

Holy tower of Babel: The language and linguistics of machines

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Satellite Communications for Learning (SCOLA)

Today just happens to be a very good time to celebrate the symbiosis of language and linguistics with technology. We are at a dizzy height of computer and hyper-electronic wizardry that oscillates, parses, and conjugates our primary communicating tools—our voices, thoughts (inner speech), ideas, visions, and feelings—our languages and all our media.

Some of our general tech toys have been friendly and cozy, spreading security, information, or entertainment: the telephone, radio, television, satellite communications. Others, even some of these, have seemed overwhelming or even threatening for the insurgence they sometimes make into our more pastoral boondocks attitudes and mentalities. Maybe we fear even that the motors of machine translation, the computers of computational linguistics, will replace flesh and blood linguists?

Trying to understand the love-hate relationship that some of us have with technology, some time ago Jim Handey on *Saturday Night Live* said: “I bet what happened was, they discovered fire and invented the wheel on the same day. Then, that night, they burned the wheel.” So here we are today to baptize the wheels of technology and to light more fires for communications and (let us add) pedagogy.

Technologies of SCOLA. Let’s begin with Satellite Communications for Learning (SCOLA) and its technology, all of which here is about knowing and pedagogy. Remember, however, that the real technology, which appears as machines, motors, and movers, is not really hardware; it is the surge of dynamism of a people in freedom, acceptance of challenges, and stored trigger-power ready to explode into new dimensions.

“Because the essence of technology is nothing technological, essential reflection upon technology and decisive confrontation with it must happen in a realm that is, on the one hand, akin to the essence of technology, and, on the other, fundamentally different from it. Such a realm is Art” (Martin Heidegger as quoted in Ulmer 1985: 15). Joseph Beuys gave this advice to art students he visited in the United States: “The making of sculptures, the forming of things must be based on thinking and in this state it must have already reached a certain intensity, to be then ‘informed’ or transferred onto another material. You should not at all pay

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attention to tools, equipment or materials, but to the point at which the forms arise” (Staek and Steidl, 1997: 215). “After visiting the over-equipped studios in an art school in Minneapolis in 1974, Beuys remarked on the relatively unimaginative quality of the students’ work. ‘No results and with the most outstanding means,’ he cried. ‘I would begin by giving them a potato peeler and a piece of wood’” (Staek and Steidl, 1997: 14).

In SCOLA-as-ART I think we are enjoying great growth into a cybernetic brewery of the new marketplace variety; growth, I might add, of the sort that comes from deep insight and realization of what we really want to do and can do best and will do. The SCOLA operation is, then, much like a family or a commune, producing, directing, and playing all the parts in a homemade film.

Largely through the Internet and its ideal suitability for SCOLA’s global immersion in the voices of conversation, our playground has become a potato peeler and a piece of wood for the sculpting of a friendly global familial chitchat. SCOLA has attracted people from the farms and small towns around who find the murmurs in the wavelengths coming in from all over the world an exciting and happy place to mix it up. Somehow this lingo environment has made people free and active participants in the celebration of getting the important work of global community and fellowship onto permanent tracks.

The net atmosphere we are immersed in has seemed to liberate us from the traditional corporate straightjacket job wherein we are constrained to do essentially what comes down from company-heaven. Participation comes through nicely as the music that accompanies constant casual informal information sharing through vernacular and devil-may-care palaver. It means that everyone knows what’s going on, what has to be done, and how important it is, and everyone knows how key my participation in it is. A book just out, *The Cluetrain Manifesto*, tells us that this is an answer to our “longing to be part of a world that makes sense rather than accept the accidental alienation imposed by market forces too large to grasp, to even contemplate” (Levine et al. 1999: xxi).

