

Waiting for Linguistic Viagra

WOULD YOU RATHER BE BLIND or deaf?

I love those classic conversation starters. Has Earth been visited by extraterrestrials? Does President Bush need to carry money? Why is it that, after making love, men fall asleep and women wake up?

Let's focus on the blind/deaf question. Genius overcomes many difficulties. As evidence, we have the pantheon of blind and deaf artists, ranging from Beethoven to Goya to Milton to Ray Charles. According to neuropsychologist and author Oliver Sacks (in his book *Seeing Voices*), whether it's better to be blind or deaf depends on how old you are. For an adult, blindness and deafness are about equally problematic. But for a child, there is no question: it's better to be blind. Anyone who has had the opportunity to teach a deaf child knows this. Hearing is the primary channel through which we receive language, and all of those incoming words downloaded into our brains carry a wealth of emotional and cognitive apparatus that structures and empowers our imagination. Language is the mind's opposable thumb.

Whether it is a book, a pencil or a computer, technology deeply affects the way we learn, and interact and create with, languages. The word "hello" came to prominence in English because of the telephone. Or consider the emergence of mass public literacy. It wasn't born in a vacuum. It is largely a technological by-product of the printing press—and it's been greatly affected by the rise of television and other media that compete for our attention. The question is, how will future information tools influence our relationship with languages?

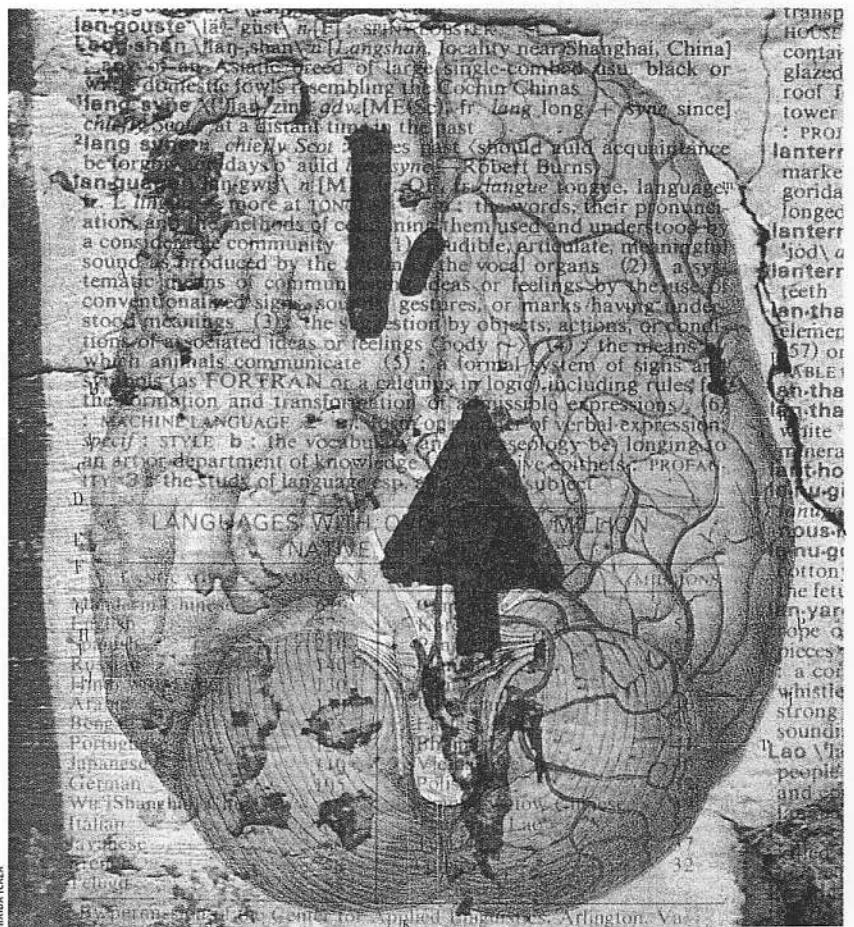
David Sarnoff, an early president of RCA, believed that the broadcast of radio and television would spread English as the world's unifying language. It did and it does. More recently, the World Wide Web has fur-

ther fostered English as the global lingua franca. Visit a developing country and you find that people seeking better lives see two clear paths: learning English and mastering computer skills. The two are intertwined.

Historically, technology has had a huge impact on the use of language. Around 1811, the steam engine collided with the printing press, and the result was as explosive then as the collision of computers with the telephone network is now. The rotary-driven steam press printed hundreds of times faster than any other available technology—so fast that publishers couldn't afford to feed enough paper into those voracious machines. In the 1850s, some clever Germans invented a cheap pulp papermaking process. The new stuff became known as news-

print, since that's largely what it was used for, and with the force of this flow, the modern newspaper took shape.

