

OPEN ACCESS, MODERNITY, AND CULTURE CHANGE

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I fully support the open access reformation (OA). Still, a potentially enormous culture change is looming for developing nations in the form of the open access movement. Culture change can occur gradually or abruptly in incidents of social or natural catastrophes of climatological, biological, or geological events. Culture change in any form, especially if it is sudden and widespread, can spell disaster to unsuspecting societies.

One of the most powerful agents of culture change is cross-cultural contact. History is replete with instances of colliding civilizations that sent countless societies to ruin. Even today, in our attempts to benefit society and culture by solving one problem, we often create another problem, like converting corn into fuel for automobiles, which jacked-up corn prices sky-high on the world markets, and significantly raised the number of starving people in the world.

We can't always predict the outcomes of our good intentions. It's like the uncertainty principle: locating the position of a subatomic particle makes the velocity of the particle uncertain; conversely, measuring the velocity of a particle makes its position uncertain.

Partly because of our uncertainty about the future, cultural diversity, like biological diversity, could be perceived as a potential fall-back strategy to protect life on earth. For instance, if some new strain of bird flu, Ebola, or a ravaging crop blight appears, a databank containing local knowledge systems of numerous cultures might possibly supply answers that could hold the disease in check, or even eradicate it, unless

the solutions were not discovered in time, or the databank was insufficient, or the traditional remedies had already disappeared in cultural breakdowns.

Remember the Bushman in the film “The Gods Must Be Crazy?” The Bushmen, or San, are hunters and gatherers and have been on the verge of extinction for generations. Nearly 2,000 years ago, African agro-pastoralists arrived in Central Africa, disrupting the San lifestyle and culture. In the 17th century, European settlers arrived and brought more disruptive cross-cultural contact (Marshall). And in the late 20th century, an empty Coke bottle fell from the window of a passing airplane, and nearly wrecked the life of an entire San village, or so goes the story in the film.

The San culture is in shreds. In 2003, *National Geographic News* stated, “The San have largely lost their sense of community and identity by being dispossessed of their territories and becoming physically dispersed. They have suffered language loss and some of their important social institutions have become dysfunctional” (ibid.). Few of them hunt now. Instead, many work as farm laborers, and others are chronically unemployed.

Yet you probably also know that the San population stands to earn billions of dollars by assigning their “intellectual property rights” pertaining to a local desert plant named *Hoodia gordonii*, which the San have used for centuries as an appetite suppressant to quell their hunger on a long hunt. A gigantic pharmaceutical interest will pay huge sums to process and market the local cactus to overweight people around the world.

This is a rather unique instance of conglomerates recognizing “intellectual property rights” of indigenous peoples, instead of simply stealing the local natural

resources. According to *National Geographic News*, there is growing international recognition for the intellectual property rights of indigenous peoples (ibid.).

The monies that go to the San will be used, in part, to reconstruct their culture by initiating dialogues “between the elders who still have knowledge of...the old ways and the younger generation who have lost [that knowledge]” (ibid.). The young people do not know about the traditional uses of Hoodia, but their interest in the plant will certainly skyrocket as the money rolls in. Already the San are becoming more secretive about their plants. They are literally repackaging their traditional plants as commodities to sell to outsiders. I have often observed that when cultural practices, implements, and arts become objects for exchange, they hasten the draining of traditional culture. By diminishing the social practices once connected to their traditional plants, the San culture may likely dissipate even faster.

In short, the San are well on their way to becoming modern, globalized, materialistic, and capitalistic. Thomas Friedman would be delighted. He reinterprets *globalization* as the 21st-century “flattening of the world.” To him it’s as if the sudden rise of digital communications and border-neutral commerce have broken down political walls between peoples, his paradigmatic example being the Berlin Wall, and replaced the walls with windows, that is, Microsoft windows. Capitalism reigns free to barrel over flatlands without portfolio. Friedman knows perfectly well that he is talking about massive cross-cultural contact. He is ushering cultures into rampant globalization, saying, “the more your culture easily absorbs foreign ideas and best practices...the greater advantage you will have in a flat world.” I shudder to think of it. He uses terms of *globalization* and *glocalization* interchangeably as people and nations flatten themselves

together. It's boring; it's frightening. It reduces cultural diversity that we might desperately need in the future for much more than high finance and weight loss.

