

Accountability and ICT Development Discourses

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Abstract

The rhetoric used in strategy and policy documents for information and communication technology (ICT) is overwhelmingly monolithic – no matter if it is formulated in economically rich or poor countries or in international organisations. ICT has become a mantra for economic development – on the global as well as the local level.

The emphasis on global ICT development has changed over the years and moved from infrastructure through regulatory issues, application areas, content and knowledge creation to empowerment. Stressing the focus on implementation gives us opportunities to go beyond the rhetoric and phase realities of the postcolonial situations of women and men in low-income countries. Implementation of ICT, which secures cultural and economical sustainability, is not possible without relating accountable for the reality- producing aspects of ICT (reinforcing the resource gaps or starting to close them).

This paper addresses questions concerning dominating discourses and signs of subordinate ones in ICT policies and strategies in the areas of encounter between economically rich and poor countries. How is it possible in this context to make space for the lives lived by women and men in nationally situated ICT implementations?

Introduction

The rhetoric used in strategy and policy documents for information and communication technology (ICT) is overwhelmingly monolithic – no matter if it is formulated in economically rich or poor countries or in international organisations.

ICT has become a mantra for economic development – on the global as well as the local level. One major motivation for this mantra practice is the circumstance that the information and communication sector is expanding globally at twice the rate of the rest of the world's economy (d'Orville, 1996¹). The fundamental arguments for investing in ICT are situated in the view of ICT as a necessity for successful integration into the world economy. ICT is regarded as having great potential to promote development in key social and economic areas where a shortage of capital, knowledge and local capacity obstructs progress; it is even seen as capable of promoting democracy.

Bringing out this rhetoric in full relief we know the situation for women and men in low income countries is that a vast majority of them have no access whatsoever to telecommunication services, and about two billion individuals lack access to electricity. Loader (1998, p. 15) states that it is not unreasonable to suppose that the digital (cyberspace) divide will be a significant feature of the political dialogue in the near future, where the present benefits of ICTs are unevenly spread and the disadvantages are particularly concentrated in the “black holes of human misery”.

The emphasis on global ICT development has changed over the years and moved from infrastructure through regulatory issues, application areas, content and knowledge creation to empowerment (Conhaim 2001). However, after the Genoa G8² Summit in July 2001 voices³

¹ Referred to in Ekenberg & Asker 1999, p. 9.

² G7 consists of the seven richest industrialized countries – the USA, Japan, Germany, France, Great Britain, Italy and Canada. The leaders of these seven nations have met since 1975 to discuss the world economy. In

are stressing the focus on implementation. This gives us opportunities to go beyond the rhetoric and phase realities of the postcolonial situations of women and men in low income countries. Implementation of ICT, which secures cultural and economical sustainability, is not possible without relating accountable for the reality producing aspects of ICT (reinforcing the resource gaps or starting to close them).

This paper deals with questions concerning dominating discourses and signs of subordinate ones in ICT policies and strategies in the areas of encounter between economically rich and poor countries. The aim of the paper is to contribute to critical self reflection within European (western) thinking of ICT implementation. The motive for that is the urgency of how to be accountable⁴ in the global ICT development. Our overarching question concerns how it is possible in this context to make space for the lives lived by women and men in nationally situated ICT implementations.

The Bangalore syndrome

Let us bring up some threads of thoughts for approaching understandings of ICT implementation processes in a very complex national context. As outsiders we are fascinated by India as a huge country, where concepts including both / and are more relevant than either / or, as a former colonised nation and as a culture with cognitive traditions more important for European culture than vice versa.

India is big in global software development and is increasingly seen as an ICT superpower with Bangalore as one of the more important centres. The rise of India's ICT industry was marked initially by the success of Indian nationals abroad, especially in Silicon Valley, California. The seeds of this image were sown by Sabeer Bhati, who created Hotmail, the Internet email service. Bhati sold Hotmail to Microsoft in 1996. Other success stories of Indian companies in the ICT field include Exodus, eCode, Infosys, Wipro.

