

Facing Technological Disenfranchisement In The Global Community

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Introduction

As professionals in what we might be pleased to call the "technologically progressive nations", we have access to data systems and networks that are able to both manage and provide bits and bytes in quantities that just a few years ago were considered a dream of things to come. Indeed, there are many among us who doubtless consider their days a waste of waking hours if they aren't able to receive a daily dose of e-mail, or surf the Net. We have become so concerned about the information that we might receive that even while we sleep we employ computers and other information servants to stand on vigilant duty guarding precious data which are retrieved by fax and answering machines until we can once more join the active world.

This daily acquisition, this barrage of information, has become a staple of our careers. It is the very breath that supports our biosphere of intellect. The review of information has become a corner stone of the society in which we work and even in which we seek escape. We are always seeking the latest version of the tools which displays our data, the fastest access time, and the surest storage capacity by which this information may be tenderly safeguarded. To fail in the quest to obtain information, or to lag behind in the pursuit of more and more information, causes some among us to be ranked by our colleagues as being "illiterate" should we be unable to perform this daily acquisition in an efficient and timely manner.

This vast amount of accessible information, and the interaction it allows us with of our fellow man, in only moments of time and space, are mere key-strokes away from us in our offices, our homes, and even as we travel. And what of the data that is only waiting to be harvested? The field of information available covers such a breadth of knowledge in such diverse levels of interest that at times the deluge of facts presented for our consumption may seem more of a "a solution in search of a problem" rather than the means of bringing any inquiry to a successful conclusion.

However, this world of abundance - this seemingly unfettered access to information, this plethora of technology which obeys our slightest whim for entertainment, or work, or simply distraction - is not available to all who might wish to tap the resources which are just suspended in cyberspace waiting to be summoned. As strange as it may seem, to those who thrive on the acquisition of information, there exists, for lack of a better term, "emerging" nations, societies, and even neighborhoods which long to be ushered into the ranks of the technologically mature. They somehow seem destined to remain in a sort of perpetual simplistic childhood of technological innocence. Who are these groups? What is causing them to postpone their entrance into

"technological adulthood"?

The Disenfranchised

The question of technological inequity is not an easy one to address or solve. If societies lack the technology to retrieve and process information, "Why don't people without computers just buy them? While such a remedy seems obvious to most it does not address the root of the problem. Problems created by a lack of technology are most often not solved simply by throwing money at them - by supplying a "technological fix". Most problems associated with a society that may suffer from diminished, outdated, or simply no technology, are not due to a lack of systems, or equipment, or a desire to have these things. The fact is, technological problems are rarely caused by a lack of software, or disks, or even telephone lines which feed modems. Most technological problems are rooted in social and cultural fields of interest. As Volti (1992) explained, "The list of technologies that have been or could be applied to the alleviation of social problems is an extensive one, and examples could be supplied almost indefinitely. What they have in common is that they are 'technological fixes', for they seek to use the power of technology in order to solve problems that are non-technical in nature" (p. 24).

To some, there may be obvious reasons why a nation, or culture, or society may not have access to the world of those who are only micro-moments away from them in cyberspace. Even though money alone cannot solve problems associated with technology we would be in error if we did not grant that the lack of financial resources (particularly in poorer nations) to secure the hardware and software is not a contributing part of this problem. We must also point to those in every society who have spent the majority of their lives in a technologically unsophisticated world and care nothing about joining the ranks of those who they perceive tap endlessly on keyboards. While we may suppose this lack of interest in technology may be based on a fear of the unknown (and that reason certainly exists), we would have to also agree that the disinterest shown may also be centered on more immediate needs, due to age, or cultural responsibilities, or simply a lack of time.

Regardless of the reasons a society may or may not accept technology there is one fact that we cannot dispute: The world changes within a society whenever it accepts or rejects technology. Perhaps the biggest change concerns the "sense" which the community has about itself. Before exploring this idea some given facts need to be considered. It is not difficult to look around various communities in any nation and quickly spot their distinct cultures by the icons associated with them. For example, cowboy hats atop people's heads, male and female, can be seen everywhere in Texas, but they are not so evident in London England; most people who speak English as a second language retain aspects of the accent or intonation of their native language which allows others to identify their country of origin in some cases; immigrants to all nations do not suddenly lose their native customs upon arrival in their adopted homeland, but usually continue to celebrate holidays and family occasions as they learned to do as a child. All of these contextual clues suggest something to us about the feeling a person has about the community in which they live. But, whenever a new technology arrives within a community it cannot but influence the way in which the established customs of that community are practiced from that

point on. Referring to technology's impact on community identification, Foster (1997) expressed the opinion that:

Community, then, is built by a sufficient flow of 'we-relevant' information. The 'we' or the collective identity that results is structured around others who are seen as similar to the 'me'. In this sense, community, like any form of communication, is not fully realized without the conception of self. Essentially, this entails that "...what goes to make up the organized self is the organization of the attitudes which are common to the group. A person is a personality because he belongs to a community" (Mead, 1993, p.159). (p. 25)

Perhaps then the major reason that societies, or people within a given society become disenfranchised, is due to the fact that they shun technology because it changes them. Marshall McLuhan (1962) promoted the notion that information (specifically printed words) would cause the breakdown of national boundaries, the blurring of cultural identity, the "detrribalization" of society (p. 111). Information would break down borders and unite people into one central community. As has been expressed, information changes societies and how they view themselves. Perhaps that is the basis of the question before us - the loss of identity. Do some societies or individuals view self-disenfranchisement as preferable to the loss of their identity?

Well, what may be even more to the point was McLuhan's statement that, "The medium is the message". The medium sets the standard by which the cultural foundation of those who will and will not be players in the "global village". As in any social setting, there are members of the society that are seen as belonging to different strata within a community. There are those who are considered to be socially unacceptable, physically unfit, economically unsuccessful, etc. Those who will be unable to participate in the technological exchange of information due to a poverty of means or skill, those who will be denied access because the supporting structures that allow information to flow freely are not in place, will be disenfranchised from a world that will never pause long enough to allow them to catch-up. McLuhan was only partially correct in his assumption that the flow of information would support his claim that the world will be detribalized. It has done something which we believe McLuhan never expected to happen: It didn't make our world larger, or bond communities closer together - it made the world a smaller, more select, place in which to live. It has created a world of the technological haves and have-nots. It has created a larger proportion of those who do not belong to the new global community than those that do.

Such a society does not reach out to attract new members, but instead picks and chooses which citizens will be accepted. The medium automatically creates niches of selected members that have traits that parallel each other - who have the expertise and resources to continue to support those community members in cyberspace. Those who live in cyberspace communicate primarily with those within that community. The on-line communicator has become less flesh and blood and more bits and bytes. The essence of being is measured in technological prowess and being able to collect ever increasing amounts of new information. Such a society exists only for those who have access to information. It shuns those who are without the literacy or ability to become

members. The rules of who will be accepted into this new society come not from a sense of communal good, but rather from the technological demands of the medium itself. Those outside the community are disenfranchised simply because they cannot effectively communicate with the members within that society. The voice of the outsider is not listened to simply because it cannot be heard.

Addressing precisely how the acceptance of technology can change the society in which we live, Alcorn (1997) wrote:

One no longer knew everyone in the neighborhood or in the community. People came and went more frequently. Mobility increased for some and not for others...Dispersion, particularly among generations, tended to decrease the level of interaction among members of the extended family and to increasingly isolate the primary family unit. (p. 176)

The Cultural Aspects of the Problem

If we accept the position that the problem of technological disenfranchisement is based on cultural and social values then we must look to society's view of itself and its acceptance in an effort to resolve this question. As Nowotny (1993) noted:

If we look for the power of ideas and their cultural influence in changing the general outlook of a society, then we have to take into account much wider flowing currents in the cultural sea. The decisive turn is from a modern society to one that believes itself to have moved beyond this programme and its so called postmodernity...Post-modernism is built upon deconstruction of any central authority, it entails fragmentation and the loss of any central perspective. (p. 81)

Attempts to alter the culture of a society, to deconstruct the centre of the society, may result in a variety of outcomes. The Luddites tried to destroy technology while other nations have limited those who are allowed to participate in technologies by assigning them to guilds, trade unions, and other social factions. Today, universities the world over select who will, and who will not, be admitted to their hallowed halls. This too is a form of disenfranchisement directed at those deemed worthy enough to be allowed to participate in technology and the global community.

While the introduction of new technologies have often had diverse consequences, history has shown some predictable outcomes among all societies. Initially, new technology is more often than not seen as a threat and resisted:

Resistance to change can be viewed as an adjustment process, by which the frustration and anxiety caused by the technological change are denied. People may feel helpless in the face of technology. It is new and undefined, an anxiety causing condition that at first spurs them on to seek out knowledge that will alleviate their initial fears of the unknown. If and when this effort fails, then they must cope by adjusting to the change in some way to ease their feelings of

helplessness...The countercultures of the twentieth century used withdrawal...to deal with the changing environment within which they were living. They chose to withdraw not only from the technology but from the changing culture that the technology was creating. They “dropped out” and “turned on” as a means of escape from the realities of changes that were occurring. (Alcorn, 1997, p. 24)

There is little wonder that some cultures fear technological change. In many regards technology is like a new born baby - we are never sure at the beginning who it will grow up to be, or what its future place in the world will mean: “Technology both creates systems which close off other options and generates novel, unpredictable and indeed previously unthinkable, options” (Callon, 1991, p. 132).