When we felt a need to informalize and loosen up the straight ASCII text of the Internet, perhaps that’s how we invented the “Smilies” to emotionalize the message. With a combination of punctuation marks and little-used keyboard symbols, you can indicate that you are winking, frowning, smiling, or being sarcastic, devilish, lewd, or sleepy, or that the user is an egghead, a dunce, or brain dead, or that you are laughing, skeptical, or your lips are sealed. Of course these expressions look a lot like Egyptian hieroglyphs or Chinese characters, perhaps indicating a direction for us to achieve the ideal marriage between machine and human talk. For a standard indispensable Smilies dictionary, see *The Unofficial Smiley Dictionary*, published by the Electronic Freedom Foundation, at www.eff.org.

Serious people often saw little point in empty palaver and chitchat like this; but *The Cluetrain Manifesto* reminds us: “The attraction was in speech, however mediated. In people talking, however slowly. And mostly, the attraction

lay in the kinds of things they were saying. Never in history had so many had the chance to know what so many others were thinking on such a wide range of subjects. Slowly at first, a new kind of conversation was beginning to emerge, but it would achieve global reach with astonishing speed” (Levine et al. 1999: 4).

In this kind of net world, SCOLA is like a crypto-dot.com initial public offering before its time, an e-commerce wannabe. But look first at what SCOLA technologically is, and then we can outline our ambitions and vision of the future and show you how we intend to do it all.

The SCOLA operation is appropriately on a farm in Iowa. Our antenna farm is 13.1 acres with twenty-five receive-only satellite antennas and one 10-meter Scientific Atlanta Uplink antenna (dish) grounded by four thirty-foot grounds that also act as the ground for the Faraday’s Cage that protects the equipment in the Uplink building (we have lots of lightning storms in Iowa). The horse barn, built in 1917, is currently being renovated; it leaned to the North after a strong South wind microburst and will soon be rededicated and painted oxblood red.

Other glitzy techno-bits running the farm:

- Two 3,000-watt Klystron high-power amplifiers for digital and/or analog signal transmissions.
- The Traveling-Wave-Tube Transmitter for digital transmissions.
- Three channels transmitting SCPC (single channel per carrier) format.
- Three Wegener Mpeg-1 video encoders compressing analog video to a T-1 bandwidth (1.54 Mbps).
- Nine Super VHS NTSC tape decks and one SVHS PAL deck so PAL tapes can be played directly onto our satellite.
- A COMPEL control signal, combined with the output of our encoders, that enables SCOLA to control all of its receivers via satellite; their parameters can be changed manually or automatically via satellite throughout North America. And there is more besides.

What a mess of junk! Speaking of which, daily during lunchtime, Dave Decker (Program/contracts Manager) and John Millar (Network Operations Manager) put on fluorescent orange safety vests and carry spear-headed sticks to walk our Pottawattamie County Road for exercise. They pick up trash along the way, so far netting a couple of horse show trophies now on Marilyn Larson’s desk, and just last week they found a baking pan with Margie Petersen’s name on it. Margie lives over in Minden, thirty miles from here. Rosalie Soloth (SCOLA Insta-Class Manager) and her husband Bob run a real nice showplace farm just over the hill east of the SCOLA farm, and they know Margie Petersen and will phone her to come and get it. She reckons Margie’s husband Harold put the pan loosely in the

back of his pickup truck after they brought it to the luncheon following a recent funeral, and it blew out along the road.

By the way, sculptor Joseph Beuys' stock-in-trade materials for his work are: "felt, fat, dead animals (road kill?), copper, sulphur, honey, blood, bones . . . all things that hitherto had been unworthy of art" (Borer and Schimer 1997: 15).

How did we get into this? How did SCOLA happen? I think or rather I assume that I have always been an artist, mostly a sculptor (although few have called what I did "art"). The art I did was always about technology; utilizing the detritus, junk, and scrap from technology, almost always including moveable and/or motorized moving parts, sometimes including simple electronic circuits, and eventually making art about the internal functions of computers. For example, my art might consider the "waiting, waiting, waiting" for some prescribed eventuality at whose arrival the computer would spring into a programmed action. I played with laser beams bounced around via prism reflectors and ultimately transmitted audio and then video signals on the beams, their pictures only to be playfully interrupted by passing gallery viewers solemnly admiring what passed for "art" in the sixties and seventies.