Living in the modern age does not necessarily make an individual "modern." "Modern individuals" tend to be utilitarian—they are more readily able than others to take advantage of new features in contemporary society in order to achieve their personal ambitions, improve their lifestyles, obtain profitable learning, and enhance their personal power and efficacy—for good or even for unsavory purposes.

"Individual" or "attitudinal" modernity is a construct that has been used to gauge the effects of culture change among persons who encounter cross-cultural contact with more modern societies. Sociologists gather modernity data through very precise surveys. Anthropologists use participant observation.

Particularly in Malaysia and India, I observed that modern individuals make liberal use of globally accessible mass media, high-speed travel, and border-neutral socio-cultural influences to compare their native social situations with other societal systems as they become aware of them. They can choose between those different value sets, or blend them into personal life patterns that best satisfy their tastes and needs. Simply put, individual modernity is a matter of expanding one's range of choices by selecting from among available social options that are within reach and which matter most to modern individuals.

Two classic modernization studies that affected my thinking about culture change were conducted by sociologists Daniel Lerner in *The Passing of Traditional Society*, (1958) and Alex Inkeles and David Smith in *Becoming Modern* (1974). Lerner recounted a case study of a grocer in a small village in Turkey. While watching an American movie

in Ankara, he was riveted by a scene in a U.S. grocery store that showed him wall-to-wall rows of metal shelves with uniformly labeled cans and boxes of store goods stacked high in orderly ranks “like soldiers in a parade.” The grocer knew immediately that this was the future of grocery stores in Turkey. It was his personal future, too, and he set out to bring to reality that vision he had received from a foreign movie. After he passed away, his once skeptical neighbors called him a prophet.

In their multinational study of individuals in six developing nations, Inkeles and Smith likewise found that the popular media were powerful change agents that could light a spark of modernity in individuals sequestered in traditional social structures. Other inculcators of modernization, they found, include participation in formal, hierarchical organizations; travel; mass media contact; education, including the parents’ educational levels; employment in factories; time management; and experience in urban settings.

According to Inkeles and Smith, contact with these types of modern technologies, organizations, and behaviors induce individual modernity in those who participate in these activities. The process works through modeling, imagined role reversals, and empathy, that is, seeing oneself in a different, more beneficial situation. In his study, Lerner called empathy “psychic mobility,” and regarded it as a prerequisite state-of-mind for social mobility.

Modern individuals can choose the social customs and practices that make the most sense to them. They are opportunistic. They can perceive advantages in change, often at the expense of their valued traditions and customary behaviors. Yet modernization often spawns inflation, deflation, deadly violence, cultural disruptions, and culture loss.

Recalling Friedman's flatistic statements that digital communications will bring nations together is certainly an aspect of the open access reformation. Many of the world's finest universities have implemented OA. Earlier this year, Harvard's arts and sciences faculty voted to permit Harvard to distribute their scholarship online, "instead of signing exclusive agreements with scholarly journals that often have tiny readerships and high subscription costs" (Cohen). Harvard English professor Stephen Greenblatt, himself an editor of a scholarly journal said, "This is one of the only ways we can break the backs of the monopolists who are currently seriously damaging our fields" (Child and Flow).

Stuart Shieber, the professor of computer science who proposed the new policy, said the decision "should be a very powerful message to the academic community that we want and should have more control over how our work is used and disseminated" (Guterman).

