

Technological Determinism and Ideology: Questioning the ‘Information Society’ and the ‘Digital Divide’*

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Preamble: The research for this chapter was prompted by an event in 2002 involving a recent graduate of the New Technology degree of the University of East London’s Department of Innovation Studies. She had obtained temporary employment on a project funded by the European Union in the London Borough of Newham. Her work involved creating an IT room in a run down housing estate used largely to house refugees. The estate was rat infested and the flats had water running down the walls. There was money to install the latest computers but no money to get rid of the rats or of the humidity in the flats. She wondered if this made any sense...

Introduction

The 27 September 2004 issue of *Business Week* featured a cover story entitled ‘Tech’s Future’. Both the cover and the story were illustrated with pictures of dark skinned women. The one on the cover was of an inhabitant of Recife in the poor North East of Brazil described as a ‘prospective PC buyer’. The main story was illustrated by a full page photograph depicting an Indian woman, Neelamma, dressed in a traditional sari decorated with a garland of flowers holding a Hewlett Packard digital camera. The message in the story was driven home by a large font subtitle stating: “With affluent markets maturing, tech’s next 1 billion customers will be Chinese, Indian, Brazilian, Thai...” This message was illustrated by the case story of Neelamma, a 26 year old village woman from Andhra Pradesh, who, as part of an experiment organised by Hewlett Packard, was charging local villagers “70 cents apiece for photos of newborns, weddings and other proud moments of village life” taken with a digital camera and printed with a portable printer powered by solar charged batteries which had been rented from Hewlett Packard for \$9 a month.

The same theme had already been broached by *Business Week* earlier in the year, in the issue of 28 June, in a featured article eulogising India’s ‘digital revolution’. Its title, “The Digital Village”, contained implicit allusions to both Marshal Macluhan and Nicholas Negroponte. The main message was expressed in a quote from C.K. Prahalad, described as a leading management theorist who studies developing markets: "If you can conceptualize the world's 4 billion poor as a market, rather than as a burden, they must be considered the biggest source of growth left in the world".

Both in the pictorial metaphors and in the textual message *Business Week* was presenting a particular strategy for bridging what has become known as the ‘digital divide’. The poor and those marginalised from the ‘information society’, particularly women and black people, need to be brought into it as potential customers rather than as human beings with needs. This, it is suggested, will simultaneously eradicate poverty and create the conditions whereby basic needs are satisfied.

The strategy promoted by *Business Week* had been advocated in December 2003 at the ‘World Summit on the Information Society’ (WSIS) in Geneva organised by the United Nations at the

behest of the International Telecommunications Union. To justify the summit, the WSIS web site¹ cited the existence of the

‘digital revolution... fired by the engines of the of Information and Communications Technologies’ and which has “fundamentally changed the way that people think, behave, communicate, work and earn their livelihood... forged new ways to create knowledge, educate people and disseminate information ... restructured the way the world conducts economic and business practices, runs governments and engages politically... provided for the speedy delivery of humanitarian aid and healthcare, and a new vision for environmental protection”. Further, “access to information... has the capacity to improve living standards for millions of people around the world” and “better communication between peoples helps resolve conflicts and attain world peace”.

But the site also points to the paradox that while the “digital revolution has extended the frontiers of the global village, the vast majority of the world remains unhooked from this unfolding phenomenon” and “ the development gap between the rich and the poor among and within countries has also increased”. The purpose of the World Summit was therefore to discuss ways to bridge the digital divide and “place the Millennium Development Goals on the ICT-accelerated speedway to achievement”. (<http://www.itu.int/wsis/basic/why.html> downloaded on 13/11/06) .

In its “Declaration of Principles” the WSIS declared that its purpose was:

“to harness the potential of information and communication technology to promote the development goals of the Millennium Declaration, namely the eradication of extreme poverty and hunger; achievement of universal primary education; promotion of gender equality and empowerment of women; reduction of child mortality; improvement of maternal health; to combat HIV/AIDS, malaria and other diseases; ensuring environmental sustainability; and development of global partnerships for development for the attainment of a more peaceful, just and prosperous world.”