Four reasons are given for the development of ICT as a national strength in India;

- a good education system
- a huge middle class
- a cognitive tradition
- English language skills

Indians do not need to go abroad to attain an excellent higher education. Two of Asia's top-ten MBA schools are Indian, namely in the business schools in Ahmadabad and Bangalore, and five out of the ten best science and technology schools in Asia are Indian – in Bombay, Delhi, Madras, Kanpur and Kharagpur⁵. Each year about 200 000 students graduate as engineers from Indian universities⁶.

India has probably the largest middle class in the world, currently estimated to number over 200 million persons – a middle class that can afford to give their children higher education

1998, Russia became a full member and G8 was established. The meetings of G8 are held each year in different countries.

³ www.hsw.fhso.ch/ruddy/Workshop_2.htm

⁴ Gulbrandsen 1995, chapter IX.

⁵ Ranking year 2000, Asiaweek research

⁶ The business section of the Swedish newspaper *Svenska dagbladet*, 30 January 2001, p. 16

and also to support the economic system for ICT development, as both investors and consumers.

The Indian education system is traditionally grounded in natural science and mathematics. The Indian cognitive mind is said to have an analytical and mathematical bent that is perfect for the ICT field⁷. The long tradition of logical thinking and mathematically skilled inhabitants – a tradition that stretches back to long before the time of the British colonization – engender computer-programming skills. It was Indians, who created the ten-based counting system and the number zero. Azim Premij, the head of WIPRO, the second largest ICT company in India, claims that *“the biggest opportunity is the change in the nature of critical resources needed by an organization or the nation. Material and capital resources characterized the manufacturing economy. The power of the mind is the critical resource in the information age. This is where we as a nation have a major competitive advantage.”*⁸

The strength of India as a nation, as compared with China, for instance, is that more Indians know English, which is indisputably the international and dominant language of technology and the Internet. Almost 80% of all websites are in English, yet less than 10% of people worldwide speak English⁹.

The factors presented above, combined with improved international telecommunications, allow the Indian ICT industry to communicate with and send products to customers worldwide. The provision of back-office functions to far-away clients is another application area that takes advantage of the global time zones and lower salary levels in India. The cost arbitrage can be more than one in ten for low-end services. Wipro is planning to introduce technology so that mass-market helplines for customers of US Internet services can be run from India. This will mean that India will be the back office of the world, which brings us round to the definition of *the Bangalore syndrome*, whereby India is a developer of software for companies abroad (Mehta 2001a).

The Indian scenario also includes poverty, especially in rural areas. According to UNDP, more than 50% of India’s population (of more than one billion inhabitants) live on less than a dollar a day. In China, this figure is 37% of a population of 1.3 billion. Congress legislator Mani Shankar Aiyar seems to share some of the views voiced by Bill Gates¹⁰, and says in a special issue of Asiaweek in August 2000 focusing on India as an up-and-coming superpower, *“try telling the poor that the answer to their problem is the Internet, that it lies in Microsoft. You’ll see the absurdity on the position. We need the old economy¹¹, as well as the new.”* Others try not to nurture a polarized, either-or position, like projects in Andhra Pradesh (Ranawana 2000) to put farmers online for access to services such as checking prices, weather forecasts, credit information, etc. by means of programs that use easily understandable, intuitive symbols and local-language phrases. The aim is to give rural farmers the chance to make informed choices and to have more control over their work and lives. Another example (Mehta 2001b) is the establishment of 76 Internet Dhabas (Cyber Cafes) by rural women at

⁷ From an interview with V. Rama Subramaniam, Managing director of ThinkGen Ltd. On 2 December 1999, published in a report from the Swedish Office of Science and Technology, *India as IT nation*, December 1999

⁸ Asiaweek, August 11, 2000, p. 40

⁹ 2000: Women’s Learning Partnership. www.learningpartnership.org/stats.html

¹⁰ Bill Gates at Microsoft has problematized the discourse of ICT as a universal tool, proclaiming that computers can do little to solve the planet’s gravest social ills and avert the most immediate catastrophes facing the world’s poorest people (McKie 2000).

¹¹ Agriculture and manufacturing industry

the Taluka¹² level, by educated unemployed young women in Gujarat. The Internet Dhabas function initially as a business centre for women in rural areas by establishing websites for the products made by women in rural areas and serve to establish direct links with the customers. The idea is to expand the activities to constitute a multi-service centre that also provides information and facilities for distance education.