Probably the most celebrated OA repository is the Human Genome Database (GDB), begun in 1990 at Johns Hopkins University (Levin). The GDB was created by geneticists, librarians, and computer scientists. Librarians gathered genetic research from journal articles, other databases, and direct communication with genetics researchers, and passed it to one of 23 editorial boards of geneticists to vet the findings, which were then added to the GDB for geneticists all over the world to access freely.

OA repositories like this can be created for every academic discipline and research project, and the acceleration of pushing back the boundaries of knowledge could match that of the GDB. This is the benefit OA would bring to the world.

In the mid-1990s, my library on the Kapiolani campus of the University of Hawaii began developing databases of this type on Asian-Pacific studies. We worked with

several UH departments and the East-West Center, a U.S. government “think tank.” We called our online creations “value added databases,” which we borrowed from John Haak at the Hamilton Library. *Institutional repositories* was not a common term at that time.

In 1995, I was invited to speak to faculty and students at City University of Hong Kong about the Kapiolani databases. When I began comparing them to the GDB, however, I was literally shouted down by the faculty because they knew the GDB was very expensive. They refused to listen when I said the Kapiolani databases cost less than \$8,000US, which was fully provided by our clients. We didn’t spend a dime. Our clients were eager to have these online resources and make them globally accessible. The City U faculty seemed unaware of the rapid development and the falling prices of technology of that time.

In 1996, I gave a presentation with virtually the same information to the IFLA meeting in Beijing. It was roundly applauded, the paper was published in the *IFLA Journal*, and I received inquiries from a number of nations, including China and Russia. In 2004, I was again invited by City University of Hong Kong to speak about OA. I was not shouted down that time, but the response was lukewarm, much like now in Hong Kong. Today in Hong Kong, all eight government-funded university libraries have some form of OA IRs, but they are not the type of research databases we’re talking about today.

Unfortunately, the two major funding agencies for the Hong Kong universities are hardly enamored of OA. The meeting notes of the Research Grants Council (RGC) for June 2007 stated, “...the RGC decided not to make it compulsory for the Principal Investigators ... to allow open access of their research outputs. However, the RGC strongly encourages your institution and researchers to make available the research

output via open-access repositories on a voluntary basis ...” A member of the University Grants Committee (UGC) wrote in 2007, “We have concerns that researchers in Hong Kong would oppose any initiatives that may compromise their IP rights ... researchers would also object to any proposal that might restrict their choice of publication venues ... We can only encourage them, but we will not be in a position to make it mandatory.”

Another UGC member wrote this question to me, “Should Hong Kong be at the forefront of this? What benefit would it bring Hong Kong to take such an initiative?” I was speechless before such a great lack of awareness by a multi-campus university funding agent. How different the Hong Kong universities are from Harvard, Cornell, the University of California, and so many others!

Let’s get back to culture change. We already know that OA will likely have a major impact on developing nations. For instance, the Wellcome Trust in London funds research to improve world health, and maximize the dissemination of this research through free, online access to create a more robust worldwide research culture. Recipients of Wellcome Funds are required to provide unrestricted access to their published research as a fundamental part of Wellcome’s charitable mission (Wellcome).

Wellcome encourages grant proposals from developing countries, and provides significant funding for its African Institutions Initiatives. This project seeks to strengthen Africa’s research capacity by supporting African universities and research institutions, and by converting research training into “career paths” for the most promising health researchers (*ibid.*).

In December 2007, President Bush signed a bill that included the research access provision of National Institutes of Health (NIH). The bill directs NIH to provide the

public with online open access to NIH-funded research. This is the first time the U.S. government has mandated public access to research, funded by a major government agency. NIH-funded researchers are now required to deposit electronic copies of their peer-reviewed manuscripts into the National Library of Medicine's online archive, PubMed Central (Bacon-Shone).

Nobel Prize Winner Harold Varmus said, “Facilitated access to new knowledge is key to the rapid advancement of science...The tremendous benefits of broad, unfettered access to information are already clear from the Human Genome Project, which has made its DNA sequences immediately and freely available to all, via the Internet” (ibid.).