The Chair of the conference, Swiss President Pascal Couchepin, claimed in his closing address that the Summit had created a new political concept of ‘digital solidarity’. (http://www.wsisgeneva2003.org/01_switzerland/phase1.html)

But the general tone for the Summit -at which the business community was strongly represented - was set by the UN Secretary-General in his keynote speech:

“The future of the IT industry lies not so much in the developed world, where markets are saturated, as in reaching the billions of people in the developing world who remain untouched by the information revolution. E-health, e-school and other applications can offer the new dynamic of growth for which the industry has been looking”. (http://www.wsisgeneva2003.org/01_switzerland/phase1.html)

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This example is typical of the portrayal of the relationship between technology and social change by the media and by policymakers. There are a number of different aspects to this representation. The first is that it ignores the fundamental nature of the creation of technology by human society. Instead it reifies technology, which in this representation acquires a 'phantom objectivity' as an agent of social change, 'an autonomy that seems so strictly rational and all-embracing as to conceal every trace of its fundamental nature: the relation between people' (Lukacs 1971:83).

The second and inter-related representation involves the myth of the 'technical fix', the implicit assumption that technology provides the only feasible solution to complex social problems. Thus the World Summit on the Information Society, in its Declaration of Principles, implies that information and communication technologies possess quasi-magical powers to provide solutions to the world's greatest social and economic problems such as poverty, disease, illiteracy, race and gender discrimination and environmental pollution.

The third is the use of myths about technology in order to promote particular policies and help create particular ideologies. The reification of technology, by creating the impression that the technological change is a rational, objective and inevitable process which is driving social change, hides the social forces and social interests behind the change and the fact that there are winners and losers in the process. In this case the new technologies are associated with the neo-liberal 'free-market' ideology and the combination is presented as creating a process in which everybody wins: the transnational corporations find new markets and the poor find new ways to improve their conditions- by making money from other poor people.

The next section explores the origins of the concepts of the 'information society' and of the 'digital divide' as normative policy tools and demonstrates their technologically deterministic content and ideological role. The final section examines the technological determinist nature and mythical character of the concepts, and analyses the role that they play in mystifying social reality analysed and draws some conclusions.

Part I: Creating the Myth

The Information Society

One of the most recent examples of an implicitly technologically determinist presentation of the relationship between social and technological change can be found in the genesis and development of the concept of the 'information society' and in how it has been used by policymakers, business leaders and the media.

The concept originates in academic attempts to understand and explain the changes that took place in the economic structure of the most advanced capitalist economies in the late 20th century. In this period, the traditionally most dynamic economic sector of the industrialised countries, manufacturing industry, went into decline, accounting for a progressively smaller proportion of both employment and of the GDP of those countries. This was accompanied by a rise in the importance of the service sector which now accounts for more than 70% of employment. Study of the nature and causes of this phenomenon led to the development of a number of inter-related concepts such as the 'post-industrial society', the 'service economy' and, most recently, the 'information society' and the 'knowledge-based economy'. The exact meaning and usefulness of these concepts have been the subject of extensive academic debate.

However, the concept of the information society has moved beyond the realm of theory and has attained the status of an incontrovertible reality and a normative character. It has been widely adopted by politicians, with the support of business and the media, as the basis of policy. In the process it has acquired all the characteristics of a technological myth. The information society is consistently presented as having been created by technology, the product of the convergence of new digital information and communication technologies. The myth, as I shall demonstrate, is nearly always portrayed in utopian terms. The development of the information society is equated with progress towards a better society in which social problems will be solved by technological means and in which human beings will be both better off and freer. This alleged freedom is ascribed to the power of the technology, the de-regulation of markets and the rolling back of the influence of the state - corner stones of neo-liberal ideology. Often liberalising and opening up markets is presented as being necessitated by technological change.