Soon it became clear that paper was no longer the scarce resource. Nor were printing presses, or even news. The scarce resource? Readers. In 1858, only one in 20 British army recruits could read. Other European societies had similar levels of literacy. And so, in countries across Europe, as well as in America, policymakers began mandating more systematic schooling. By 1900, literacy among British recruits had jumped to more than 85 percent and the novel had become a mainstream art form. Mass public literacy, therefore, was an outgrowth of a burst of technology that liberated a huge quantity of text, and then encouraged an ensuing ballet of



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sorts among policymakers, educators, authors and printers.

If steam engines plus printing presses ignited a literacy revolution in the 19th century, what might be the combined effect of computers and telecommunications today? When the

teach foreign languages and fewer students study them. Shockingly large numbers of U.S. elected officials have never traveled out of the country. The erosion of foreign-language study is a melancholy sight: there is nothing like learning another language to help you

Literacy grew out of the collision of the steam engine and the printing press. What will the Net's linguistic impact be? We may be in for some real surprises.



Web first self-assembled like the world's biggest set of tinker toys, the eyeopener was that the words and images on your screen were coming not just from your own local disk, but from disks on computers sprinkled all over the planet. As more and more bits piled up, the personal computer became like a soup strainer to filter chunks of useful information from the great wash of bits. Search engines like Yahoo! and AltaVista were followed closely by pidgin translation systems, which are interesting even in their fledgling state—and which will need to improve dramatically after two billion people in China and India come roaring online.

know your own more deeply. Whether it is calculus or Cantonese, you think differently in other languages, and those differences matter.

This linguistic ignorance dismays me because I love words. In fact, I'm a word nerd. I get a kick out of tossing a few odd ones into my column, just to see if the pervicacious editors will weed them out. Back in the late 1980s, I created one of the first computer dictionaries (with entries from Merriam-Webster's Collegiate Dictionary) on a NeXT computer. At the time, it was exciting to have hot-and-cold running definitions at your fingertips. You could click on any word that aroused your curiosity and my "Digital Webster" program popped up the definition. Isn't that the essence of the educational itch? First, having the appetite to know more; and second, actually satisfying that appetite.

What nobody can predict, of course, is what new intelligences will spin out of this computer-driven, massively global engine of cause and effect. Or how these developments will influence the language we speak.

One engineer used the dictionary to build an unbeatable Scrabble-playing program. Someone else tried to automatically translate the news-wires into rap. I never got around to throwing Digital Webster at the *New York Times* crossword puzzle, but that kind of word play was what we hoped computer dictionaries would unleash. Sadly, it wasn't.

We may be in for some real surprises. Will this process cause sophisticated artificial intelligence to finally burst onto the scene? Will the lingua franca dumb down from English into a sort of Internet Esperanto? Will cultures colliding online spur interest in other languages?

Recently, it seems as if information technology has become a sleeping pill for this sort of creative and constructive language hacking. Today's computers no longer come with a first-class, built-in dictionary; that feels like a step back. There are, of course, dictionaries online. But although you

On the face of it, the prospects for another technology-induced upgrade in the popular use of language are not good. For one thing, computers have evolved into visual media. They are more deaf than they are blind: aural and linguistic interfaces lag far behind visual ones. What's worse, computers are coming out of an increasingly Anglocentric culture. Even at universities, fewer and fewer departments

can graze these canned Web dictionaries, you can't write programs to chew through them and do interesting things. The programmatic interfaces are closed. The pattern formed by networked PCs—the glut of Windows software, the lowest common denominator of Web servers—has become too much like the one-way information delivery of dumb cable television, and not as inviting even to word hackers like me. And writing teachers always bellyache about the insidious ways that word processors engender choppy, sloppy writing.

Maybe this is a lull. Maybe the current landscape of ugly displays, poor typography and flaky networks is too primitive compared to a beautifully printed magazine. But when the displays get really good, and when network connections are always available, like the air that we breathe—will we then see the emergence of a Napster of books to really shake things up? Can you imagine some hacker selling shoebox-sized pirate copies of the Library of Congress?

Perhaps we will wake up in a decade or two and the prevailing online language will be Cantonese. Perhaps it won't matter because computer and telephonic translation will have become so fantastically frictionless that worrying about Chinese copyright ripoffs will be superfluous. Ask to watch a spaghetti Western in Italian, and the system will not only translate the language on the fly, it will add the extra hand gestures, too. And maybe, if the biotech wizards get their way, we won't need all those clunky computers. I'm waiting for a linguistic Viagra pill that instantly makes you fluent in Italian, at least for an hour or two.

It's important to communicate. It's important to have a lingua franca. But it's also important to think differently. The most fertile, thriving cultures have a balance of order and chaos, with constant ferment. But today's computer media are flat and Anglocentric. Things are a bit too stuck, a bit too ordered. Both within the machines and across the network, we could enjoy a little more linguistic turmoil. ■