Conclusion

Then to where have we come? What is to be done to alleviate the vast numbers of the technologically disenfranchised? How are we to pursue a course of action that will correct the social and cultural misgivings that create the monster before us? Indeed, it is a monster, for it feeds on the techno-poor. Instead of lifting them to a level of confidence and intellect, it leaves them in a position of despair and inequality. Disenfranchisement is a monster for it has the ability to reproduce itself in greater numbers with every generation, not the generation of people, but the technological offspring's which have arrived, and continue to arrive in leaps and bounds. No sooner does a new version of a program arrive than a newer release, or improved format replaces it.

We marvel sometimes at the technical community in which many of us live. The community is diverse and parallels the civic townships in which we reside. There are about us technocrats from every level and social standing. Those of us who lived through the days of DOS (and the struggle to be technologically proficient as we thought!) really share no technical bond with students who have never worked on a computer outside the Windows environment. A few weeks ago, while working in DOS, a student approached and said, “Is that DOS? Wow! I've never seen it before.” I suddenly felt not unlike a dinosaur whose extinction was imminent. However, while we may not share a technological heritage with our students, we will share the future. Despite these historical differences, when it comes to manipulating data, extracting power from software, and thinking of the next new challenge in technology, many of our students, we must concede, are technologically our superiors.

If we wish to redress the issue of disenfranchisement, we must labour to correct the social imbalances that have created it. Diettrich (1993) suggested that the solution to this inequity may be

found in a complex interplay of several factors. As stated:

One possible interplay is the exchange of scientific, technological, economic and Other factual data, information and arguments with a view to the elimination of misunderstandings and the possible rationalization of conflicts...This is the very root of the idea of public information: the more people are informed the more successful will be their decisions. (p. 209).

Paralleling these views Cantley (1987) wrote, “If there is...control without understanding, there is danger not only to science and technology, but ultimately to the society itself” (p. 5).

At the beginning of this argument we began by suggesting that money alone cannot solve the problems of being disenfranchised. But, neither can we exclude its need. If we can judge by past experience then there is every indication that time will assist in the resolution of this problem. Countries with struggling economies will slowly become more stable and have resources available to promote a policy of technological access. Undoubtedly, as people in poor nations are able to raise their standard of living, personal means could be dedicated that will allow them to become a part of the technological community. Then their lives will change and perhaps they will find themselves again on the bottom rung of the ladder, albeit a technological one.

The road will be a long one for many. Indeed, some will never arrive at the destination they desire. However, some will. In an effort to ensure that as many as may wish to join the society of the informed, and in effect assist those who desire citizenship in the global community, we must ensure that the path is clearly laid out for them to follow. In fact, the road to technological equity is not unmarked, but is well worn and easy to traverse. All we must do is assist those trying to find it and once there point them in the direction that leads forward. As Tehranian (1990) wrote:

The hardware and software technological requirements...are thus already for us. The challenge is to create the cognitive technologies by generating the appropriate values and norms, political consciousness and will, and institutional arrangements...To insure citizen participation, however, at least two conditions must be met. The services must be made universally available and the price must be affordable...But the seeds of a powerful idea have already been planted in the minds of the citizens...(pp. 90-91)

There is no need to look further for the road we seek for it is before us. Amen.

Bibliography

Alcorn, P. A. (1997). Social issues in technology: A format for investigation (2nd. ed.). Upper Saddle River, NJ: Prentice Hall.

Callon, M. (1991). Techno-economic networks and irreversibility. In John Law (Ed.), A Sociology of

Monsters: Essays on Power, Technology and Domination. New York, NY: Routledge.

Cantley, M. (1987). Democracy and biotechnology. Swiss Biotech, 5, 5, 5.

Dietrich, O. (1993). Biotechnology and social perception. In Rene von Schomberg (Ed.), Science, Politics and Morality: Scientific Uncertainty and Decisions Making. Boston, MA: Kluwer Academic Publishers.

Foster, D. (1997). Community and identity in the electronic village. In David Porter (Ed.), Internet Culture. New York, NY: Routledge.

McLuhan, H. M.(1962). The Gutenberg galaxy: The Making of typographic man. Toronto, Ont: University of Toronto Press.

Mead, H. (1993). The emergent self. In James Farganis (Ed.), Readings in Social Theory. New York, NY: McGraw-Hill.

Nowotny, H. (1993). A new branch of science, inc. In Rene von Schomberg (Ed.), Science, Politics and Morality: Scientific Uncertainty and Decisions Making. Boston, MA: Kluwer Academic Publishers.

Tehrani, M. (1990). Technologies of power: Information machines and democratic prospects. Norwood, NJ: Ablex Publishing Company.

Volti, R. (1992). Society and technological change. New York, NY: St. Martin's Press.

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