthusiastically did not occur in this case. One major point in his defence, as I have argued elsewhere (Sinha, 2005c: 16), can be found in the arguments of the TDP [spellout acronym] activists and general supporters of Naidu. This was that the urban tilt was part of his 'overall plan' to take advantage of the 'trickle down' effect to spread IT in rural areas. But the counter-argument was that the 'golden Andrha Pradesh' - characterized by promises like 'total eradication of poverty', 'basic minimum needs', 'happy fulfilling life' and 'knowledge and learning society' – was bound to fail because it privileged only the already

privileged segments. The publicity-blitz associated with the promotion of the state capital Hyderabad as the 'IT hub' of India left the rural areas largely alienated. As one analysis (Yahya, 2009: 388) of Naidu's decline notes, '[t]he consequences of building Hyderabad into an IT hub have proven financially costly and eroded the support…in rural areas'. Naidu was banished from power. At least to date he shows no sign of regaining it. In Yunus's case, the Bangladesh continues to be far from experiencing the revolutionary transformation that he was visualizing.

Not very different is the case of Sri Lanka, India's southern neighbour. Goonawardane (n.d.), who refuses to indulge in the 'cheer-leading' that often marks the IT scenario, polemically raises a fundamental question: Why is not IT in the mainstream of public life and public affairs in Sri Lanka? He also raises a number of ancillary issues regarding the role of ITin income generation, easier interfaces with government, support of cultural and personal needs, and finally, affordability, user-friendliness and minimization of barriers – all in the interest of the ordinary people and for ensuring public trust and acceptance. Warning that it is easy to be 'mesmerized' by IT he advocates the cultivation of a 'big picture' of IT's role in society and the economy, which he argues can be made possible by 'credible, articulate and passionate individuals', capable of being involved in public debates.

A distinctive feature of Rahman's response is the way he seeks to relate IT to the existential reality of the developing world. It is important to note that he does not dismiss the power of IT; he seeks to problematize it in terms of the conditions prevailing in his society. As he dramatically puts it (Rahman, 2000: 45): 'When people in my country have empty stomachs, nothing works so smoothly…not even if telephones are pushed into the belly'. Last but not least, critical analyses of this kind remind us that they are infrequent when it comes to situating the *IT problematique* in the developing societies. And as long as this is so, the hidden transcript of the politics of depoliticization goes largely unnoticed and mostly unchallenged.

(DE)POLITICIZATION AT WORK

Technology and its technocratic rationality seek to weaken politics by robbing it of diversity and spontaneity. Undermining this, deliberately or in some cases due to ignorance, the top-level policymakers – leaders, bureaucrats and technocrats – of developing countries, after their desperate bid and consequent failure for decades to reap the fruits of development, are now relying on IT to bridge the yawning gap. Elsewhere I (Sinha, 2005a: 245-64; Sinha, 2005b: 135-61) has discussed extensively how India very much constitutes a part of this scenario. Keniston (2002: np), a veteran observer of the ICT-sourced projects in India, is being pragmatic and not cynical when he makes the following observation:

> Not surprisingly, in discussions of IT for the common man, there is a great deal more talk than action […] But a more careful reading, to say nothing of visits to the sites themselves, indicates that in such plans, the operative verbs are not "is" and "does", but rather "will" and "would". These are plans, wishes, dreams, promises. In only a few cases do they have any on-the-ground reality.

When the policymakers who determine our destiny resort to *IT idolatry* this seems to signal the end of politics. An excessive and uncritical faith in 'IT power' gives rise to a condition in which the idea that all social ills are there only because there has not been 'sufficient and efficient' application of IT gains ground. This in turn gives rise to a situation in which any dissenting perspective is regarded as unnecessary and, even worse, illegitimate. The resistance of policymakers to any kind of dissent becomes even stronger because there is the proverbial slip between the cup and the lip – proliferation of IT infrastructures and channels do not 'automatically' contribute to democratization in terms of greater informational communality and exchange. This necessitates a thorough *reality-check* – both in terms of discursive formations and in terms of concrete manifestations.