Artist heroes during my student years in France included Swiss sculptor Jean Tinguely, who did large welded machines that exercised brutal, noisy, and threatening crashes of iron and steel, and German sculptor Joseph Beuys, whose symbols and models of esoteric realities featured things like felt and fat. He did many metaphysical almost messianic performance-art lectures on stage for audience "students." It is the life and work of Beuys that is featured in the book *Applied Grammatology* by Gregory L. Ulmer. Ulmer's subtitle is *Post(e)-Pedagogy from Jacques Derrida to Joseph Beuys*, and I will refer to it from time to time for models and examples. (Beuys, not well known by some in the United States, is widely recognized by European critics and art journals as perhaps "the greatest living artist of the post-war period" [Ulmer 1985: 226].)

His 1984 bicycle sculpture titled *Is It about a Bicycle?* denotes messages like "ride freely on, find harmony with nature, and equilibrium in moving ever forwards; rely only on yourself; use your own heat, like fat or felt (as in the expression elbow grease); or else, in political mode, think about the earth-air-space relationship, about the autonomy of movement and thus of action, widen your horizons to take in all the problems in the world." The meditative wealth provided by Beuys's bicycle symbolizes his idea of the path to be taken, and as such it represents the entire body of his work, to which in 1964 he gave the general title—with strong Buddhist overtones—of "vehicle art." See also *ROOM with Fat Corners and Dismantled Bicycle Air Pumps*, a 1968 triangle of fat in a corner, with bicycle pumps stuck into it (Borer and Schimer 1997: 23).

Francis Lajba (SCOLA Chief Operating Officer) and I go biking from the SCOLA farm one day each week down about twenty miles to Silver City, lunch at Maudie's Café, and then bike back in time to open the mail.

The point of all this is simply to *link* technology, language, and linguistics with the rationale for SCOLA's birth out of a thirty-five-year stint of sculpture teaching at Creighton University. This also should reveal how significant it was for me when deregulation of the satellite industry came along in 1979, and the private satellite industry dish manufacturers and dealers came to Omaha for a convention in 1981. I saw a hundred dishes like giant galvanized garbage-can lids sitting in a motel's parking lot pointed up to the sky, showering television down from all over the world. At that instant, SCOLA was born, totally, in a nutshell, part dream, part vision, only to be worked out with coworkers, participants in schools, and with organizations and at gatherings like this one.

At the end of the Omaha Private Satellite Industry Expo, when all the backyard dish dealers were packing up to go home, I got a good deal for a homemade kit-type demo model, Spherical Antenna, pedaled by guys called "Ghost Riders" from Montana. They didn't really want to tear the thing apart to truck it home. This was our first antenna: an eight-foot by eight-foot homemade wooden frame with window screen stretched into a segment of a big sphere, reflecting numerous satellite signals to an amplifier mounted strategically out front at one-half the radius of the original big sphere. We installed it on the roof of the sculpture studio. The first signal we got was Benny Hill, and the president of the university climbed a ladder to get up there the first evening to watch his favorite comedian.

Soon, campus people wondered why sculpture students were able to spend their studio time watching Mexico, France, Germany, Russia, Spain, South America, Africa, and a bunch of other foreign programs coming in from all over the world and asked why we didn't share this with the whole campus.

Just what we wanted! During the summer of 1982 we wired every building on the campus, including at least one floor in each of the dorms, just to get the word around. Soon all the dorm rooms were wired and the first Campus Cable System was born. Note well, 1981 was also the year CNN was born, and 1981–1982 were the years the United States was "cabled." The idea was to beat to the draw the franchised cable companies, who were of course eager to connect easy-connect apartment buildings and college campus dorms; the idea was to reserve this valuable distribution system for the educational potential it held, while of course including programs that students couldn't live without: MTV and CNN, etc.

