

time, when he is facing two younger, less powerful rivals, i.e., Vice-President Al Gore and the son of former President George Bush.

I, personally, do not believe that history repeats itself, and I do not believe that candidate Lyndon LaRouche will be defeated before the election campaign starts. . . .

I met with LaRouche [in 1984], and we had long discussions on the most important issues which he presented. He listened to my views, from the standpoint of understanding the Arab-Islamic view of these same issues. He was full of eagerness and willingness to see how Arab-Islamic civilization dealt with the same problems he is dealing with. I found out that LaRouche had already read Abdul Rahman bin Khaldoun, whom he considers the father of historiography, sociology, and many modern political sciences. . . .

I remember when LaRouche—in 1982—presented his idea of what he calls “The New Silk Road,” some of the “serious” newspapers in the U.S., Britain, and France accused LaRouche of being a raving dreamer. But we have lived long to witness in the year 1992, i.e., after ten years, a real beginning for the implementation of the project “the New Silk Road,” or what is also called the Eurasian Land-Bridge. It is an economic, technological, and industrial project, linking Asia, Europe, and parts of Africa through networks of advanced transport infrastructures such as railways, high-speed roads, and water canals. It also includes the construction of areas—or corridors, as LaRouche calls them—for intensified, rapid development. This project, which LaRouche was accused of having dreamed up, and being detached from reality, has started today to manifest itself through a tangible agreement between the governments of China, Russia, India, Iran, and the Central Asian states that have started connecting their railway networks and laid pipelines to transport oil and gas. LaRouche believes that if Europe abstains from joining this New Silk Road project, it would end up with an ailing economy in the early 21st century. When LaRouche was telling me about this project in November 1984, when I visited him in his “ranch” in Pennsylvania, he expressed his ideas by placing his mighty hands on the world map which was placed in the living room. When his wife Helga LaRouche was serving us the coffee, LaRouche’s confident voice was flowing with extreme enthusiasm and optimism. However, he told me with a slight tone of pessimism: “The only two obstacles in the way of my project are the imperialist policies of the IMF and the ignorance of European leaders in economics as a science and as a method of forecasting the future.”

For my part, I can definitely assert—16 years after LaRouche’s statement—that he was right. He had a piercing political vision. On the one hand, he was right concerning the policies of the IMF, because most of the causes of the collapse in the economies of Southeast Asia, the famine in Africa, and the social crises in eastern Europe are generated by the IMF. . . .

Book Review

Get the computers out of the schools

by Susan Welsh

High Tech Heretic: Why Computers Don't Belong in the Classroom and Other Reflections by a Computer Contrarian

by Clifford Stoll

New York: Doubleday, 1999

221 pages, hardbound, \$24.95

As a person who has been called a “political extremist,” by people who don’t know anything, for the past 25 years, I loved this book. Clifford Stoll, an astronomer at the University of California at Berkeley who was one of the pioneers of the Internet, argues with wit and incisiveness that there should be *no computers* in the schools—*absolutely none*. (And no calculators, either.)

Isn’t that a rather *extreme* position, I wondered, when I began the book. Well, he convinced me—which wasn’t all that hard, in my case. A lot of people are going to really hate what he has to say, because they’ve invested zillions of dollars and hours in doing exactly what he says is pointless and even detrimental to do. I hope that they, and you, will read his book, and think twice. I’ll give you just a few tidbits, to whet your appetite.

Computers are supposed to save the schools money, right? They don’t. You have to replace them every couple of years, and hire people to make sure they keep running. But it gets worse: By using computers to teach science, you also get rid of the science. Take the case of the Science Magnet School in Buffalo, New York, which has dozens of computers. Stoll quotes physics teacher Dr. Reichert, who is from the State University of New York at Buffalo: “I volunteered to teach physics there. But this science magnet school has no physics lab. No air table to teach mechanics, no hands-on experiments. All they have is computers. . . . It fries me that we can get cash for computers but we can’t buy an optics workbench or a set of voltmeters, or a collection of tuning forks. At a physics teachers meeting, I met a guy who wouldn’t pay two thousand dollars for hands-on apparatus to teach magnetic fields and angular momentum. The same guy happily spent

twenty times that much on a roomful of computers.'

"For the cost of two dozen computers," Stoll continues, "you can equip a terrific high school physics lab. Ten years from now, when those computers are in the trash heap, a set of tuning forks could still teach resonance, a voltmeter could still demonstrate Ohm's law, and students might still learn about angular momentum using that apparatus."