The ‘information society’ as a normative concept is essentially a European construct²: it was originally adopted as a central plank of the influential 1993 Delors report written by a committee led by the then European Commission Secretary -General, Jacques Delors, a French Christian Socialist (European Commission: 1993). The report argued that the development of the market economy has a decentralising effect and “set(s) free the dynamism and creativity inherent in competition”. It further maintained that the combined effect of this and of the use of the new technologies was “taking Europe towards a veritable information society”. The mythical association between technological revolutions and a better social future was established by the report’s contention that the information society was the result of the “dawning of a multimedia world (sound - text - image)³ (which) represents a radical change comparable with the first industrial revolution” and that it “can provide an answer to the new needs of European societies: communication networks within companies; widespread teleworking; widespread access to scientific and leisure databases; development of preventive health-care and home medicine for the elderly”.

Soon afterwards, the concept was consolidated into European policy by the establishment of a High Level Group of Experts on the Global Information Society, composed almost exclusively of senior executives of Europe’s leading computing and telecommunications firms. Martin Bangemann, European Commissioner responsible for industry and telecommunications, was appointed to lead the Expert Group and their report, which became well known as the Bangemann Report, was published in 1994. (European Council 1994). The report opens with a clear expression of the technological myth and its utopian promise:

“Throughout the world, information and communications technologies are generating a new industrial revolution already as significant and far-reaching as those of the past. It is a revolution based on information, itself the expression of human knowledge. Technological progress now enables us to process, store, retrieve and communicate

² A more detailed critical examination of the development and use of this concept in European policy from which much of the material used here has been taken has been developed elsewhere (de Miranda and Kristiansen: 2000)

³ The term “multimedia” is widely interpreted in technological terms as the integrated technology that results from the convergence of the previously separate technologies of sound, text and image. This convergence has been made possible by the digitisation of all forms of information.

information in whatever form it may take - oral, written or visual - unconstrained by distance, time and volume.

This revolution adds huge new capacities to human intelligence and constitutes a resource which changes the way we work together and the way we live together.”

(European Council:1994: Chapter 1

<http://europa.eu.int/ISPO/infosoc/backg/bangeman.html#chap1> 13 November 2006)

The association of the information society with free market ideology is also made explicit in the report. The European Commission press release announcing its publication highlighted this fact:

"The creation of the information society should be entrusted to the private sector and to market forces. Existing public funding should be directed to target its requirements. At Union level, this may require reorientation of current allocations under such headings as the Fourth Framework Programme for research and development and the Structural Funds." (From : News Release on the Bangemann Group report on the Global Information society: European Commission Spokesperson Service http://ica.cordis.lu/search/index.cfm?fuseaction=news.simplifiedocument&N_RCN=2648&CFID=2058139&CFTOKEN=12658882 13 November 2006)

The Bangemann report was adopted by the European Union Heads of Government at the European Council meeting in Corfu in June 1994.

The concept of the information society did not have much influence in the United States. However, a parallel dominant normative concept was developed there simultaneously, that of the Information Age. This derived largely from the influence of Alvin Toffler's 1980 book *The Third Wave* over leading US politicians of both main parties, notably Al Gore and Newt Gingrich. Newt Gingrich, Republican Speaker of the House, had been a friend of Toffler since his days as a junior academic at West Georgia State College. In 1975, at the request of Congressional Democrats, Toffler organized a conference on futurism and 'anticipatory democracy' to which Gingrich was invited. Toffler later described in his next book *Creating a New Civilization: The Politics of the Third Wave* how the conference led to the creation of the Congressional Clearing House on the Future, a group which eventually came to be co-chaired by a young Senator named Al Gore (Farrel:2001b). In *The Third Wave*, Toffler had predicted that the future would be shaped by the new information technologies. In the introduction to his previous book, *Future Shock*, Toffler had made clear that the purpose of predicting the future was to help citizens adapt to it. Toffler's work thus established the mythical proposition that the future was technologically-determined and therefore inevitable. Citizens will have no option but to adapt to it, lacking the power to exert any influence or control. The message was well received by US elites and Toffler came to command \$30,000 per speech in the after dinner circuit. (Bereano:1994) . It was also taken up enthusiastically by both Gore and Gingrich.