Universities envision SCOLA's mission. Soon we were getting calls from big prestigious universities asking if they could send someone out to see this campus cable thing. So, flattered, we'd meet them at the airport, show them the nifty cable system, buy them lunch, and return them to the airport. After doing that a number of times and finally getting wise, we organized the first SCOLA Conference, in the summer of 1983, and charged universities what we thought was a small fortune to come and see what a campus cable system was like and how they could build one.

The universities represented at this first conference participated in creating SCOLA as a consortium of universities, dedicated to providing campuses nationwide with select critical foreign television supportive of students of languages, international studies, political science, and any other logical applications.

National Cryptologic School “founder.” Conferences each year thereafter saw participants, coming mostly from universities, who arrived mumbling things like, “If it isn’t international, it isn’t education.” A few representatives from a United States government agency came to the early annual conferences, explaining shyly that they were from a “school” just like other people and were interested in doing the cable distribution of SCOLA around their campus, just like any other ordinary school. But then one bright day in August 1987, one of the government people who had attended our conferences annually phoned me and said they wanted to help us. “Well, how?” “Well, if you could make up a little shopping list and come to Washington?” “Well, I can be there this afternoon.” “Well, wait until we get our stuff together, I’ll let you know.” Then the next day he phoned again and told me: “Fly next Thursday into the Baltimore-Washington Airport, rent a car, come out of the airport to the blinking light, drive straight ahead past seven trees on the right until you come to the unmarked white building.” Once inside, I learned that this was the National Cryptologic School (NCS), founded by George Washington himself during the Revolutionary War, of which all involved are very rightly proud.

There, in Mister Whitney Reed’s office, several people were gathered: Whitney Reed; Steve Marini; Larry Seese, who had attended so many SCOLA conferences and phoned this invitation to me; the dean of the school, Dean Schwartzkopf (sister of the General for the Gulf War); and others who would be longtime friends of SCOLA. Even before I could sit down on the nice leather sofa in his office, Whitney told me, “Don’t bother to show me your stuff; we’ve already had our meeting, and we’re going to give SCOLA a grant (annually) and we’re going to give it forever.”

That was the startup that enabled SCOLA to get into the business of specialized educational satellite transmission of foreign television for schools; it gave us the energy to collect what we needed to install an uplink transmitter, lease a transponder, and quickly procure enough critical foreign television programming for regular twenty-four-hour transmission. The NCS is truly a key founder of SCOLA.

SCOLA now three channels. SCOLA gradually has expanded to three channels. The first was dedicated to television news, because (1) it contains elements of interest to most disciplines taught in the schools, (2) it is usually the best articulation of the language, and (3) the rights for retransmission are (or were, then) the easiest (and least expensive) to get.

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The Second Channel is made up of Variety Entertainment programs from the same countries providing the news, about fifty countries now. This channel often includes documentaries, children's programs, novellas, soaps, interviews, and some language-learning classes. These variety and storybook programs were always what linguists desired particularly from us, to experience real-life verbal interaction from real people in soap-opera-type dramas.

The Third Channel is dedicated twenty-four hours to Chinese (Mandarin) television, sponsored by China Yellow River television, a consortium of 178 television stations in China in partnership with SCOLA. It shows news, Variety Entertainment, and Language Learning. This was the first of what could be many channels dedicated to one language or another. SCOLA is ready and eager to supply such specialty channels for less commonly spoken or taught languages or groups of languages, which are nevertheless critical.

SCOLA's broad audiences. SCOLA has become a classic resource for disciplines like international studies, political science, and, of course, languages. About 450 four-year colleges and universities use SCOLA. Almost 10,000 primary and secondary schools use us in one way or another. Shortly after the start of our services, many thought we would be a resource only for the most advanced language students in the biggest universities. Then, all of a sudden, all the grades at Saints Peter and Paul Grade School in Tulsa, Oklahoma, started to watch the television news from a different country each week. Then they would discuss together the funny people, funny sounding language, odd buildings and environment, etc.; then look them up on the map, color projects, check the encyclopedia, and soon became experts in geography.