Finlay (1987), in his research on the discursive critique of IT, traces the roots of the rhetoric and hype. Following James Carey and John Quirk who sought to demythologize the rhetoric and dismantle the fetishes of communication, Finlay (1987: 8) states the following:

> If we could talk to the information society, we would ask it: "Does the communications society/revolution really exist?' It, of course, would answer: 'Yes'. But this would be an answer given from within an already technologically-biased society. One would have to wonder whether this revolution really existed or whether the society were trying to bring it about. One simply cannot take the answers…at face value when technology is concerned.

Noting that discourse is not necessarily an accurate reference to, or reflection of, reality, Finlay (1987: 9) proceeds:

> "How" we speak becomes just as important as, if not more than, the content of "what" we say. Social communication is not merely a content, a set of messages, but rather first and foremost a set of ways and rules of interacting, the "how" of communication […] For example, if we wish to know something about the power relations that will characterize society with the advent of new communications technology […] we must look at who has which rights to speak and to dictate to others how they may speak at various levels of society […] We must first investigate actual practices of power as practised in and mediated by communicational interaction.

As far as power relations in the IT problematique are concerned, Finlay's theoretical exposition finds concrete form in a comprehensive report on *Inclusion in the Information Age: Reframing the Debate* (2001: 12-3), which advocates a reorientation of some of the key concepts and strategies used by the policymakers – literally, the *powerful communicators*. In explicating the need for the report he explains the 'dangers of digital divide', in the following way:

> For those who see the divide as a problem…existing problems of wealth and community stratification may be intensifying or radically changing their appearance and nature. For every new Silicon Valley, numerous communities are left behind. And the problem is not only an increase in the already enormous disparities. There is a significant threat to the currently viable, but digitally impoverished, working class and middle class communities. These communities are in danger of joining the ranks of the left-behind […] It is unclear whether the transformation can continue when a significant portion of the population is not participating.

Those concerned with the fate of developing societies, in particular, would be disturbed to know that this introspection pertains to a developed country – the US. For the policymakers of the developing countries it is highly instructive, as a timely warning against growing *IT-philia* – a dangerous trend in view of the fact that the choice between the provision of basic needs and the development of IT is a *false dilemma*.

The key issues in *inclusionary* IT deployment are meant to be access and participation. In the first case, specifically, the frequent promises of 'universal access', do not have much traction unless simultaneous efforts are made to make such access meaningful in the life of the ordinary people by raising the bar vis-à-vis the baseline of human development. In the second case, regarding participation, because nothing can be 'stage-managed' from the top forever, not even with the best rhetoric and hype, what is required is popular conscientization. It necessarily follows that since in the name of e-governance there are practices of selective, if not exclusionary, access, the hype about 'popular participation' is essentially reduced to *pseudo-participation* – non-participation in the name of participation. IT has a special propensity to be 'coopted' in the hyped discourse because it can be interpreted easily as a 'specialized domain' by the powers that be. As a consequence, a

superordinate-subordinate relationship based on 'we know IT better than them' stance subverts the claims of access and participation, thereby mystifying IT all the more.

My ongoing study[2] of Common Services Centres (CSCs), the 'easy, direct, cost effective' IT-enabled front-end delivery points being set up by the Government of India since the year 2006 under the Public Private Partnership mode with the promise of promoting rural entrepreneurship, reveals a huge gap between role-expectation and role-performance. This is despite the assurances of 'good governance', 'empowerment', 'equal opportunity', 'human development' 'income/employment generation' in the *Guidelines for Implementation of the Common Services Centres (CSC) Scheme in States* (2006). The CSCs, with a few scattered exceptions, have become neither efficient delivery points nor effective 'change agents'. While there are a number of factors responsible for this gap the fundamental reason is the failure to ascertain the 'felt needs' of the local people in their respective localities. Interaction with different categories of respondents – from stakeholders to supposed end-users – reinforces the point that in the IT policy-based epistemic and discourse communities, technology is accorded a greater priority than information. As a consequence, the value of information as a 'raw material' is underestimated in two ways:

1) underestimation of information residing with people, which they seek to disseminate to others, including the policymakers and

2) undermining information the people lack completely or partially, which they seek to receive from other sources, especially from the policymakers.

Thus, respondents in the Darjeeling Hills inform that the CSCs are of 'little use' unless they provide relevant information about better production and marketing of oranges and better ways of tea cultivation.