Fired by the wish to facilitate the development of the Information Age, Gore made the creation of the US's National Information Infrastructure (NII) and of a Global Information Infrastructure (GII) his first priority after he became Clinton's Vice-President in 1992. The development of policy on the information infrastructure was entrusted to an Information Infrastructure Task Force (IITF) operating under the aegis of the White House's Office of Science and Technology and of the National Economic Council and on which all the key government, regulatory and industry players were represented . It was chaired by Clinton's Secretary of State for Commerce,

Ron Brown. The IITF developed an Agenda for Action on the National Information Infrastructure. According to this, the development of the NII could “help unleash an information revolution that will change forever the way people live, work and interact with each other”. People would be able to “live almost everywhere they wanted, without foregoing opportunities for useful and fulfilling employment, by ‘telecommuting’ to their offices...”; “the best schools, teachers, and courses would be available to all students, without regard to geography, distance, resources, or disability”; also health care systems “could be available on-line, without waiting in line, when and where you needed them”. (IITF: 1993)

The US government took the proposal for the creation of a Global Information Infrastructure to the world stage. In March 1994 Al Gore addressed the conference of the International Telecommunications Union (ITU) in Buenos Aires. He began with a quotation from Nathaniel Hawthorne in 1881 referring in mythical terms to the power of the telegraph.

“By means of electricity, the world of matter has become a great nerve, vibrating thousands of miles in a breathless point of time. . . . The round globe is a vast . . . brain, instinct with intelligence!”

He argued that the development of the GII would be what would finally lead to the fulfillment of Hawthorne’s vision. The prerequisite for sustainable development would be the building of this “network of networks”. From it

“we will derive robust and sustainable economic progress, strong democracies, better solutions to global and local environmental challenges, improved health care, and-ultimately- a greater sense of shared stewardship of our small planet... (It) will help educate our children... It will be a means by which families and friends will transcend the barriers of time and distance... In a sense the GII will be a metaphor for democracy itself. Representative democracy does not work with an all powerful central government, arrogating all decisions to itself. That is why communism collapsed”⁴ (Gore: 1994a)

The European Union, through Commissioner Bangemann, took the Information Society to the global stage when it persuaded the G7 group of countries at its summit in Naples in July 1994 to set up a Global Information Society Project. This was operationalised through a G7 ministerial conference on the Global Information Society in Brussels in February 1995. In the conference, Europe’s ‘information society’ met the US’s ‘Information Age’. Under the title ‘A Shared Vision of Human Enrichment’, the Chair’s conclusions of this conference announced again:

⁴ The argument that the creation of the GII would lead to the development of a global free market and of a global decentralised democracy was echoed in even stronger terms by the ultra-conservative Newt Gingrich. He believed that the information age means more decentralization, more market orientation, more freedom for individuals, more opportunity for choice, more capacity to be productive without controls (quoted in Lepkowski:1995). Gingrich carried this trust in the power of technology to deliver individual freedom to the ultimate when he argued in a speech in Congress in 1998 that by 2010 every soldier in battle "will have somewhere on their body a personal telephone...that will also have a computer capability, faxing capability, so during lulls they can arrange a date." (quoted in Silverstein: 1999)

‘Progress in information technologies and communication is changing the way we live: how we work and do business, how we educate our children, study and do research, train ourselves, and how we are entertained. The information society is not only affecting the way people interact but it is also requiring the traditional organisational structures to be more flexible, more participatory and more decentralised. A new revolution is carrying mankind forward into the Information Age...The rewards for all can be enticing. To succeed, governments must facilitate private initiatives and investments and ensure an appropriate framework aiming at stimulating private investment and usage for the benefit of all citizens.’