I see these grade school students as exemplars of a new form of learning, a sort of "coming-out-of-the-cave" to look at some new wonder they have never seen before. They start by contrasting new ideas to things they know deep down and tucking the phantasms deeper down to be recalled when explicating it or writing it down. Recall Joseph Beuys who in May 1974 mounted a three-day New York gallery performance titled *I Like America and America Likes Me*. For these days he lived, at times wrapped in felt, in a caged room in the gallery with a coyote. "Beuys talked with the coyote, attempted to find an approach to him, to establish a relationship" (Goetz Adriani, *Joseph Beuys: Life and Works*, as quoted in Ulmer 1985: 227).

For personal apologetic reasons, I'd like to quote Beuys's catalog explanation for his 1979 Retrospective Exhibit at the Guggenheim in New York:

My objects are to be seen as stimulants for the transformation of the idea of sculpture, or of art in general. They should provoke thoughts about what sculpture *can* be and how the concept of sculpting can be extended to the invisible materials used by

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everyone: *Thinking Forms*—how we mould our thoughts or / *Spoken Forms*—how we shape our thoughts into words or / SOCIAL SCULPTURE—how we mould and shape the world in which we live: *Sculpture as an evolutionary process; everyone is an artist*. That is why the nature of my sculpture is not fixed and finished. Processes continue in most of them: chemical reactions, fermentations, colour changes, decay, drying up. Everything is in a *state of change*. (Caroline Tisdall, *Exhibit Catalog*, as quoted in Ulmer 1985: 227)

After doing sculpture that at least I recognized as such for over thirty-five years and telling people that my art quite naturally developed and evolved into what SCOLA is becoming, I am still asked occasionally, “Don’t I miss doing real art?”

Still, hardly a day passes that we don’t hear from a SCOLA fan telling us that, cloyed by other television offerings, he or she has drifted to the SCOLA channel. Without full comprehension, the fan just sort of basks in the flow of foreign images and sounds, just like sitting in a sleepy, sunny sidewalk café effortlessly musing deep down about what passes by.

Over fifty cable systems in the United States carry SCOLA, either in “college towns,” where it is included in the college’s affiliation, or in cities, where the considerable ethnic populations have insisted on having SCOLA. The cable systems have paid the fee for primary and secondary schools, and the general cable audience benefits by watching SCOLA for free.

A. C. Clarke and UNESCO. In 1983 I joined a gang of *nouveaux riche*, private satellite industry designers, engineers, and manufacturers visiting Arthur C. Clarke in Colombo, Sri Lanka, installing antennas for him at his home and at the newly constructed Arthur C. Clarke Technology Center.

Returning from there I stopped in Paris to visit friends from my student days there, some connected with UNESCO’s television council, and I was asked to talk on satellites and their new industries at UNESCO’s International Film and Television council. At the question period, a representative from Syria took exception in a blazing and offensive tirade to the fact that these infernal things were the tools only for capitalist superpowers and what they rained down on their unsuspecting populations was destroying their cultures. This was still the time of the New World Information Order, mainly involving developing countries. I was deeply affected by this verbal attack and expressed quite convincingly for the UNESCO audience that what we, too, wanted was for them and all the peoples of the world to rain down upon us their own cultures, languages, arts, and commerce, so that we could more effectively get to know them and have their culture effect some insights for our own and for the mutual enrichment of us all. This event was an important impetus for me and for the launch of SCOLA toward

understanding and utilizing effectively what satellite technology had wrought and how it was continuing to bring the world together in ways sometimes intended, sometimes revolutionary, and even today in some critical ways, sometimes controversial. These days I look upon SCOLA as being almost a crypto-partner of the World Trade Organization (WTO), the International Monetary Fund (IMF), and the World Bank.

Internet-2. SCOLA itself is currently opening to a new life of high-speed streaming throughout the world. Emblematic is the gradual transition of our multiple channels' transmission from satellites or, for now, duplication of transmissions to the Internet, with video streaming capability arriving soon on Internet-2.