Politics, to reiterate, has a key role in reversing the trend. The greatest virtue of politics is its inherent urge to nurture discontent, differences, diversity and dissent. Notwithstanding periodic assertions to the contrary – including the one, now very popular among the Indian politicians of all ideological hues, that 'we would usher in IT Revolution *without politics*' –

[2] The ongoing study (from September, 2009 to July, 2010), which has a major but not exclusive focus on the front-end information service kiosks in the state of West Bengal, and an earlier study of the same in West Bengal, Sikkim and Andhra Pradesh (2005-2006) was based on a representative sample dervived from household survey data. The methodology was based on semi-structured questionnaires for various categories of stakeholders and clients, and focus group interviews for clients. The details of the titles of the studies and of the sponsors are provided in the Acknowledgements section.

politics never ceases to exist. First, because dissent and conflict remain at the ground-level, especially in thoroughly inequitable societies, even if they fail to be noticed by the rulers at the top. Second, even the most subtle acts of depoliticization are inherently political acts. Nevertheless, there are instances, though rare, of governance in which a conscious attempt has been made to 'politicize' the IT policy in a developing country. The following section illustrates this drawing on the experience of Brazil[3].

BRAZIL SHOWS THE WAY

According to the report *Measuring the Information Society 2010* (2010), Brazil's ranking is 60th while that of India is 117th. The 'giant' India, a supposedly potential economic superpower, is preceded by such 'dwarfs' as Ghana, Swaziland, Namibia, Gabon and Nicaragua. The respective rankings of the countries in the report are based on a number of technological criteria in which, as the ranking shows, India, notwithstanding the huge IT hype, is on the lower rung, considerably behind Brazil which is at best on a middle rung. But such a ranking does not tell the story. From an *organic* perspective in which the notion of the Information Society has to be 'rooted' in the concerned society with ordinary people treated as 'end users' and also fundamentally as 'actors' in the decision-making process vis-à-vis public policy on IT, such technical data remain partial. They do not reveal the complex but necessarily deliberative path Brazil sought to politicize IT policy by taking various segments of society into account – as compared to India's top-down 'trickle-down' approach.

One of the main planks of Brazil's construction of the Information Society is to make use of IT's potential to break down spatio-temporal barriers to ensure greater economic and technological dynamism. Two very important meetings and their *Declarations* – the *Florianapolis Declaration* (2001) of the Regional Information Society Programme Meeting, 20-21 June, 2001 and the *Itacuruca Declaration* (2000) of the Information Ethics 2000 Meeting, 26-27 October, 2000, reveal Brazil's approach in this regard. The first mentions that information and communication are the central pillars of the global knowledge-based economy and society, and that they require to be 'redefined' in the way in which countries position themselves in the world economy. It specifically mentions that the evolution of an

[3] The section draws upon: D. Sinha, "The Construction of Information Society in Brazil and India: A Comparative Perspective". The English version is unpublished the French version has been published in Michel Sauquet (ed.) (2004) *L'idiot du Village Mondial* , Brussels/Paris: Alliance-Luc Pire-Charles Leopold Mayer, pp. 301-14.

Information Society 'guided solely by market mechanism entails the risk of an amplification of the social gaps existing within our societies'. The declaration identifies education, health, job opportunities, eradication of social marginality, establishment of citizen participation, transparency in administration and more open and democratic societies as areas to be influenced by the democratic diffusion of IT. The *Itacuruca Declaration* reflects the expectation of Latin American (and Caribbean) countries to become 'full-fledged members of the Information Society with efficiency, equity and sustainability'. It also refers to the 'deepening social inequalities within the (developing) countries' and 'international asymmetry between the developed and the developing countries' which tends to 'deny access to the knowledge at stake'.