There is no doubt that OA advances will dramatically affect developing nations, mainly for the better, or so we must hope. Don't forget the uncertainty principle.

I've visited a number of developing nations over the last fifteen years, including China, Vietnam, India, Micronesia, and Malaysia, but the most compelling was my visit in 2004 to Cote d'Ivoire in Central Africa. I was a member of a delegation of educators from the California State University system (CSU) participating in a U.S. State Department grant to mentor eight Universities in Cote d'Ivoire. Administrators and faculty from the Cote d'Ivoire universities visited CSU several times, and the CSU delegation made focused trips to Africa toward the end of the project.

When the CSU educators arrived in Abidjan and fanned out to visit the circuit of universities, I was stunned by the deplorable condition of their library facilities and the terribly small collections of outdated books. I decided not to talk about building new library facilities and huge print collections, as the Ivoirian librarians and administrators had expected, because these conditions were beyond the means of the nation to remedy.

Instead, I gave my Ivoirian audiences extemporaneous presentations on the principles and benefits of OA for very rapid and timely scholarly communication. I used the University of California e-scholarship repositories as the model.

They immediately saw that OA repositories could quickly gather research on agriculture, tourism, and other industries throughout the region to bolster the nation's economic and social development. They decided to put buildings and collections aside and focus on digital research for scholarly communication. Then shortly after our return to the U.S., the civil war in Cote d'Ivoire flared again, ending all our collaboration.

The Ivoirians were proud to show-off their IT systems to the CSU group, and though meager, the technology worked, and our group could see that the technical people were very savvy. Although the Ivoirians lacked funds and infrastructure, they did not lack insight, intelligence, or education. Many of them received their academic educations in Europe.

Ten years earlier, I gave similar workshops to reference librarians at Peking University on automation, technology-leapfrogging, and the Kapiolani value-added databases. And look what happened to scholarship, research, and information sharing by China's academic libraries since then. They rival anything the West has to offer. Of course, this burst of advancement was certainly not a result of my lowly workshops. Instead, it was the readiness, drive, and motivation of the librarians and administrators, and we must not overlook the role of the 211 funding package from the central government, to move China's universities and their libraries forward quickly.

Technology is the great equalizer; crack open a door of an underdeveloped nation with a little training and access to a bit of information technology, and many individuals

will quickly become early adopters and transform their nations. We see it every day now. While developing nations may lack “stuff,” their capital is their ambition and inquisitiveness, and OA-delivered research might be perfect for them. In fact, developing nations may likely be the primary beneficiaries of open access.

OA is an important part of globalization. Globalization does not touch only on economics and business. Culture is intricately pervasive in social actions and beliefs. Change the social actions and beliefs, and culture will be affected. Globalization inculcates uniformity among disparate societies. OA may not be good in all instances or in all developing nations. Knowledge is power, and power is easily turned corrupt and destructive.

It is quite possible that some governments in developing nations may quarantine or embargo OA information to make their own profits. Such a case would simply transfer information from one criminal monopoly (the commercial publishers) to another (the central government). If a government, as in the NIH bill, can mandate that all health and medical information be free, some governments can mandate that information must be purchased, and at exorbitant prices. If commercial publishers go out of their monopolistic business in the developed world, they might hire themselves out to governments in developing nations at even higher costs.

We certainly cannot restrict OA information reaching developing or remote cultures. We must go ahead for the sake of humanity. But remember the uncertainty principle: we can't always predict all the results of our good intentions.

We've been talking about culture and the intellectual property rights of Harvard professors, Hong Kong professors, and African Bushmen. The different circumstances

and effects of these different intellectual property rights holders could be very different in their respective spheres.

Or NOT. Perhaps just within the next generation or two, both groups will be utilitarian opportunists. That's the way Friedman sees the future of the flat world. I'm not sure I want to go there.

NOTES

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