Andhra Pradesh has between 60 and 70 million inhabitants. The capital of the federal state is Hyderabad, a.k.a. Cyberabad. Hyderabad has eight universities, which provide the various ICT enterprises with a highly qualified working force. The federal state has approved an ICT strategy called Vision 2020¹³. The vision includes Andhra Pradesh becoming a knowledge (information) based state by 2020. A number of questions demand answers:

If and when, the Vision 2020 strategy is implemented, what will happen in Andhra Pradesh in terms of:

- ?? the transition from illiteracy directly into the information society
- ?? democratic influences
- ?? caste and class divisions
- ?? cultural sustainability
- ?? impact on resource allocation in general
- ?? impact on gender norms
- ?? interpretation of Western-defined ICT in a South Asian context
- ?? the dominating ICT discourses
- ?? marginalized ICT discourses?

We want to explore contexts for some of these points, mainly the four last ones by the following discussion, which also is our attempt to self-criticism.

ICT Development in Postcolonial Situations

The theories of post-colonial identities and situations are research areas of great importance and volume. We want to address some threads of thoughts in order to come closer to understand the process of combining post-colonialism and ICT. Referring to Sandra Harding (1998), we can say that post-colonialism is not monolithic; the term has many referents and meanings. Temporally, it indicates the period beginning in the 1960s, marking the end of formal European colonialism.

Harding (1998) mentions a number of postcolonial positions. One is that it is imagined still to lie in the future, as the contemporary development policies of the international agencies and northern nations merely constitute “colonialism by other means”. Sello Mashao Rasethaba, head of South Africa’s state-owned IT agency, claims that “the information society of the 21st century is leading to cyber-colonialism. What do people need more urgently – clean water or the possibility of ordering underwear online?” (Finkenzeller 2001).

Secondly, post-colonialism can mean a return to or revival of precolonized cultures, institutions and practices by the formerly colonized peoples. Thirdly, post-colonialism can constitute a critical counter-discourse either “*by those who say and actively work to overthrow the rule of the colonizer, or as a more ambivalent, complicitous discourse by those who*

¹² A small city

¹³ For a discussion of national ICT strategies, see Ekdahl et al. 2000

criticize the evils of colonialism even as they also extol its virtues and its necessity"¹⁴. We find postcolonial critique rife among those in hybrid conditions at the borders between the former colonizers and the colonized. Today, there are many students, scholars and others in the US and in Europe presenting postcolonial critique situated in these borderlands.

The anthropologist David Hess (1995)¹⁵ suggests that we think of post-colonialism as "*a kind of discursive space opened up both within and after the end of formal colonialism, where diverse positionings, discussions and other practices can occur*". In Manuel Castells' book (1998) *End of Millennium Volume III*, he discusses the power battles of the "information age", claiming that these battles are in fact cultural battles. "*Power, as the capacity to impose behaviour, lies in the networks of information exchange and symbolic manipulation, which relate social actors, institutions and cultural movements, through icons, spokespersons and intellectual amplifiers. [...] Culture as the source of power, and power as the source of capital, underlie the new social hierarchy of the Information Age*" (p. 348). Is it possible to develop multicultural battles / negotiations in the contemporary "Information Age" – negotiations that include autonomous, formerly colonized countries? And what form would these negotiations have to assume in order to make space for the lives lived by women and men in economically poor countries?

These questions indicate an alternative approach to the current dominant one, which can be called *the catching-up approach*. Maria Mies provides a very critical analysis of what she calls "the myth of catching-up development" in Mies and Shiva (1993). There are a number of researchers, including Shiva and Mies, who argue "*that the poverty of the underdeveloped nations is not a result of "natural" lagging behind but the direct consequence of the overdevelopment of the rich industrial countries, who exploit the so-called periphery in Africa, South America and Asia*". It is easy to recognize the processes of accepting the lifestyle of those at the top as the only model for a good life, not only for the colonizers but also for the colonized. But one of the most difficult problems for the colonized (countries, women, peasants), Mies claims, is to develop their own identity after a process of formal decolonization. This means that they must re-evaluate what they are and what they do and at the same time also overcome their fascination with the colonizer. According to Mies, the catching-up policy of colonies is impossible, undesirable and always a lost cause, as the very progress of the colonizers (the rich northern countries) is based on the existence and exploitation of the colonies. In addition, the industrial centres themselves have already progressed to yet more sophisticated stages of technical development, when an economically poor country after much effort attains what was once considered to be the ultimate development.