In terms of 'domestic' efforts at constructing an IT-friendly inclusive society, Brazil has also devised a National Information Society Plan (NISP), which is intimately connected to the ambitious *Avanca Brasil* (*Advance Brazil)* Development Plan. The major goal of the NISP is to integrate, coordinate and foster actions for utilization of IT and, in turn, to contribute to 'the social inclusion of all Brazilians in the new society'. The idea is to ensure that the technical leap forward has results in terms of human, ethical and economic development. More important in our context, the NISP calls for the creation of:

1) a more just society based on preservation of cultural identity and wealth of diversity
2) a sustainable development path that respects differences and promotes regional equality
3) effective participation of the society in the process as the prime requirement of political democracy

In this context the publication of the *Information Society in Brazil: Green Book* (2000), which is widely considered to be the main reference point for the construction of an IT-inclusive society in Brazil, also assumes importance. In his *Presentation*, the then Minister of State for Science and Technology, Ronaldo Mota Sardenberg, notes (Green Book, 2000: v) that the report has been created with a conscious effort to 'fuel a debate' among the political leaders, bureaucrats, business community and other concerned segments of the Brazilians. The minister implores civil society to come forward and involve itself in debates and deliberations 'to establish clear political lines of action to be followed' and 'to develop strategic activities'. It mentions that the government and civil society 'must work together in order to assure the prospect that positive aspects of such a society 'effectively benefit all Brazilians'.

The NISP it identifies a number of key areas in which government-to-people interactions are to be encouraged. They are: expansion of e-commerce, promotion of small and medium business, incentives to entrepreneurial spirit, employment opportunities, education, transparent, citizen-centric public administration, sustainable development, infrastructural development and preservation of cultural identity. The number of items mentioned relates to Gunawardene's 'wish list' for a democratizing IT scenario in Sri Lanka.

In Brazil the civil society has responded to the call of the state. Thus, for instance, the members of academia are active participants in projects and schemes related to IT deployment and in ongoing debates. There is the instance of the *Knowledge City Project*, conceptually inspired by the ideas of French sociologists, Luc Boltanski and Eve Chiapello, and moderated by the University of São Paulo, the project seeks to create an extensive digital network involving education institutions (including elementary, primary and secondary schools, research institutes and public and private universities), non-governmental organisations (NGOs), the corporate world, banks, the media and various governmental organizations (Schwartz, n.d.). The main objective of the project is to explore new forms of knowledge production and distribution through 'intelligent and competitive use of IT at the community-level'. Schwartz elaborates by arguing that in order to face the challenges, the role of networks must be stressed and their communitarian, public nature should be ranked first among the organizational features of the emerging development paradigm. In this way new regulatory controls and the grassroots development of networks work as 'antidotes for the ultraliberal approach' to capitalism. Schoonmaker (2007: 999-1020) meticulously scripts the role of Brazilian software policy, especially since late 2003, as a form of 'globalization from below' that challenges the historical dominance of the global North by developing new forms of digital culture and digital inclusion, and opens up what she terms the 'prospects for alternatives to neo-liberal globalization'.

In terms of devising the means of access and participation with a view to constructing an *inclusionary* Information Society, Brazil seems to be playing the role of a pioneer in the developing world. In India very little if any evidence is available to suggest that the policymakers — be they at central or at regional and local levels – are willing to do the same. Nor is there a widespread and sustained involvement of academics in the scrutiny of official slogans like *IT for all by 2008* (the date has expired!) and *IT for the Masses*. While there are scattered individuals and organizations advocating free and open source software movements in India there is no concerted effort to make it broadly based by relating these

to information literacy and digital inclusion. It follows that in the world's largest democracy, which claims to be making a transition from the representative variety to the participatory variety, there is little sign of debate on how IT is 'talked about'. It is precisely because of this that a repositioning of social scientists, not the least from the developing world, becomes extremely significant – a point I shall take up subsequently.

BEYOND SCRATCHING THE SURFACE

Can IT contribute to economic development? In an essay critiquing public policy and the academic literature for frequently touting 'substantial progress' in bridging the digital divide, Gillis and Mitchell (n.d.) argue that if increased IT deployment leads to greater digital opportunities, including economic and human development, it can be framed and applied as a potent tool in reducing poverty, extending health services, expanding education opportunities and improving the quality of life for many of the world's disadvantaged. But they qualify this by adding that such framing should recognize that these desired outcomes are only plausible when the process is accompanied by *concurrent public policies supporting equitable access*. Their conclusion: 'IT is an important tool but not a solution in itself for economic or social problems'.

