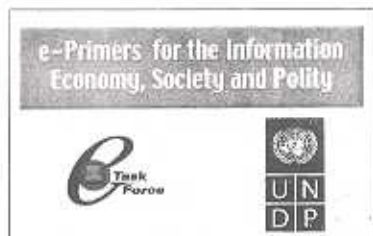


Book Review

Promises and Pitfalls of Technological Utopianism

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Emmanuel C. Lallana, Ph.D./Margaret N. Uy, *The Information Age*, Manila: e-ASEAN Task Force/UNDP-APDIP, 2003.

Edwin S. Soriano, *Nets, Webs and the Information Infrastructure*, Manila: e-ASEAN Task Force/UNDP-APDIP, 2003.

Victoria L. Tinio, *ICT In Education*, Manila: e-ASEAN Task Force/UNDP-APDIP, 2003.

Rodolfo Noel S. Quimbo, *Legal and Regulatory Issues in the Information Economy*, Manila: e-ASEAN Task Force/UNDP-APDIP, 2003.

Patricia Pascual, *e-Government*, Manila: e-ASEAN Task Force/UNDP-APDIP, 2003.

Zorayda Ruth Andam, *e-Commerce and e-Business*, Manila: e-ASEAN Task Force/UNDP-APDIP, 2003.

Jose Maria Ochave, *Genes, Technology and Policy*, Manila: e-ASEAN Task Force/UNDP-APDIP, 2003.

A commonplace argument in current writing on the international political economy suggests that new information and communication technologies (ICTs) will compel changes in the policy-making priorities of all nations. This imperative, we are told, derives from the logic of international competitiveness. We exist in the world controlled by semiconductor chips and software systems. Cutting-edge computer technologies have the power to transform our social being, from the way we govern ourselves to the manner that science configures our DNA. We have to contend with a double narrative: a world of inexorable change that demands adaptation in order to participate in the global order and, at the same time, a world of infinite possibilities.

These seven UNDP-sponsored primers each advance, in similar ways, the techno-optimists' understanding of the ICT—globalization story. The twin phenomena of ICT development and digital revolution currently alter significant global activities (*The Information Age*). International relations in the near future will neither be guided by *realpolitik* nor by *liberal*

internationalism but by *noopolitik* through an information-driven cyberspace. Online politics will supplant the existing modalities of global political power. The era of 'new work' and 'new economy' becomes plausible with the economies embracing the post-Fordist principles of efficiency, flexibility, informationalism and networking. Consequently, symbolic analysts or knowledge workers will gradually replace conventional workers or generic labor. The reconfiguration of social relationships is anticipated to have a profound impact on the attitudes of the 'sovereign individual'.

Understanding the complexities of the Information Age requires the appreciation of technological neologisms and their concomitant information infrastructures (*Nets, Webs and the Information Infrastructure*). There is a persistent call for developing countries to find a path through the demands of technological advance. But being behind the ICT race does not necessarily denote frailty. Developing countries can still absorb the best practices and learn from the failures of developed countries without absorbing their towering costs. Therefore, the main question is not whether to build or improve the information infrastructure but "when" and "how".

But the ICT—globalization story has never just been about informational flows driven by integrated network systems. It also touches the dynamics of politics and the transformation of the state. One example can illustrate this. The Information Superhighway exposes nations to the threats against privacy. Governments can approach the issue in two ways: regulate the Internet or leave cyberspace to a *laissez-faire* system. By either means, the legal jurisdiction over ICT crimes remains a big puzzle. Cybercrimes transcend state boundaries and government legislation. Hence, treating data as a property right is considered as an adequate defense from information abuse. The legal recognition of e-documents and signatures is perceived as a big step in deliberating cybercrime cases. The models of Kingdom of Saudi Arabia and the Singapore Broadcasting Authority in regulating Internet content reveal that the state can be an effective cyberspace sheriff. Regulation and censorship of Internet content, however, should not stifle innovation. Internet content-regulation is often associated with the encroachment to private rights. Essential public education and awareness campaigns must be sustained to preserve the nature of Internet as an 'innovation commons'.