The conclusions also adopted some ‘core principles’ in order to realise their common vision of the Global Information Society, including:

- promoting dynamic competition
- encouraging private investment
- defining an adaptable regulatory framework
- providing open access to networks

In the UK the concept of the Information Age had an earlier impact on policy than that of the Information Society. The first government document on these issues was a consultation paper entitled “Our Information Age” published by the Central Office of Information in 1997. In the foreword to the document, Prime Minister Tony Blair declared, in poetic terms:

‘The prize of this new information age is to engage our country fully in the ambition and opportunity which the digital revolution offers. The prize is there for the taking. We must stretch out our hands and grasp it.’ (Central Office of Information, 1998)

The Digital Divide

The global diffusion of the myths of the ‘information society’ or ‘the information age’ with their vision of a great technologically driven future which would bring untold benefits to all was accompanied by an increasing concern for the fact that some might be left behind. The G7 group of countries sponsored a conference on the theme of ‘Information Society and Development’ (ISAD) which took place in South Africa in May 1996. The conference concluded that Information and Communication Technologies and Services have a potential to offer a significant contribution towards growth in all countries, but that a huge gap exists between the highly-industrialised countries and the less-industrialised countries in terms of information infrastructure. It argued that developing countries were under-investing in ICT infrastructure and urged these countries to mobilise investment so that they can narrow the economic gap with industrialised countries.

A parallel initiative had begun in Africa in 1995 when 53 African countries, with the support of international organisations such as the UN Economic Commission for Africa, UNESCO and the International Telecommunications Union, started a process which culminated with the creation of the ‘Africa Information Society Initiative: An Action Framework to Build Africa’s Information

and Communication Infrastructure' in 1996. Africa was the first continent to undertake such a programme.

Whilst the concern for the international gap in access to ICTs had been highlighted by these initiatives, the concept of the 'digital divide' had not yet been established. This was born in the United States and subsequently adopted worldwide. It was clearly linked to the notion of the 'information age', and its adoption as a normative policy tool followed closely that of the national and global information infrastructures. This crystallised the fear that a gap was opening up between the 'information haves' and the 'information have-nots' which governments needed to help bridge. Its original use in 1996 referred to fears about the differential access to ICTs in different schools in America. This was allied to concerns that the US might not be doing enough to develop skills for the 'Information Age'. Al Gore first used the concept at a White House ceremony in May 1996 when he said:

“...we've tried, at the President's direction, to make certain that we don't have a gap between the information-haves and information-have nots. As part of our Empowerment Zone Initiatives we launched this cyber-Ed Truck, a book mobile for the digital age. It's rolling into communities, connecting schools in our poorest neighborhoods and paving over the *digital divide* (my emphasis)”.
(<http://www.techcorps.org/news/tcnews/archive/goretalk.html> 13 November 2006)

However, the term came into widespread usage as a result of a series of studies by the National Telecommunications and Information Administration (NTIA), a US Department of Commerce agency, undertaken at the behest of Vice-President Al Gore and published under the overall title of "Falling through the Net". The studies looked at the disparities in access to ICTs in the US by geography, income, race and gender. All came to the same conclusion that the disparities were large and getting wider. The second of these reports, published in 1998 was entitled "Falling through the Net II: New Data on the Digital Divide". The third report, published in 1999, was "Falling through the Net: Defining the Digital Divide". These reports received widespread media and political attention and were responsible for popularising the term. The conclusions caused alarm in the Clinton administration and the development of policies for 'bridging the divide' became a high priority. However, at the same time, within the US administration the feeling developed that 'bridging the digital divide' could be associated with outmoded concerns with equality which Third Way Democrats had abandoned in favour of 'equal opportunity'. The White House therefore began to use what they considered to be the more fitting slogan of 'creating digital opportunity' for the marginalised. In February 2000 "From Digital Divide to Digital Opportunity: the Clinton-Gore Agenda for Creating Digital Opportunity" was announced. This aimed to mobilize the private sector to help promote digital opportunity. The introduction to the initiative proclaimed that "private sector competition and rapid technological change are powerful forces to ... make Information Age tools available for more and more Americans". At the same time Clinton announced US\$2 billion over 10 years in tax credits to encourage private sector donation of computers, sponsorship of community technology centres and technology training for workers and smaller sums to help train technology teachers, promote Community Technology Centres in low income communities and to help develop public-private partnerships to expand home access to computers. To launch the initiative Clinton undertook a whistle-stop tour of three deprived areas in the US accompanied by senior executives of ICT companies. This 'digital divide' tour followed soon after the White House's top level forum of economists, business leaders and Wall St. analysts on the New Economy where the creation of digital

opportunity had figured prominently. In a keynote address as part of a forum panel on “Closing the Global Divide: Health, Education and Technology”, Bill Gates enthused:

"These are amazing times. And I am proud and grateful to have the chance to be a part of the technology revolution at the heart of so much of the progress we are making. The scope of change -economic, social, and cultural- is awe-inspiring. Because technology has the power to make such a positive difference in people's lives, we have a simple obligation: spread it."

<http://www.microsoft.com/presspass/features/2000/04-05wh.mspx> 13/11/2006

This particular way of trying to ‘bridge the digital divide’ and of creating digital opportunity has its ideological origins in the Third Way’s triangulation method of developing partnerships between public and private organisations. However, it is also compatible with some strands of neo-conservative thinking. One of the gurus of the Information Age, Don Tapscott, writer of influential books such as *Paradigm Shift: The New Promise of Information Technology*, *The Digital Economy* and *Growing Up Digital*, who is credited as one of the early theoreticians of the digital divide, explained his approach in an interview with neo-conservative talk-show host Geoff Metcalf, for Global Pathways, a website which “operates on the premise that the most powerful force in erasing the digital divide will be aggressive, private sector companies who provide products and services that meet the needs of the global market and make a profit”, the very approach being promoted by *Business Week* in the example given in the introduction to this chapter. Tapscott coined the term ‘philanthropreneur’ for the strategy he was advocating. He argued that from a shrewd business perspective, companies should be able to find ways to benefit from their philanthropic activities in spreading IT across the divide through both tax advantages and brand enhancement which might well be greater than the benefits that they obtain from their advertising budgets. (<http://www.geoffmetcalf.com/qa/19657.html> 13 November 2006)

The ‘digital opportunities’ approach was carried into US foreign policy towards developing countries through the creation of the ‘DOT-COM Alliance: Development in the Information Age’ which was funded by US Agency for International Development (USAID) and sought to bring together public bodies, universities, NGOs and private companies with expertise in ICTs in order to provide support to USAID’s efforts to “bring the benefits of ICTs to under-served regions and populations”. Particular emphasis was placed in bringing ICTs to women. USAID’s strategy towards governments was encapsulated in DOT-GOV initiative of DOT-COM whose mission was to convince developing country governments to adopt “policies that encourage private investment, competition and equitable regulation, leading to universal access and diverse service”. This included “fostering privatization, competition and open networks, and universal service in telecommunications policy”. (<http://www.dot-com-alliance.org/library/documents/DOT-COMFULL.pdf> 13 November 2006)

At the same time as it was launched in the US, the Clinton-Gore initiative was taken to the global level. The World Bank’s online magazine *Development Outreach* report on the Davos World Economic Forum⁵ at the end of January 2000 was entitled “From Digital Divide to Digital Opportunity: Business Leaders Report from Davos”. Clinton, Gates and many other leading executives of ICT companies were present. At the summit John Chambers, President of Internet technology monopoly Cisco Systems, told his peers:

⁵ The Davos World Economic Forum was the object of large anti-globalisation demonstrations which were violently put down by the Swiss police.

“We can change the life of every child who dreams of creating something new, but we must work together to create policies, practices, and opportunities to enable access for all”.

In July 2000 the global information society and the digital divide became main themes of the G8 summit in Okinawa, Japan. At the summit the ‘Okinawa Charter on Global Information Society’ was adopted. The Charter stressed that

“(t)he essence of the IT-driven economic and social transformation is its power to help individuals and societies to use knowledge and ideas”

and resolved

“to renew our commitment to the principle of inclusion: everyone, everywhere should be enabled to participate in and no one should be excluded from the benefits of the global information society”.