There is little doubt that the power of IT needs to be harnessed to facilitate a transformation of the economy, and more broadly, the lives of the ordinary people in developing countries. But analysts sometimes overemphasize this point, proclaiming IT as a liberating phenomenon. A typical illustration is an essay by Chowdary (2002: 3886-89) in which the author celebrates the fact that the IT industry in India has emerged in the 'post-1992' period, that is, in the era of liberal economic reforms. Two major observations guide his analysis: i) that the IT industry is free from governmental control and ii) that it is mainly based on the market overseas. Both of these claims are wrong however. First, the IT industry in India is not free from governmental regulations; aside from the fact that the private players operating in the IT industry in India need the approval of the government to enter the market, one has to remember that even the privatization of telecommunications in India is an act or policy of the government. Second, the fact that the IT industry has substantial overseas connections does not indicate that it is a 'liberated' industry. It is naive to detach IT from global capital and its search for a market.

IT's so-called liberation is even more difficult to conceive of because effective dissemination of IT is conditioned by the economic, political, social and cultural milieux of a specific society and locality where it is made. IT-enabled development is part and parcel of the society-led development process and if the latter falters it is inevitable that the former will magnify, rather than diminish, inequality. In criticizing the third world's obsession with satellites as a sort of 'cure-all' device, Jayaweera (1985: 57) warns that if policymakers fail to realize that the causes of poverty are mostly structural, a 'massive injection' of communication into an unequal structural relationship most likely will help to consolidate and deepen existing inequality. In more specific terms, IT can acquire greater and meaningful reach only in relation to the extend of people's awareness of it, the scope of its utilization by end-users, the availability of material and human resources, the institutional capacity, and the nature and extent of political will and administrative commitment. In brief, IT development does not occur *in vacuo*.

Thus, there is nothing spontaneous about IT. In terms of its historical antecedents, the IT revolution is part of a continuum that situates the agricultural and industrial revolutions that preceded it. Like these revolutions, it is also bound by the pre-conditions and relations, though not necessarily of the same kind, that are produced at the international, national and local levels. All these revolutions are 'control revolutions' seeking to influence and shape the society in which they are situated. The tug-of-war between IT and a society continues despite attempts to sanitize the popular imagination of this process. Social scientists can challenge this process by reorienting the dominant discourse on IT. This can be done by means of a shift, as suggested by Sussman (1997: 263), from the 'object-focus' (what is changing?) to a 'subject-focus' (who are the agents of change and who is being changed?). The core concern in this kind of shift is 'on what terms?'. Before turning to the reorientation process from a disciplinary vantage, I refer to the Simputer debate to indicate how such a shift can be envisaged from a grounded reality perspective.

The Simputer, 'the common man's simple computer', devised primarily by the Indian Institute of Science in Bangalore, was publicized widely, by academics and activists in India and abroad, as evidence of IT's potential to reach 'down below' to the rural poor of the developing countries and to bridge the Digital Divide. The portable hand-held device, it has been claimed, is not only simple to operate (with Smart Card and three AAA batteries), but also technically efficient in eliminating the need for multiple computers. The Simputer was meant to be a community-owned property, to be administered at the village-level by

Panchayats (as the core institutions of rural local governance), schools, kiosks, postal workers and shopkeepers. It also can be operated individually for personal information management, for example, for checking the prices of agricultural products or for health information. Most important, as part of its claim of ensuring 'radical simplicity for universal access' it is said to have a 'language-sensitive' interface which does not require knowledge of English or even literacy skills. Thus, in terms of its projection, it is an ideal device, a poor-friendly piece of IT, destined to bring about radical change in the rural third world. But is it as 'revolutionary' as it appears to be?

One critical assessment (McCollum, 2002) suggested that because the Simputer relies on *non-standard* software it would not be able to make much headway in bridging the digital divide. It was argued that it would in fact intensify the divide and end as a 'frustrating exercise'. The divide is too complex a phenomenon – marked by severe obstacles to access by developing countries to global capital in the political economy of the contemporary world order – to be removed by the mere circulation of a device among illiterate and poor villagers. This critic even hints that the Simputer is so ineffective in terms of its power to bridge the divide that the technology-rich developed countries, finding no real threat, would co-opt it and go out of their way to produce and supply it to the developing countries, as a sort of condescending gesture – to the extent of pushing it down the throats of its supposed users.

My purpose here is to point out that, apart from the substantive issues it raises which have significance in themselves, the Simputer debate also has symbolic value. This intiative raises a vital issue with respect to democratization of IT through community-level access in developing countries. It also provides scope for deliberation on the means of localizing IT. The latter point needs elaboration in the context of my argument in this paper.