Turning to the issue of ICT applications, again the picture is one of flexible adaptation. Mexico's *Telesecundaria* demonstrates that direct

class teaching can be enhanced using state-of-the-art media. *Telecollaboration* can make learning much easier because of the possibility of organizing Web resources to formulate curricula and devise teaching methods. A paradigm shift from a teacher-centered to a learner-centered mode of instruction is not far-fetched in the future. Nonetheless, this does not mean that computer software will replace the role of human teachers. Tinio (*ICT and Education*) believes that the education system must drive the use of ICTs in schools and not the other way around. The paradox of e-learning is prevalent: "teaching the tools rather than using the tools to teach". In this light, teachers in primary and secondary school teachers in developing countries require a serious upgrade of technological and pedagogical skills.

Information technologies can permeate bureaucratic systems. Pascual's paper is a subtle invitation to all governments to follow the *e-government* track followed by ICT champions Prime Minister Mahathir of Malaysia and Chief Minister Naidu of Andhra Pradesh, India. All is premised on the notion that the success of any e-government initiatives must be steeped in strong political leadership. Government executives are given a motto—"think big, start small and scale fast"—to aim for realistic goals in collaboration with the private sector. The technological competence of the country is considered a reliable barometer for the adoption of a *top-down* or *bottom-up* approach to any e-government project.

Current developments in e-commerce have altered the triangular relationship of the producer-retailer-consumer system. With the use of ICTs, the pattern has shifted to the new direct relationship between the producer and the consumer. Electronic payment systems (EPS) have been introduced as the new system of market exchange. While developed countries have maximized its benefits, the confidence level of developing countries in the use of an EPS and e-banking is still relatively low due to security concerns. The partnership between the government and private sector is crucial in sustaining the viability of an e-marketing strategy. Government initiatives should support and be at pace with private business firms' trajectories and velocity. Andam (*e-Commerce and e-Business*) writes that government's e-commerce initiatives should manifest in terms of infrastructure support and economic policies.

For some, genetic technology is the next wave of knowledge-based economy after the Information technology (*Genes, Technology and Policy*).

The benefits of biotechnology can be observed in the fields of health care, crop production and environmental management. On one hand, the debate over genetically-modified organisms (GMOs) surfaces because of the confusion surrounding the safety of some biotechnology products induced by a murky science conflated with power politics. The debate often focuses on the demands of developed countries and does not reflect the interests of the developing countries. Hence, there is a need for a global governance regime for biotechnology which will serve as a platform for developing countries to voice their collective concerns.

The UNDP studies veer away from the unproblematic nature of the ICT revolution. As we have seen, outstanding issues such as political leadership or North-South asymmetries continue to confront the new politics. Each study explains that these issues can be resolved through technocratic and managerial solutions. But I am less certain that the answers proposed here—to follow the ICT bandwagon—are quite so straightforward as suggested. Part of the problem is empirical and the policy issues that derive from this. Realistically, developing countries need to first test the waters before taking the technological plunge. But the reader should be wary of cautionary voices. Soriano, for example, states a half-truth when he mentions the positive effects of liberalizing the ICT sector. Singapore's liberalization of IT industry in 2000 and the passage of Telecoms Act of the Philippines in 1995 fail to provide a persuasive case for his claim that liberalization triggers welfare-enhancing development outcomes. There is a great deal of evidence that unfettered liberalization has actually failed even on its own terms.

