

# *Technology, Education and Global Cooperation: Opportunities, Risks and Implications*

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Suppose you read or heard the following report: Today, 150 nations have joined together for an extended and continuing period for the purpose of gathering coordinated observations of the earth. Four satellites have been launched in polar orbits, along with five geostationary satellites provided by the countries of Europe, Japan, India, and the United States. These 150 nations have also put into place a global network of ships, aircraft, balloons, buoys, and terrestrial stations as part of the project. Would you consider such a report fact or fiction? Can thousands of people on this planet work together, cooperate, and share sensitive information about their countries without letting "politics" get in the way of global cooperation?

Yes, thousands of people from diverse cultural, political, and economic backgrounds, from 150 nations, can get together and stay together to confront a global issue for mutual benefit. The world can and is doing just that when it comes to tracking and analyzing the weather. The Global Weather Experiment, begun in 1979, with its geostationary weather satellites—familiar to hundreds of millions of people via television weather reports—is more than an experiment involving weather; it is an experiment in global cooperation. Although the satellites were furnished and launched by a few nations, all nations benefit from the sophisticated satellite data; all nations benefit from the thousands of conventional measurements gathered by observers at over 1,000 locations throughout the world. No nation can forecast weather from observations and data taken exclusively within its

borders. Weather is an international employer who does not discriminate; the global nature of weather necessitates global cooperation and sharing of data gathered by existing and emerging information technologies.

If the global nature of weather necessitates and receives global sharing and cooperation, what about the global nature of poverty, starvation, pestilence, illiteracy, and warfare? Could not 150 nations of the earth cooperate and use the existing and emerging technologies to track, analyze, and solve these global problems?

The answer is Yes, the nations of the earth could cooperate and solve global problems, and No, they are not doing so.

The world's 80 telecommunications systems weave all nations—developing, developed, and remote nations, all with their own cultural, economic, and political diversities—into a high-tech electronic web where, if the Sultan of Oman sneezes, Uncle Sam of the United States catches a cold. "Observations of earth from space," warns John McElroy of Hughes Aircraft Company, "know no national boundaries. The passage of a satellite from the space above one country to that above another requires no visa: Technology has made obsolete the concept of ... national privacy. Earth observation programs are by their very nature international programs."

The obsolescence of national privacy notwithstanding, how many of the earth's five billion inhabitants understand that a world depending more and more on computerization poses risks

to personal issues as well? As computerization grows, not only does national sovereignty shrink but personal rights and freedoms are also in grave danger. Governments and technology vendors would like the public to believe that “computer networks can be independent, exclusive, and secure; national frontiers are inviolable; elements of a digital system can be made ... unique; the functions of digital devices are not easily substitutable, and rules and laws can effectively restrain unauthorized applications ... in practice these are seldom true,” state J. Solomon and L. Anania in a 1987 article in *Telecommunications*.

In case the unprecedented opportunities and incredible risks posed by the Information Age are not enough food for thought, let us for a moment consider the implications of a world where over 150 satellites monitor everything all of the time.

Satellite dishes, radio and television antennas, radar, and power lines—together with all the related electronic gadgetry necessary to create and maintain the “flow” of information—fill the air with non-ionizing radiation. Despite assurances of experts claiming that non-ionizing radiation is safe and poses no risks to the public health, increasing numbers of Americans are becoming concerned about the possible health risks associated with electronic pollution. “Radiation Phobia” is spreading in the United States.

Why the concern? “The reason is simple,” says Louis Slesin, editor and publisher of *Microwave News*. “We know practically nothing about the effects of long-term, low-level exposure to non-ionizing radiation. Though the numbers of studies is impressive, most are crude, many are contradictory, and some of the results and the way in which they were handled are anything but reassuring.”

Why not reassuring? Although we cannot “see” non-ionizing radiation, it pulsates through each of us, and we become vibrating antennas; our bodies pick up the constant radiation of invisible phone conversations, radio broadcasts, and television commercials—all of which modulate through each and every cell in our bodies. Does Ross Adey’s research suggesting that non-ionizing radiation may alter the flow of calcium to the brain and Dan Lyle’s findings that our immune systems are affected by electronic pollution seem far-fetched, unbelievable, or

science fiction?

Desirable as it may seem to some of us, we cannot pull the plug on the Information Age and return to a simpler time. Like it or not, for the first time in the history of mankind, we have at our disposal the technological tools with which to usher in the Age of Global Cooperation or the Age of Total Annihilation. Using the very same technologies, we can improve the quality of life or eliminate life itself. Technology is non-discriminatory; it serves the cause of life or the cause of death. The desire for life or death is not within the optic fibers of technology; it is within the moral fibers of each and every one of us.

As I see it, if we wish to serve the cause of death, we need do nothing. The loss of national sovereignty, the deprivation of personal privacy, and the potential hazards to health will plunge the world into an abyss soon enough. But, if we wish to serve the cause of life, there is something we can do. By “we” I mean particularly those of us in educational institutions worldwide. If 150 nations can cooperate to track, analyze, and understand weather, why can’t all of the educational institutions—schools, colleges, and universities—use satellites to eliminate the foundation problem on which all others depend, namely illiteracy? Let’s put satellite dishes in the deserts, in the jungles, on the tundras, and in the mountains. Let the same nations that launched the satellites for the Global Weather Experiment launch the satellites for the Global Literacy Experiment. Let’s link every location where learning is or can take place together and let’s develop programs and beam them down. Let’s make a full-scale effort to teach each other languages, cross-cultural understanding, and knowledge about each other’s country. Let the scientific disciplines all over the world benefit from the incredible data gathered by satellites—data that is revolutionizing what we thought we knew about our universe, our planet, and our place in the galaxy. Let’s dedicate just one telecommunications system to world-wide education, and let’s use it like the system that tracks the weather: to seek after knowledge, to understand what it means, and to put the understanding of knowledge into practice to improve the quality of life for the five billion inhabitants of this planet.

Suzanne E. Lindenau, Editor-in-Chief