We can also cite the instance of the Government of India's prized scheme called Rashtriya Madhyamik Shiksha Abhiyan (RMSA). The scheme calls for the universalization of computer access in secondary schools. The idea is apparently noble: to familiarize secondary students with an essential skill. The scheme is ambitious because there are more than 150,000 sedondary schools in India. The scheme has induced a rare gesture from the Government of India of consulting selected groups from the civil society to discuss the possible modes of deployment. The objective of the 'consultation' was to find the best means to intergrate computers into the learning environment and knowledge gathering process of secondary school students. There are strong advocates on both sides with equally strong arguments for

their respective stances. But if one follows the trajectory of this debate closely one finds that the terms of the debate are confined to a debate about computers in classrooms versus computers in labs (Trucano, 2009). What is not discussed is the point that in a largely rural society like India there are a large number of secondary schools sctattered across 600,000 odd villages. Many of these village-based schools lack most of the basic infrastructure facilities such as an adequate number of classrooms and many also suffer from a lack of availablity of computer-literate teachers. India is a country in which IT projects abound but, as stated earlier, there is a complete absence of IT literacy initiatives. No less important, 'universalization' of access to IT is supposed to take place in India where even after six decades of independence has yet to universalize primary education, and which is still tempting a large number of children to attend primary schools by offering the mid day meal scheme.

That globally-sourced IT needs to be localized to ensure access, participation and inclusion is an argument that is fast gaining ground. In this case localization implies adaptation of IT in terms of resources, skills, knowledge (and I would add, subjugated knowledge-systems) and the felt needs of the people in the concerned societies. It should be noted that a major thrust in the localization strategy has been in the sphere of software – in the development of software with local language and content, with the intent of enlisting high number of users and ensuring the affiliation of the user-community. However, arguably the strategy needs to extend to hardware as well. Which technology, inclusive of hardware and software, is to be most appropriate in which locality? – that is the basic question. Unless the inhabitants surviving on fishing in the coastal regions of a country have an IT scenario which provides them with what is most needed – warning about impending storms – IT will have little value in their life. It is the same for farmers who will have little to do with information kiosks if they fail to provide the price of grains or for hill people who would take little interest if IT does not help them in for instance, landslide disaster preparedness. If integration of IT in the everyday life of the users is essential, localization is the best means to achieve it. The local government institutions can play a key role in identifying the felt needs of local people and the way localization can be accomplished for their benefit. However, in this context it needs to be noted that despite the increasing emphasis on strengthening local governments by the Government of India, an emphasis which has been given constitutional validity by passing the 73rd and 74th constitutional amendments, the considerationn of IT issues remains outside the deliberations of local people.

In India a number of IT projects are being 'deployed' at the local level (Garai and Shadrach, 2006; Bhatnagar and Schware, 2000) but localization remains sporadic and mainly at an experimental stage. This is an opportune moment for intervention by social scientists. First, because the projects are at the take-off stage with many *ifs* and *buts* waiting to be addressed and solved. Second, the localization process is not just a technological process; it is a social and cultural process as well – to be negotiated by and through orientations, values, attitudes and the mind-sets of the people concerned. Localization does not simply mean translation of a dominant language, such as English, of packaged software into a vernacular language. It implies cultural adaptation of technology by 'societalizing' it. Third, considering the fact that the whole process will involve contradictions and frictions, social scientific interventions can provide important clues.

POLITICAL AGENDA

As the preceding discussion reveals, the problems at hand and the solutions that are needed are profoundly political. They are political in the sense that they concern influencing the people and shaping their perspectives and outlook on IT so that they can individually and collectively exercise their choices based on the articulation and aggregation of felt needs. What might be the point of departure in the construction of such a political agenda? We need to humanize IT rather than to anthropomorphize it. Because IT does not have consciousness or will of its own, providing it with autonomy and agency through the process of *anthropomorphization* (such as in the case of 'e-governance is the new kid in town' or the 'Information Kiosk is going to be your friend and neighbour') is something that progressive social critics need not accept passively. The first step in this regard is to give primacy to the IT-enabled transformation process – its promises and constraints, rather than to IT itself. Under no circumstances should it be the other way round. When such a transformation is accorded the highest priority, analysts might sense the requirement of exploring the sources of IT power in order to evaluate its potential. Such an exploration would reveal the global origins of IT whose ascendance is, to an overwhelming extent, determined by global capital and information capitalism in which nation-states, transnational organizations, multinational corporations, international development agencies and other non-governmental organizations play a crucial and dominating role. The political economy of ownership and control and the simultaneous corporatization of IT in a global oligopolistic market constitute part of the hidden transcript. However, this type of analysis remains a marginal academic enterprise.