In a section entitled “Seizing Digital Opportunities”, the Charter highlighted

“the potential benefits of IT in spurring competition, promoting enhanced productivity, and creating and sustaining economic growth”

and called for

“(e)conomic and structural reforms to foster an environment of openness, efficiency, competition and innovation, supported by policies focusing on adaptable labour markets...”.

The G8 created a Digital Opportunities Task Force (to which the acronym DOT Force was assigned) to address the problems of the digital divide⁶. The DOT Force in turn delegated the following year some of its work to Digital Opportunity Initiative, a public-private partnership made up of the United Nations Development Fund, the US Markle Foundation, whose President, Zoe Baird, had been Clinton’s failed nominee for Attorney-General, and the US-based global consultancy firm Accenture, which had re-incarnated from Andersen Consulting following Anderson’s involvement in the Enron scandal. The Digital Opportunity Initiative adopted the slogan “From Digital Divide to Digital Opportunities for Development”.

In December 2001 the UN General Assembly adopted resolution 56/183 which endorsed the holding of the World Summit on the Information Society, the first phase of which took place in Geneva in 2003 and to which I have alluded in the introduction to this chapter.

Part II: Dealing with Reality

The previous section detailed the way in which the concepts of the ‘information society’ and of the ‘digital divide’ have been consistently used to promote particular policies through the creation of dreams of a future techno-utopia in which all will participate, from which all will benefit,

⁶ When the Digital Opportunities Task Force was formed at the G8 meeting, protestors marked the occasion by burning computers on the streets of Okinawa.

where the deepest human aspirations will be fulfilled. This makes use of the power of myth in mobilising human imagination to engender commitment to particular policies. It constitutes the creation of what Mosco (2004) has called the ‘digital sublime’. The mythology is perpetuated through the incessant repetition of the mantra that the technology has a revolutionary potential to fulfil the deepest human aspirations, to create a world in which disease will be conquered, distance won’t matter, and communication will be both instantaneous and universal. At the same time the sense of community will be enhanced and new communities will be created unhindered by spatial or temporal barriers.

In order to achieve this, the myth has to create “euphoric clarity” (Barthes: 1972; quoted in Mosco:2004). It has to create a clear image, devoid of nuances and contradictions and devoid of politics. Insofar as politics involve struggle for resources between conflicting interests, they can have no place in myth creation for they would undermine the myth’s effectiveness. However, from the point of view of the powerful and of those who stand to benefit from the policies that are being promoted, the use of de-politicised myths has the dual advantage that it hides the existence of winners and losers, whilst simultaneously capturing the imagination and mobilising people to actively support them.

Technological myths, as I have argued, convey the additional advantage to their creators that they hide human agency and particular political interests in promoting a particular direction of social change. Technology is consistently presented as the driver of the process: it is perceived as a rational, quasi-natural autonomous force independent of society and implicitly impervious to human agency. Accordingly, the phenomena which technology creates acquire the inevitability of natural events which human beings are powerless to affect. If some people are adversely affected, they must accept this as inevitable: resistance would be pointless and would achieve nothing. In any case, as the myth has created the mirage of progress towards a better society, such resistance can only be construed as standing in the way of desirable goals and inimical to the interests of the vast majority of humanity who stand to benefit from technology’s march to the Promised Land.

I have shown that the ‘information society’ or the ‘information age’ are presented by the powerful in ways that have all the characteristics of a technological myth. Myths are often couched in prophetic and poetic language as in the case of Tony Blair urging us to stretch out our hands to grasp the prize that the digital revolution offers. When, in similarly poetic terms, the President of Cisco Systems claims that we can change the life of every child who dreams of creating something new, but that in order to do so we have to work together to enable all to have access to the technology, he appeals for support for policies that will benefit his company in terms that appear altruistic whilst creating an image that collective solidarity is the means to achieve this. A similar appeal to higher human aspirations is made when the Swiss President claims that the World Summit on the Information Society has coined the new term ‘digital solidarity’.