A global and general catching-up approach to achieve the kind of development seen in industrialized countries on a planet with limited resources is ecologically unrealistic. Furthermore, since ICT is not a separate technical and economical sector, like motorcars or refrigerators, but instead crosses almost every sector, we must ask ourselves if this situation accommodates a potential for sustainable development, when regarded from the perspective of a catching-up approach. What does seem clear is that there are no immediate links between equal-level¹⁶ participation and ICT development, ICT policy development. Rather, the links are created by means of hard work and tedious dialogues, multidimensional partnership

¹⁴ Harding 1998, p.15

¹⁵ As referred to in Harding 1998

¹⁶ We have borrowed Jan Åhlander's concept of the equal-level perspective in order to overcome the dichotomy of the top-down / bottom-up perspective.

negotiations with developed and working sensitivity and awareness of diverse interests, gender dimensions and cultural–ethnic pluralism, among other components in an increasingly complex world.

What we have indicated above, which is also confirmed in the reading of the rhetoric employed by the different actors concerning attitudes to the ICT strategies of economically poor countries, is permeated with faith in development linearity and ICT as a panacea. In order to create a broader and more complex understanding of how ICT is intertwined in cultural, social and economic structures, it is necessary to expand the notions of other lines of interpretation.

Is it possible to work out “national ICT strategies, which also permit bottom-up approaches”¹⁷ in economically poor and in addition formerly colonized countries? Is it possible to create prerequisites for postcolonial identities to make their mark on a nationally situated ICT implementation?

ICT Discourses

Technical transfer in a global perspective and modern time is dominantly unidirectional. Dealing with ICT development the situation quickly gets complex. The direction is not obvious, as the border between developer and receiver does not necessarily coincide with a national border. Still keeping a nation state context we are eager to find ICT strategy formulations relating to postcolonial situations. Why so refers to willingness if any from the rich countries to include their own participation in the existing prerequisites for the low-income countries to implement ICT on their own terms.

In this section, we are starting the indicated investigation by looking at some ICT policy documents and initiatives at different international and national levels. We are looking for different ICT discourses, dominating as well as subordinate.

UN

We want to point out four initiatives within UN promoting ICT development for poor people.

ICT Task Force

The session of the Economic and Social Council in July 2000 resulted in a ministerial declaration, which established a task force on ICT for development. The aim of the task force is to provide an interface between the information technology community and the development community, bringing together private sector, foundations and the donor community to develop innovative ways to bring ICT capacity to the low-income countries. On a more general level the aim is “*to harness ICT to bridge the social and economic gaps that divide the world – not as a substitute for broad development efforts, but to complement them as a leveraging factor that can empower the poor with the knowledge and skills they need in order to grow out of poverty*”...”*to devise technological solutions that can help poor countries and people to leapfrog traditional technologies and stages of development*”¹⁸. The conclusion in the same report states that “*although ICT do not provide the magic wand in overcoming poverty and addressing development problems, they can make a major*

¹⁷ Suggested in the DOT Force report Genoa July 2001, see above

¹⁸ ICT Task Force, Report of the Secretary-General, E/2001/7, 20 February 2001, paragraph 11.

contribution in tackling many long-standing development challenges. The establishment of the ICT Task Force can be an important catalyst in this endeavour.”¹⁹

UNITEs

In November 2000 UN General Secretary Kofi Annan launched a project, which he described thus in a press release²⁰: *“This is what I had in mind when I asked United Nations Volunteers to lead an Information Technology corps of volunteers – UNITEs – which is helping people in developing countries learn how to use the resources of the Internet and of information technology for human development[...]Bridging the digital divide is not going to be easy. UNITEs is just one example of the exciting new areas that volunteerism can venture into.”* The project was criticized by Anriette Esterhuysen, head of African Progressive Communication, saying it is dangerous to identify ICT as a miraculous medicine for poverty.