This is not surprising, as Wajcman (2002: 355) notes, because when efforts are made to 'naturalize' technical systems within the social system, studies linking power relations to technology tend to be scarce. Wajcman (2004), from a feminist perspective, emphasizes the need to undertake a critical scrutiny of technological interventions.

It is common knowledge that when debate occurs the core issues are problematized and the hidden dimensions are gradually revealed. As a result, the distinction, if any, between the appearance and what lies beneath, emerges. Do social scientists have such an agenda in a country like India? If not, can we afford not to have one? These questions are worth considering because they give credence to the quest for *relevance* which has become a nagging issue for social scientists in the developing countries, including those of South Asia (Chatterjee, 2002: 83-95) and India (Sethi, 2000; Mathew, 2001). However, the main scenario is different. Acting as a 'client community' of the state and/or as 'sponsored conscientizers' for some NGOs, social scientists are under pressure to adopt a 'policy-orientation' which more than not implies uncritical support for policymakers and/or non-state actors. In the process, the change-orientation is lost. In the name of offering interpretations of 'reality', these social scientists tend to confine themselves to micro-level cases, thereby rendering broader, integrated perspectives unfashionable. Thus, on IT-enabled development the overwhelming majority of material produced offers either uncritical promotion of 'IT power', or at best, develops an internal critique in which the main parameters of the process remain unchallenged with only superficial limitations highlighted. This kind of disengagement coincides with a steady decline in normative theorizing in the social sciences and with an overwhelming output of (crude) empirical studies of a technocratic nature. Hamelink (1998: 64-76), in his critique of scholarly efforts to forecast the future social effects of IT, laments that such works do not offer a theoretical perspective on technology-society interactions that could provide the basis for understanding their future articulations. He further notes that by disguising the basic theoretical flaw in sophisticated forecasting techniques, the exercise is revealed as being 'no better than ancient astrology' (Hamelink, 1998: 65). I would also underline the point that the failure to make critical interventions in the prevailing IT scenario is self-defeating for social scientists, at least for those who wish to explore possible avenues for humane, participatory and equitable development in a world that is being vertically split between the rich and the poor.

CONCLUSION: THE TAKE-OFF IMPERATIVE

Inclusion is too complex and serious an issue to be left to rhetoric and hyperbole. To reverse the trend there is a need for social scientific intervention. To reverse the *politics of depoliticization* and to develop an inclusionary perspective, social scientists, therefore, have to come together to put a premium on shared learning and the exchange of experience through cross-disciplinary dialogue. In such a dialogue, the analysis of the wider political, economic, social and cultural structures and processes in which IT is inextricably embedded, must hold centrestage. The cross-disciplinary nature of such a dialogue is to be distinguished from a so-called interdisciplinary approach in which only selective and limited points of contact are made between the 'core' discipline and 'other' disciplines. Social scientific analyses – infused with a change-orientation, armed with the notions of rights, justice, communicative action, deliberative democracy and so forth, and no less important, infused with the zeal to provide a better deal for the developing countries in technological development – need the combined input of political scientists, economists, sociologists, anthropologists, historians and scholars of management, public administration and communication studies among others. They need to perform a dual task: first, to devise relevant methodologies for critical areas of inquiry; and second, to prevent IT from being hyped as an 'autonomous' phenomenon and to reclaim a space for the *political*. In the field this endeavour must be complemented by initiating an IT-literacy movement to overcome unnecessary optimism or pessimism about IT. In short, the organization and mobilization of intellectual capital are essential to prevent 'hi-tech' hyperbole and fantasy which seek to enforce closure on critical public evaluation by branding critical assessments as 'neo-Luddite' and/or 'technophobe' and by dismissing a large number of *unaffected* people as 'laggards'.

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