They're even putting computers in pre-schools and kindergartens. Knowledge Adventure Company says that nine-month-old infants can benefit from their software, because it will "give them a comfort level with computers." A comfort level? Well, maybe that's a little much. But why not elementary school children?

Stoll shoots back: "Computers aren't compatible with the clay, dirt, and cookie dust of a five-year-old's life. Kids mustn't pour sand into the keyboard or smear peanut butter on the monitor—tough rules to enforce in a kindergarten. I met a second-grade teacher who discarded the magnets from her classroom because she feared they would erase the floppy disks. Her students now learn about magnetism from some multimedia program."

Okay, okay, but what about the older grades? Don't they need to develop "computer literacy" in order to function in the modern world?

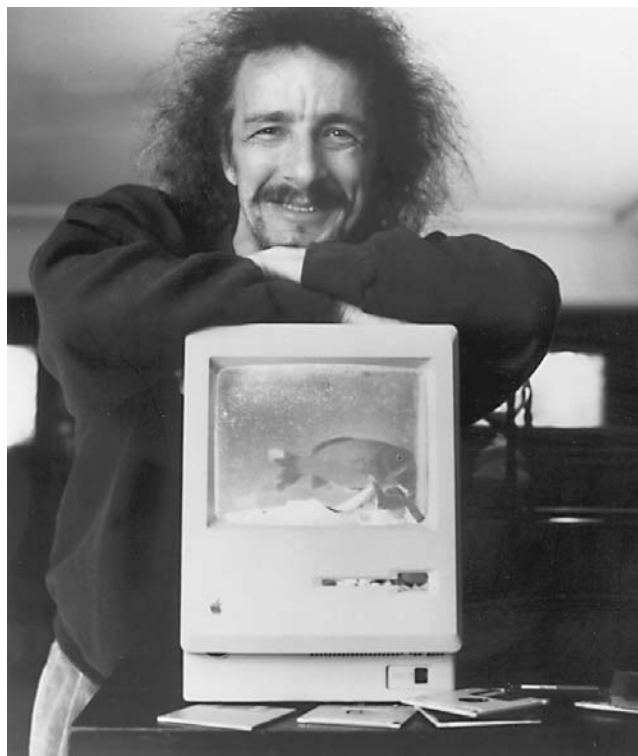
Sure, we use computers in the workplace, Stoll argues—and they are invaluable tools. We also drive cars. But we don't construct our school curricula around cars. People who need to use computers on the job will learn what they need to do quickly. Children, in particular, have no trouble learning to use computers. What they *do* need help with, is math, science, literature, history, foreign languages.

It goes deeper. Stoll: "The very skills taught by television are reinforced by educational software. Sit, watch, and be entertained. More than anything else, computers teach children that the world is a preprogrammed place, a virtual universe where solving a problem means clicking on the right icon."

In the name of "interaction," what is eliminated is the most important interaction of all: the Socratic dialogue between human beings, teacher and student.

Now, the case of calculators. Stoll gives devastating examples of how they cripple the thought process of young students: "The circumference of a circle isn't 3.14159 times its diameter, but rather π times the diameter. And how do you grade a student who says that two-thirds times three is 1.999999?"

The issue here is an epistemologically crucial one, which Lyndon LaRouche and *EIR* have written about often, and which gets to the core of what is wrong with science and mathematics today: *incommensurables*. Cardinal Nicolaus of Cusa proved in the 15th century that no circle can ever be formed by an aggregation of very thin triangles around a center point. Circularity and linearity are incommensurable concepts. If you don't understand that, you can't do science.



Author Clifford Stoll. That's no screen-saver on the monitor of his Macintosh; it's a real fish. He made his computer into an aquarium.

'No more teachers, no more books . . .'

One result of the "computer revolution," is that we are replacing the books in our libraries with computers, and the librarians with computer technicians. The University of California, Stoll reports, opened a brand-new library, with a beautiful spiral staircase and four ethernet ports at every table (so that people can link up to the Internet with their laptops). Some study carrels have 8 computer ports and 16 power outlets; every work space has a high-speed link to the Internet.

But where are the books? To make room for the staircase and the computers, half of them were shipped ten miles off campus, to a warehouse, which you can get to by bus. Any book that has not been checked out in a year gets warehoused.

"And don't think that you can go to the warehouse to read. You'll discover that you can't browse the shelves—books aren't filed by subject, title, or author. They're warehoused by size. Perfect for a computer call system. Impossible for the researcher."

It reminds me of a certain prison in the Commonwealth of Virginia, at which the illiterate inmate who works in the prison library organizes the books in what seems to her the most sensible way: by size. Very tidy.

In an insane asylum, is the only sane person a "political extremist"?