The purpose of UNITEs is to support the efforts of people in developing countries to build their capacity in the use of ICT for human development. UNITEs works through a coalition of institutions from the North and the South, comprising volunteer agencies, institutions from civil society, governments, the private sector and the development organisations, including those of the UN.

Health InterNetwork

The Millenium report of UN announced the Health InterNetwork with an aim to enable healthcare workers, researchers and policymakers in low-income countries to gain access to updated health information using ICT including Internet. The Health InterNetwork is led by WHO and is creating a global public health portal on the Internet and establishing health access sites. These sites are going to be set up, both telephonic and wireless, in the poorest nations across the world. The content and application must be designed to address the specific professional, social and cultural needs of these countries.

Disaster Relief Program

A first-on-the-ground program has been established to provide and maintain mobile communication equipment and expertise for humanitarian relief operations. A partnership is created between UN and Ericsson drawing on support from Ericsson’s offices in more than 140 countries. The program is led by the Office for the Co-ordination of Humanitarian Affairs and includes all UN agencies involved in emergency response as well as the international Federation of Red Cross and Red Crescent Societies.

The two first initiatives show dominant ICT discourses, though somewhat hedged, characterized by ICT as a powerful, general tool for poverty alleviation and by step-by step progress understanding (using terms like leapfrogging). Great expectations on ICT are expressed. However, there are discussions at the UN level, constituting explicit cracks or ambivalences in the dominant ICT discourses and turning the questions towards problems of injustice and global resource gaps not able to solve merely by a technical fix. This turn is supported by the two last initiatives, which constitute practices of ICT development starting in concrete, situated problems.

¹⁹ Ibid, paragraph 39.

²⁰ SG/SM 7642 November 28 2000

G8

ICT, the digital divide and the situation facing low-income countries were the main themes on the agenda for the G8 meeting in Okinawa²¹ in the 2000 between the Heads of State of the participating countries. A policy document was approved – the Okinawa Charter on the Global Information Society – and a Digital Opportunities Task Force (DOT Force) was initiated by G8.

The Charter states²² “Countries that succeed in harnessing the potential (of ICT) can look forward to leapfrogging conventional obstacles of infrastructural development, to meeting more effectively their vital development goals, such as poverty reduction, health, sanitation and education, and to benefiting from the rapid growth of global e-commerce. [...] Indeed, those developing countries which fail to keep up with the accelerating pace of ICT innovation may not have the opportunity to participate fully in the information society and economy.”

The dominant ICT discourse we identify here is firstly the view of ICT evolution as a more or less linear process. Leapfrogging indicates the possibility of leaving out some progress steps, thus speeding up the process. This understanding of development practices leaves little room for complex and often necessary feedback processes, which are anything but linear and include a wide variety of actors. The second dominant discourse addresses ICT as a panacea. A new major technological breakthrough like ICT is expected to carry the solutions for a wide range of social problems and challenges. The third discourse, which must be considered more as a rhetorical strategy, is to add an element of “threat” in the development process for the presumptive participants in the information society. If you don’t get on the ICT train and adapt, you’ll run into serious troubles.

The DOT Force presented a plan for action at the G8 meeting in Genoa, Italy, in July 2001. The action plan is included in the DOT Force report *Digital Opportunities for All: Meeting the Challenge*²³.

The background text in the Genoa report includes no explicit leapfrogging discussion as in the Okinawa Charter. A more multidimensional picture is painted of partnership. The title of the Genoa report – *Digital opportunities for all* – indicates the dominating rhetoric in the discussion and connects it to the theme “helping the poor”. The ICT development and its potential for poverty reduction, increased social inclusion and the creation of a better life for all is constantly emphasized. Although it has been rejected, the panacea discourse is a strong undercurrent throughout the report. It tries to balance the requirements for good applications and the threats of misapplied or non-applied ICT.