A more sober assessment of the ICT revolution has obvious implications for the adoption of information-driven transformations in the Philippine economy, polity and society. In its current state, the Philippine government may be unprepared for the requirements of *e-government*. In this regard, Pascual's study downplays the roles of bureaucratic culture and people's motivation. Government structure is emphasized while agency is neglected. For instance, learning and relearning new information software poses a problem for senior government personnel who are more accustomed to their entrenched ways of work. The problem lies less on *e-government* mechanisms than on the fixed mindset or on institutional stickiness that impede reform. A discussion on the costs of *e-government* failure is also absent: direct, indirect, opportunity, political and future costs. A key problem of government practitioners is the lack of awareness of these

intangible costs. This explains why many e-government people are still enthusiastic supporters of the project despite the high costs of failure.

Governments must realize that e-government is not the panacea to solve all e-government issues. Concomitantly, the thesis that e-government has great democratizing potential in the Philippines needs more empirical reinforcement and not merely asserted as it tends to be in these studies. An e-education project can be unpredictable due to its fluctuating fixed and variable costs. The price of computer hardware and software, including their maintenance costs, is dictated by an unstable international market. The government should intelligently procure equipment based on the appropriateness of the technology to local needs. Moreover, access to Internet is not only an issue of funding but also of local content-related barriers based on local information needs, literacy rates, language problems and cultural issues.

Establishing legal strictures in cyberspace is a double-edged sword. While Quimbo perceives the importance of strengthening the system of intellectual property rights, it can also signal the commodification of information which can polarize society to the information-rich and the information-poor. Such a digital divide further impedes most people's access to technology and participation in political exercises meant to extend voice and influence.

If the empirical and policy consequences of ICT need to be thought through more critically than they are here, then there are also some serious conceptual shortcomings. All the UNDP primers reverberate with the concept of socio-technological convergence which is considered central to any country's IT well-being, and the goal of international competitiveness measured against global standards. In doing so, they seem to revive the evolutionism of the modernization paradigm first espoused in relation to the post-industrial society by Daniel Bell some thirty years ago. Following the claims of sociologists of globalization such as Anthony Giddens and Manuel Castells, they contend that information has become the distinguishing feature of the contemporary order, and that industrial societies are being displaced by a knowledge-based, global information economy. Lallana and Uy claim that the "pervasiveness" of technological change and the annihilation of distance because of communications are inevitable and inescapable. These notions are not unpacked and less subjected to critical scrutiny. There is a thin discussion on comprehending

the relationship between globalization and the ICT revolution, privileging the role of technological change and market-based economic systems. The short account of the relationship of globalization to the nation-state is simply inadequate. These are not mere trivial objections. For without an adequate conceptual understanding then we can easily succumb to the hyperbole about an "information revolution" whose implications are not scrutinized nor intelligently examined.

On a more positive note, the primers' recommendations on how to define the relationship between the private sector are instructive (e.g. five-step recommendation in instituting an e-government). Moreover, the use of "open source" software like Linux is an intelligent proposal because it represents a philosophy of emancipation from technological dependence. Information technologies have been grafted into the global capitalist system which generates political and economic inequality, social polarization and economic degradation for many nations. Ironically, in a so-called "borderless" global age techno-nationalism has emerged as a defense against the Western technological domination. Many developing countries perceive the current Internet as an American-European project to reassert their hegemony. Many of the promises of Internet will be illusory if not complemented with necessary economic and social adjustments in the state level. Just like the television, the Internet could be the next idiot box of 21st century.

True to their real purpose, the primers provide a clear grasp of the terminologies, definitions, trends and issues surrounding the ICT discourse. Internet neophyte scholars in both the social and natural sciences can easily appreciate the tables and box illustrations which give some substance to the conceptual and theoretical underpinnings of the themes. Diagrams are commendable for their simple but straightforward presentation. But there is still much to be done in this field of inquiry. The expansion of the series to other pressing themes relating to democracy, civil society, marginalized and indigenous peoples, the rise of new religious and political communities in the Web, environmental concerns, political integration and destabilization, among others, would be a worthy enterprise. Without doubt, the studies' leitmotif is to accentuate the glowing promises of the "information age". Some of the assertions may provide a tainted hope for developing countries, but they can also provide stimuli for current efforts to offer a critical reading of issues that are central to our times. ❁