SCOLA is in partnership with the departments of computer and electronics engineering in the Peter Kiewit Institute at the University of Nebraska at Omaha, where, through an NSF grant, they will connect all the SCOLA channels to the Internet-2, installing server and archive equipment at the SCOLA site and then linking this to the Peter Kiewit Institute (PKI) site in Omaha via an Optical Carrier Level 3 (OC3) fiber connection. This fiber link will connect with the Internet-2 Nexus that is at PKI, so SCOLA will have a full connection to the Internet-2 and will have full use of the entire 155 Mbps of bandwidth.

SCOLA will be able to program its entire offering of three or more transmitted channels at satellite speed onto the Internet-2 and will be able to offer access to a digital library of video programming and instructional material archives.

The fiber link will be able to support eighty T1 signals or any multiple of this, depending on the compression rate. The Internet-2 programming and resources will also be available to Internet-1 users, but at a reduced bandwidth.

Research universities belonging to the Internet-2 consortium will be able to use the Internet-2 to supply their campuses with SCOLA's programming without the need of a satellite dish and receiver. They will also have this programming as well as the archived programming available for whatever research and experimental activities they choose to undertake. Since the programming will arrive at the institutions in digital Internet form, it will be very easy to incorporate this material into any online application.

The OC3 link from SCOLA to Omaha is expected to cost about \$10,000 per month. The initial serving and archive equipment will cost another \$100,000. The total budget for the project is \$498,000 for two years.

But this high-speed Internet-2 connection provides impressive full-motion reception of the SCOLA digital compression that is a foretaste of the quality soon to be available more widely globally and presaging the day relatively soon when all of our television will come that way, making our computers indistinguishable from our television sets and our toaster ovens. This is the technology that cur-

rently every other Tom, Dick, and Harry Videola research corporation is working twenty-six hours a day to perfect and bring to market.

The archiving we've been waiting for.

Archives for retrieval. It is through part of this project that a fiber link is being brought to SCOLA from the Omaha PKInstitute, serving also as the vehicle for delivery of the SCOLA programs, archival material, interactive language-learning programs, and global business information services to the Internet video streaming server. The archive will make available to anyone on the net all the programs and services of SCOLA anytime of the day or night worldwide, click on demand:

- Individual news programs of all the countries from each day of the previous week.
- Variety channel programs available from an index or topical search engine.
- Language-learning classes/series/courses in all the less-taught languages of countries represented on SCOLA and others (like ESL).
- The current day's television news from any country at any time convenient to the searcher, post-broadcast where SCOLA receives these live via satellite (or postreception of tapes in some cases).
- The machine translation services online.
- The overseas, global linkages for business and every other area of exchange or commerce in every country.
- The specific total climate for the complex of information needed by a person seeking to research business potential in a specific country and how to do it and how to get specific personal assistance to bring it about effectively.

For archiving SCOLA will install digital archiving hardware, a central computer that controls "slave" computers with large hard drives for the storage of digitally encoded and compressed video programming. Several thousand hours of programming will be stored in these devices and all of it will be randomly accessible on a per-demand basis. A central database will enable online users to browse the entire library and search by topic, time, language, etc. After the user makes a selection, a simple click of the mouse signals the serving hardware at SCOLA to initiate a video stream of this programming. At the same time, it will be noted on the SCOLA website that this programming is being watched, and others will be invited to join the show or request another program.

The cost for all the startup equipment—fiber installation, live stream server hardware, servers for archive, random access storage devices, Ethernet LAN hub,

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etc.—will be about \$1 million at least, for the first year, and about \$700,000 each year thereafter.