The G8 meetings concern world economy issues. The role of ICT in the world economy is prevailing. The discussions in the Genoa DOT Force report are focused on poverty reduction in economically poor countries without explicitly stating the importance for the G8 countries of ICT development in the poor world. Cracks occur though, for example, just before the list of action points, where extending markets and sharing innovations in the international community are mentioned but not analyzed. Another crack is the eagerness to secure pro-competitive policies in the communications sector and a regulatory framework that will support such competition in economically poor countries. We understand these G8 suggested

²¹ www.g8kyushu-okinawa.go.jp

²² www.g8kyushu-okinawa.go.jp/e/documents/it1.html under Promoting Global Participation, 12

²³ 11 May 2001, www.dotforce.org/reports

policies to refer more to the international than the national market and the need for deregulation, when mentioning a regulatory framework in the particular country.

EU

The present position of ICT policy in the European Community can be found in the proposal for decision of the multi-annual framework programme 2002 – 2006 of the European Community for research, technological development and demonstration activities aimed at contributing towards the creation of the European Research Area²⁴.

In the selected thematic area ***Information Society technologies***, the various actions suggested all address a number of technological priorities. One is *integrating research into technological areas of priority interest for citizens and businesses*. Elements of discourses can also be read between the lines of the description of envisaged activities²⁵:

Completing and building on progress expected in the development of basic technologies, research aimed at finding solutions for major societal and economic challenges and, accordingly, focusing on:

- ambient intelligence systems offering access to the information society for all, whatever their age and situation, as well as interactive and intelligent systems for health, mobility, security, leisure, preservation of the cultural heritage and environmental monitoring;*
- electronic and mobile commerce, as well as technologies for secure transactions and infrastructures, new tools and new methods of work, technologies for learning and systems for corporate knowledge management, for integrated business management and for e-government;*
- large-scale distributed systems and platforms, including GRID-based systems that provide effective solutions to complex problems in areas such as the environment, energy, health, transport and industrial design.*

The ICT discourse of linear process thinking is not very strong with the emphasis on, for instance, cooperation practices not only between member states and other nations but also between different actors, such as universities, institutes, enterprises etc. However, the panacea syndrome as a dominating ICT discourse is as strong in Europe as it is in the G8 collaboration. In this part of the document, the understanding of ICT as an exclusively technical discourse is explicit, but if we take account of the proposal as a whole, it is not exclusively technical, including also social and cultural context impacts.

Sida

The Swedish International Development Cooperation Agency (Sida) launched its own ICT policy when it established the *Strategy for IT in Development Cooperation*²⁶ in December 1999. The vision for Sida's ICT cooperation support is summarized in the strategy document²⁷:

²⁴ Brussels, 21.2.2001, COM (2001) 94 final, 2001/0053 (COD), 2001/0054 (CNS)

²⁵ Ibid. p. 19

²⁶ www.sida.se/Sida/articles/5400-5499/5459/STRAT_SV.PDF

²⁷ Strategy for IT in Development Cooperation, 1999, p. 7

- ✍ Sida supports the rapid integration of ICT in the partner countries in order to improve communications and the exchange of knowledge, both within the countries and globally.
- ✍ Sida is a partner in cooperation with high quality experts whose services in the subject area are in demand.

The arguments for the involvement of Sida in the development of ICT in economically weak countries are stated on Sida's website²⁸ as follows:

IT is gaining foot in the developing world and it may take some time before it will benefit the poor people in these countries. Telecommunication networks and other IT infrastructure are lacking as well as the technical and economic base for achieving a widespread connectivity. The situation is worsened by the lack of technical personnel and computer literacy. The digital divide threatens to impede the economic welfare of the developing countries.

IT is the instrument that can help developing countries to be a part of the global economy. It is also a question of everybody's right to get information. While IT provides tremendous opportunities for the poor people of the developing world, there also exists a risk that the IT revolution can enhance the gap not only between the rich and the poor countries but also between the rich and the poor people in the same country.

Developing Cooperation Agencies can play an important role at this embryonic stage by providing the necessary tools for utilising IT. The task at hand is to quickly integrate IT in the support programmes of these agencies so that the developing countries can benefit from increased knowledge transfer both globally and within the countries. But how should this be done?

The report *IT in Swedish Development Cooperation – Suggestions for Ways of including the Low-income Countries* (Ekenberg & Asker 1999) was written on behalf of the Swedish Ministry for Foreign Affairs and Sida and formed the background for Sida's strategy document discussed above. In the report it is not obvious that important development potentials and the necessary fresh ideas are situated in the economically rich, Western world. This may imply a breakaway from technically dominated ICT discourses in favour of appropriate, context-dependent, situated and sustainable system changes.