I have also shown that the inevitability and benefits of the information society are systematically associated with the expansion of the market and the dismantling of government control and regulation. This ideology embraces the claim that the full benefits of the technology can only be enjoyed by opening up markets. ‘Building the Information Society for All’, a positive slogan implying social solidarity adopted by the European Union, becomes simultaneously implicitly associated with de-regulating markets. The market said to be in most need of de-regulation is the labour market. Its regulation, whether by governments or as the product of effective collective

action by trade unions, is presented as one of the greatest obstacles to the development of the information society.

But the reality of disintegrating social solidarity and of increasing inequality contradicts the myth. We are told that there is a revolution towards a techno-utopia which we should all welcome whole heartedly, but numerous studies demonstrate that the *economic* divide between the haves and have-nots has widened. This is true of the divide between countries (Cornia, G.A.:2004).

It is also true of the divide within countries. Within the US, the country that has travelled fastest and furthest towards the 'information society', inequality has risen at the highest rates in the Western world in the course of this revolution both in terms of income and wealth. By some measures the increase in inequality is not just a relative phenomenon. It is not just that the real incomes of the rich are rising at a faster rate than those of the poor: the real incomes of the rich have risen whilst those of the poor have declined. The biggest winners have been the very, very rich. (Corn: 1995; Piketty and Saez: 2004; Krugman: 2002; Cassidy: 1997).

This huge rise in inequality created a considerable degree of political and academic concern in the US which was difficult to escape. The Clinton administration addressed this issue in the *Economic Report to the President* of 1994. The report recognised the rising inequality and called it "a threat to the social fabric". Included in the list of factors responsible for the rise in inequality were the spread of new technologies, diminished union strength and a falling real minimum wage (http://www.migrationint.com.au/news/iran/apr_1994-02mn.asp 13 November 2006). However, despite the fact that rising inequality was being officially ascribed partly to the spread of new technologies, the Administration chose to focus the problem around the concept of the 'digital divide' which it then successfully transferred to the global stage. The implied medicine was one of 'hair of the dog'. Inequality could be resolved by accelerating the spread of the new technologies which were partly causing it. It was only necessary to ensure that those who had been left behind could be brought into the fold and included.

There is, however, no evidence that ICT technologies will make any contribution to closing the socio-economic divide. If anything, as I have shown, the evidence points in the opposite direction: it is unlikely that creating 'digital opportunity' would do anything to ameliorate inequality within countries. Even if it did the problem is that, as one of the architects of the Clinton policy has since admitted, the excluded could only be included through government action that involves serious investment (Reich: 1999),. 'Philanthropreneurism' will never be more than a means for corporations to improve their image by pretending to be addressing the problems of the dispossessed. It is also unlikely that the villagers of rural India, or the women of North East Brazil as customers will make much contribution to Hewlett Packard's balance sheet in the foreseeable future. However, serious government investment requires serious government money and this is incompatible with the strategy of reducing taxation and embracing the market which has characterized the Third Way.

Technological determinism perceives the relationship between technology and social change as one in which technology is a quasi-natural force driving social change in a way that is impervious to human choice and human action. This chapter contends that technological determinism is an ideological weapon favouring the powerful and seeking to hide the fact that there are winners and losers from change. The concept of the 'information society' is presented by politicians, business executives and the media in technologically deterministic terms. The terms used also give a

mythical status to this concept, creating visions of a techno-utopia. This is designed to mobilise support for, and undermine opposition to, the changes associated with the policies being promoted. Approaching the problem of socio-economic inequality through the concept of the 'digital divide' perpetuates mystification and prevents real problem from being addressed.

'Building the information society for all', 'bridging the digital divides' or 'creating digital opportunity' are therefore inappropriate slogans for those concerned with rising inequalities in society. 'Digital solidarity' is not an appropriate way to address concerns with increasing individualisation.

The issue is building a *society* for all. This can only be done by 'bridging the *socio-economic* divide'. Such bridges cannot be built without challenging wealth and privilege. Social solidarity cannot be constructed by embracing the very mechanisms which promote the increasingly individualised consumption and economic greed which the continuous expansion of markets requires of society.

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