Teaching the Information Society

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A general consensus has formed around education and research in WSIS, but it is deceptive: it hides the current acute crisis in every country and the lack of global vision for snapping out of current constraints and leaping forward into a direction that motivates our youth beyond mere capacity-building.

Research shows that change in education always takes place when at least three criteria are met. The new global vision must be:

- 1. sustained by a master narrative;
- 2. grounded on a breakthrough in the understanding of human nature; and
- 3. supported by a new media technology.

When these are present, then the political and economical will of an enlarged constituency, driven by democratic values, can enforce change.

The end goal is utopian, perhaps, but the direction and progress of the project are measurable to a certainty. Today, the conditions for measuring progress towards an enlightened utopia, with all attendant hesitations, mis-steps and corrections, are present in the WSIS process. WSIS itself reflects a state of uncertainty and instability of the world, on the brink of awakening to a global political theory unimaginable in any previous age:

 The global vision of the 21st century is the "Information Society" master narrative, which civil society is trying to change into the "Knowledge Societies" master narratives, to account for the need of bio- and cultural diversity and to extend education beyond data-mining and retrieving.

- 2. Based on research in cultural biology, the new breakthrough in human nature, "open cognition", has provided a paradigm for human understanding that posits the co-evolution of our brains and mental framework with the natural and cultural environment. Computer sciences, in connection with advances in cognition, offer the means, through the Internet and other media, of extending human brain-power and communications and to remove any limits on the expansion of this continuous exchange.
- 3. The supporting technology is the computer and its attendant ICTs, with the Internet as media of choice conveyance. The Internet conveys information, resources for action, employment and education, in real and virtual space. As all new media have in the past, it enlarges the information citizenship of the world while forging an identity for that group that makes it into a politically active constituency.

Civil society documents, and some parts of the state documents as well, reflect a cognitive revolution at work that announces this new view of human nature and a departure from the pessimistic 17th and 18th century view. Then, self-interest placed humankind in a war of all against all in a zero sum world. Only a coercive state, or the limits of a competitive market, would keep an individual's ambitions in check. The innovators of 18th century representative governments linked the narrow self-interest of the powerful to the collective interest of the nation defined narrowly as survival. The limited human productions – of mind, mass media (the press) and mass education – required state protected freedom of expression and free access to information. Certain basic human rights were thus guaranteed and by the 19th century a skilled and literate industrial labour force was created. Now, some centuries later, our knowledge of human nature and our global environment has changed this picture. Collaborative humans, working for mutual benefits, strive for an open-ended process of expanding exchanges of intelligence. Responsiveness, connectedness, communication, participation, co-regulation, such are the new keywords attached to this open cognition paradigm.

The open cognition paradigm extends beyond the reach of information, education and freedom of expression into the realm of social capital and situated knowledge societies. It offers an alternative to the view that humans are determinedly individualistic and driven by selfish instincts requiring legal restraints. It recognizes networks of actors, consumption junctions and communities of place as the basis for a complex civil society. It encourages their participation in the co-regulation of media and education, as synergistic means for renewed common purpose. Solutions imposed through either government or corporate ownership often exacerbate problems rather than solve them. The heavy hand of the state or

the invisible hand of the market may produce more constraints than they solve if not focused on the proper local human scale for civic involvement. Yet, as the link between civil society and governance cannot be guaranteed by cooperation for mutual benefit alone, the role of education to provide a shared mediating culture in economic and political designs needs to be fully elaborated.

The open cognition paradigm posits that education and research can build life-long autonomy and collaborative exchanges. They are part of a continuum of knowledge that integrates old and new technologies into a common platform (the Internet) with multiple media functions and plural educational processes. It promotes the open access to a variety of models of education, research and publication by the production of open code, nonproprietary software and the maintenance of public archives, libraries and repositories of content. It consistently connects education to capacity-building, long-distance training, community-based solutions, public domain commons, linguistic diversity and pluralistic approaches to information and knowledge as an alternative to government or corporate control. It also offers an alternative model for scientific inquiry, open "R&C" (Research and Collaboration), as against "R&D" (Research and Development), for the sustainable spread of prosperity beyond the invention of new material goods, their reproduction and distribution. Such education can foster a new citizenship where individuals learn how to devise properly adapted rules of cooperation as they participate in the design of the institutions that affect their environment. The open cognition agenda thus calls for financing mechanisms based on public funding or private-public partnerships, when non-proprietary conditions are met and modifiable designs are guaranteed. This agenda also calls for an Internet governance that preserves the inter-operability and open-endedness of the cognitive networks.

So, two models are at work in the current process, in relation to education and ICTs. On the one hand, an explicit information-provider model relates ICTs to a commercial common carrier model, likening them to a raw resource, to be exploited for economic development. Thus the self-interest of corporate capitalism directs the Information Society master narrative. In this story, economies of scale still principally guide the design of social arrangements. On the other hand, there is the open cognition model that relates ICTs to an emerging public forum model, with self-supporting systems, in-built maintenance programs and upgrading capacities. Thus the mutual benefit of situated cultures, open commons and global public goods directs the Knowledge Societies master narratives. This approach is based on public domain preservation and enhancement, to be achieved by convincing content producers to be active participants in the open cognition paradigm, along the lines delineated in a variety of documents and initiatives (Budapest Open Access Initiative, Berlin Declaration, Creative Commons, Open Courseware Initiative, etc.). Trying to promote

participation and transmission, it is the only approach predicated on a cognitive view of human nature as collaborative, responsive and involved in a distributed, sustainable exchange of intelligence. It does so while keeping the advances from the previous era, especially in matters of freedom of expression, mass education and universal human rights.

These two models in co-presence suggest the possibility of a bifurcation of cultures within the Internet environment, to accommodate their diverging trends: on the one hand, a protraction of the commercial proprietary market culture, on the other hand a protraction of the open commons culture. They are not mutually exclusive, and they will contribute to the differentiation of Knowledge Societies instead of one single Information Society. Some hybridization process is already at work, between traditional, industrial and national forms of knowledge production, not yet obsolete and still quite efficient, and new forms that appear as viable international alternatives for the exchange of knowledge. Governments may find themselves as arbitrators between the two, trying to keep a balance between the need for public connectedness and the drive for private business, to avoid some of the 20th century's dehumanizing consequences of ICTs. Educators and researchers have the social responsibility of making these changes and exchanges happen.