Capitalizing. New commercial interest in SCOLA on the part of various investment entities is developing. Mainland China has inquired about the possibility of a partnership, purchasing 30 percent of SCOLA. That could be at the very least a catalyst for other corporations dying to learn how to do business in China and with China. China's already existing relationship with SCOLA is through the CYRTV (China Yellow River TV), a consortium of 178 television stations in China. This would be expanded to include the Ministry of Education and the Office of Foreign Information directly under the Central Committee, as well as representatives from Phoenix China television based in Hong Kong and 30 percent owned by Rupert Murdoch. They have asked for, and received, an invitation from us to come and talk about buying 30 percent of SCOLA.

Also, there is the possibility that large numbers of distance learning operations at universities around the world, with which we either have or are developing links, will find it conducive to their missions to link with the new SCOLA establishment. The universities we have in mind are, by and large, not famous for offerings of less commonly taught languages, but they could be important markets for those offered by SCOLA in a major and highest quality interactive distance learning format via Internet video streaming archival links. The schools typically don't have the capital needed to produce high-quality interactive Internet video streamed courses done by highly paid star teachers through spiffy state-of-the-art studios and supported by teams of experts and techies to answer questions, correct homework, interact linguistically, or whatever; but a well-financed for-profit corporation will.

In view of these expansionist developments, it may be logical for SCOLA nonprofit to create a new corporate for-profit arm. This would mean SCOLA would move into serious, all-out, heavy-duty, no-holds-barred capitalization in order to do it right, do it worldwide, inclusive of all countries and their languages, with linguistic, educational, and global trade benefit.

Supporting global business. SCOLA thinks that it is a natural to be a player and provider of resources for global business promotion—in a manner that is a germane and obvious spin-off and development of its main mission.

In addition to broadcasting the key television news from more than fifty critical countries around the world, providing a finger on the pulse of the economic, political, and social health of potential important players in global business, SCOLA should expand and make explicit a bundle of ancillary services to include a broad range of technological, historical, geographic, capitalistic, commercial, and social programs, services, and exercises to make entering into trade and commerce with a given market smooth, predictable, and ultimately successful. Some of these services are:

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- Current onsite business climate reports by native MBA experts of individual countries and regions.
- Lists of personal contacts and offices in each country for business and educational opportunities.
- Native language facilitation: learn quickly enough for basic hospitable and salesmanship exchanges; more for in-depth serious representation on the part of the non-native business agent.
- Elaborate expert geographic (in the broadest sense) studies pertinent to specific business opportunities.
- Local customs, social climate, religions, and other esoteric, recondite, or hidden sensitive cultural elements.
- Online interactive language courses in each of the countries' languages, with "live" teacher support and direction via the Internet.

With these and other resources we hope to be an active player in the technological support megaplex for global commerce (cf., Lambert 1986).

Realization. And, yes, we do realize the extent, breadth, and expanse of the technological and human resources we need for such productions and such ambitions: a considerable staff of native language, business, and cultural experts both here and abroad in the key developing countries, and Internet and software computer wonder-people for archival and automatic server creation, evolution, development, and service.

And yes, we do realize the enormity of the technological junk we have to assemble for the students to play with while finagling, contriving, and jockeying every available and imaginable caldron of bio-and-mechanical-technological sorcery into the service of what finally ends up being pure and simple human communication and interaction.

Yes, we do mean to pull out all the stops of existing research in languages and linguistics and allied technologies—computer, computational everything, machine translation, voice recognition, voice commandable, voice to text, and text to voice—if not even with Zipf's Law and all the Fuzzy Logic necessary. SCOLA should be linked to all the best translation software as it is developed.

And yes, we do know what the fine people who speak languages will do in the good world to come. By the millions, they will rule the world—rightly taking their places as the people who communicate with one another and with everyone in sight, and with everyone linked with them, be it by osmosis, telepathy, postcard, Post-it Notes, or wireless pigeon. These are the front people and spokespersons for business and cultural contact and will in the future be paid handsome salaries cognizant of their key functions in global business.

These are the people who really are the business. Even at a start-up level, it doesn't take a lot of investment for a person to master enough lingo to be hospitable

in an encounter with a passing potential client or customer interested in his or her business, services, products, and most of all, life.