If we consider the two Sida documents together, we can identify the following prevalent ICT discourses:

- ✍ Economically poor countries have to invest (with foreign help) in ICT in order not to be excluded as a nation or – on the level of the individuals – as marginalized groups. The issue of who shall adapt to conform to whom has low priority.
- ✍ There is no time to lose in joining the ICT development. High initial costs must be accepted, as delaying will be more expensive in the long run.
- ✍ ICT is a condition for contemporary social progress (evolution).
- ✍ A linear perception of development dominates and there are high expectations of leapfrogging.
- ✍ ICT is a universal tool²⁹.

²⁸ Homepage updated 000914 and read for this citation 010704

²⁹ Sida's Strategy Document states on page 14: "Since IT is a *universal tool*, the natural starting points are the needs which are experienced as the most urgent from the developing country perspective...."

Women voices and gender research

Vandana Shiva once said “*New technologies travel on old social relations*”. Experiences reveal that new technologies simply reinforce old social structures rather than transforming them. This means that the discourse of ICT as a universal tool, which also must include the possibility to change deeply ingrained structures like gender structures, is highly questionable. The concern to understand the underlying cognitive structures, which are reality producing in the evolving information society, has been and still is comprehensive in gender research.

Participatory ICT design is emphasized in gender research as well as in human work science, computer science and elsewhere. Birgitta Rydhagen (1999, p. 75) regards the feminist understanding of power relations and their impact on the production of knowledge and technology as highly relevant in participatory research and technology design. Combining participatory ICT design and feminist research promotes:

- ✍ diversity potentials as strategies to handle non-consensus situations
- ✍ enforcement of situated knowledge and technology development (Haraway 1991)
- ✍ emphasis on the importance of power relations and their impacts, including complex understanding of gender structures
- ✍ process-oriented development through a broader understanding of transformation processes.

Christina Mörtberg (2000) holds that equal access to ICT ought to be a basic principle, when the slogans are no longer “technology in a democratic society” but “democracy in an information society”. She problematizes the discourse of equal access by showing that the limitations of equal access are rendered visible by a multiplicity of variables such as gender, class, race, region, etc. “*There are no automatic links between the political goal of equal access and the opportunities that are opened up by information technology.*”

Notes for the Near Future

In the complex web of material, cultural, social and economic actors³⁰ within cyberspace³¹ and ICT development, one of the current key issues is accessibility for economically weak countries and poor women and men. To open up for and increase access to cyberspace is a non-linear process and not only a technical problem. The contemporary accessibility debate pivots on telecommunications.

We have seen how the G8 gathers around the telecommunications sector and more or less explicitly demands deregulation of that market. In contrast with that view, we agree with Holderness (1998) that the telecom market, left to itself, will not address the inequality of women’s and men’s access to communications. Positive political intervention will be required and – as suggested by Ekenberg and Asker (1999) – national telecom sectors must be reformed and restructured. Nick Moore (1998) claims that open, unfettered competition will never ensure that telecommunications are provided globally, other than perhaps in a compact city-state like Singapore. However, it may be possible to achieve the goal of global service through regulation and by placing conditions on the companies licensed to provide telecommunication services.

³⁰ For a discussion of diverse actors in ICT contexts, see Elovaara 2001

³¹ Cyberspace is understood as the space, which world-wide computer networks create.

The conditions of the ICT have changed dramatically since spring 2001. The telecommunication and ICT industry has seen the value of their shares fall to a historical low level. This situation may imply the traditional western ICT infrastructure solutions not to be as useful in the panacea rhetoric as before, which also stands for the ICT discourse of linear process thinking.

The second event is the terrorist attack on New York and Washington. USA is more vulnerable, even in its centre, than the country thought. An international dependence for USA seems more urgent now.

The result of these two situations is a vacuum for the traditional rhetoric. Maybe we can see a more humble western world, which is actually interested in other solutions, other questions and most of all – other answers of how to implement ICT in low-income countries.

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