What about the multiplicity of languages—do we perceive a leveling of language difference? Or is everyone learning English? I think not. I believe in the richness of the overwhelming variety of world languages and dialects. I value high-level language and linguistics study and research; I believe in the ongoing need for (human) translators and simultaneous interpreters. I hope to see vast armies of accomplished practitioners of second, third, and fourth languages of every language and dialect spoken upon the earth for education, language learning, gossip, chatting, travel, e-mail contacts, etc. But perhaps I hope to see them mainly engaged in the practical down-to-earth work of meeting people in travel, business, government, and social exchanges and interaction.

Let us face some of the facts of learning-life:

- It is possible for a normal person of average talent to learn several/many languages.
- Even a linguist (or: *especially* a linguist) has to master several disciplines in life.
- As a dummy run: see how even Chinese is eminently learnable.
- When we really have a deep sense of solidarity with the human race, nothing can keep us from communicating effectively for wondrous results.
- We do not want the world to be reduced to *one* language.
- Learning languages is the key to learning everything in life.
- Nurturing, supporting, and promoting the multiplicity of languages of the peoples and tribes of the earth is even more important than protecting the disappearing species of animals.
- All the technology possible and thinkable to achieve these objectives should be taken for granted.
- If the machine won't kowtow to the person, let the person assume the spirit of the machine. That's how you dominate, control, and humanize technology.
- However, perhaps mainly in the stages of learning, the availability of too much technology could quash creativity and may not be desirable.
- Otherwise, the tower of Babel is holy: the multiplicity of languages is indeed a blessing.
- Through languages, more lively young students will "learn learning," and, through self-motivation for the contemplation and wisdom required for greatness, will achieve what is, in their age, demanded for the task (Heidegger 1998: 11).
- Joseph Beuys's answer to the question "Who is qualified to create?" said, "Those who know the language of the world, that is to say, you and I . . ." (i.e., everyone is an artist) (Borer and Schimer 1997: 17).

SCOLA and learning pedagogy and destining media. It seems that the various blustering *media* of our day are here to stay and demonstrate boldly their ability to provide new modes for learning in every discipline, even the humanities. Derrida himself, in a key address at the Sorbonne in June 1979, insisted that “the academic worker not only . . . study the effects of the media but . . . engage in media practice: ‘It is within the media that the battle ought to be established’” (Ulmer 1985: 15). The message is that the realities of learning the sciences and humanities of life’s cultures do get through to the viewer and listener most effectively from the contemporary media of the marketplace, and, like it or not, the messages have changed and communications technologies have produced a signal development in the evolution of cognition.

Now the models, modes, and symbols by which we learn are more often those derived from their communication via television, film, dance, poetry, novels, novellas, theater, sports, work, and play of all sorts, everyday human experience. Derrida, again in 1979 at the Sorbonne, said that there is: “Given a cultural situation in which the media have replaced the educational institutions as the purveyors of whatever philosophy or humanities the public is exposed to . . .” (Ulmer 1985: 14).

So, in answer to the demand of the organizers of this conference to describe my field, I might now venture some trial answers:

- SCOLA is global media immersion by razzle-dazzle.
- SCOLA is media-oriented pedagogy—multi-performance, multi-channel, interdisciplinary, intermedia, electronic apparatus—in the classroom, in video, and film.
- SCOLA is, in Ulmer’s words, a systematic exploration of “the nondiscursive levels—images and puns, or models and homophones—as an alternative mode of composition and thought applicable to academic work, or rather play” (a picto-ideo-phonographic or phonogrammic style, as Ulmer quotes Derrida, utilizing three “levels of communication—images, puns, and discourse”) (1985: xi).

At the very least, any key locus for prime pedagogy, ideally serving the whole human race in its search for meaning, cannot be far away from SCOLA’s situs in the “now” media world—where our motto is, as preposterous as it may sound (in Latin), “Securus Judicat Orbis Terrarum” (The whole world can’t be wrong).

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