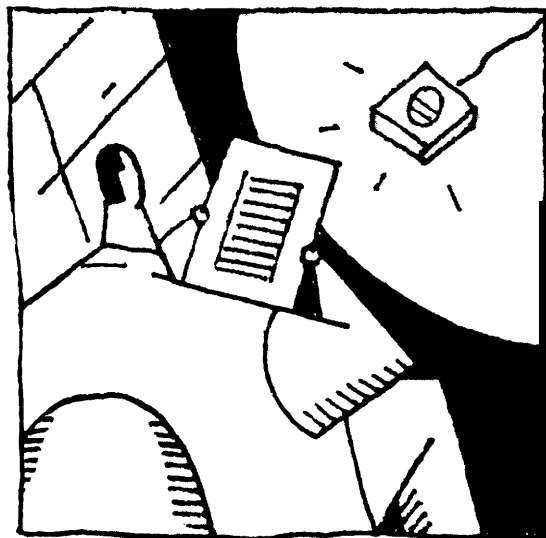


The Civilization of Illiteracy

BY MIHAI NADIN



Beyond literacy begins a realm which for many is still science fiction. The name civilization of illiteracy is used to define direction and to point out markers. The richness and diversity of this realm is indicative of the nature of our own practical experiences of self-constitution. One marker along the road from present to future leaves no room for doubt: the digital foundation of the pragmatic framework. But this does not mean that the current dynamics of change can be reduced to the victorious march of the digital or of technology, in general.

Having challenged the model of a dominant sign system--language and its literate experience--we suggested that a multitude of various sign processes effectively override the need for and justification of literacy in a context of higher efficiency expectations. We could alternatively define the pragmatic framework of the civilization of illiteracy as semiotic in the sense that human practical experiences become more and more subject to sign processes. The digital engine is, in final analysis, a semiotic machine, churning out a variety of signs. Nevertheless, the semiotization of human practical experiences extends beyond computers and symbolic processing.

The realization that we must go beyond literacy does not come easy and does not follow the logic of the current *modus operandi* of the scholars and educators who have a stake in literacy and tradition. Their logic is itself so deeply rooted in the experience of written language that it is only natural to extend it to the inference that without literacy the human being loses a fundamental dimension. The *sophistry* is easy

to catch, however. The conclusion implies that the practical experience of language is identical to literacy. As we know, this is not the case. Orality, of more consequence in our day than the majority are aware of, and in more languages that do not have a writing system, supports human existence in a universe of extreme expressive richness and variety.

The University of Doubt

Literacy-based education, as all other literacy experiences, assumes that people are the same. It presumes that each human being can and must be literate. Just as the goal of industry was to turn out standardized products, education assumes the same task through the mold of literacy. Diplomas and certificates testify how like the mold the product is. The question of why we should expect uniform cognitive structures covering the literate use of language or numbers, but not the use of sounds, colors, shapes, and volume, is never raised. Tremendous effort is made to help individuals who simply cannot execute the sequentiality of writing or the meaning of successive numbers. Nothing similar is done to address cognitive characteristics of persons inclined to means different from literacy. In order to respond to the needs of the pragmatics of high efficiency leading to the civilization of many literacies, education needs first of all to rediscover the individual, and his or her extensive gamut of cognitive characteristics. I use the word *rediscover* having in mind incipient forms of education and training, which were more on a one-to-one or one-to-few basis. Education also needs to reconsider its expectation of a universal common

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denominator, based on the industrial model of standardization. Rather than taming and sanitizing the minds of students, education has not only to acknowledge differences in aptitudes and interests, but also to stimulate them. Every known form of energy is the expression of difference and not the result of leveling.

During this process of re-evaluation, the goals of education will have to be redefined, methods of education rethought, and content reassessed. A new philosophy, embodied in a dynamic notion of education, has to crystallize as we work towards educational alternatives that integrate the visual, the kinetic, the aural, and the synesthetic. In the spirit of the pragmatic context, education ought to become an environment for interaction and discovery. Time taken with reiterations of the past deserves to be committed to inferences for the present, and, to the extent possible, for the future.

To achieve goals corresponding to the requirements and expectations of the civilization of no dominant literacy, education needs to give up the reductionist perspective that has marked it since generalized education became the norm. Education has to recognize its students as the individuals they are, not as some abstract or theoretic entity. Basic education should be centered around the major forms of expression and communication: language, visual, aural, kinetic, and symbolic. Differences among these systems need to be explored as students familiarize themselves with each of them, as well as combinations. Concrete forms of acculturation should be geared towards using these elements, not dispensing instructions and assigning exercises. Each student will discover from within how to apply these systems. Most important, students will share their experiences among themselves. There will be no right or wrong answer that is not proven so by the pragmatic instance.

Fundamental to the educational endeavor is the process of heuristic inquiry, to be expressed through programs for further investigation. These programs require many languages: literate inquiry, mathematics, chemistry, computation, and so on. By virtue of the fact that people from different backgrounds enter the process, they bear the experience of their respective languages. Relevance to the problem at hand will justify one approach or another. Frequently, the wheel will be

re-invented. Other times, new wheels will emerge as contributions of authentic ingenuity and inventiveness. In their interaction, those involved in the process share in the experience through which they constitute themselves at many levels. One is to provide access to the variety of perspectives reflecting the variety of people.

Interactive learning

Education has to become a living process. It should involve access to all kinds of information sources, not only to those stored in literate formats. These resources have their specific epistemological condition—a printed encyclopedia is different from a database. To access a book is different from accessing a multimedia knowledge platform. Retrieval is part of the practice of knowledge and defines a horizon for human interaction. All these differences will become clear through use, not

through mere assertion or imitation. The goal of education cannot be the dissemination of imitative behavior, but of procedures. In this model of education, classes are groups of people pursuing connected goals, not compartments based on age or subject, even less bureaucratic units. A class is an expression of interest, not the product of statistical distribution based on birth and zoning. The physical environment of the class is the world, and not the brick and mortar confined room of stereotyped roles and interactions. This might sound hollow, or too grandiose, but the means to make this happen are progressively becoming available.

Here is one possible scenario: Students approach centers of interactive education after the initial phase of acculturation. Perhaps the word center recalls one of the characteristics of the civilization of literacy. By their own nature, though, these centers are distributed repositories of knowledge stored in a variety of forms—databases, programs pertinent to various human practical experiences, examples, and evaluation procedures. With such a condition, such centers lend themselves to making refreshable knowledge available in all imaginable formats. Such interactive education centers are simultaneously libraries of knowledge, heuristic environments, laboratories, testing grounds, and research media. The hybrid human-machine that constitutes their nucleus alters as the individual involved in the interaction changes.

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As we all know, the best way to learn is to teach. Students should be able to teach their neural network partners subjects of interest to their own practical experiences. In many cases, the neural networks, themselves networked with others, will become partners in pursuing practical goals of higher and higher complexity. The fact that students interact not based on their address and school district, not based on homogeneity criteria of age or cultural background, but on shared interests and different perspectives gives this type of education a broader social significance: There is nothing we do that does not affect the world in its entirety.

In the model suggested, interests are identified and pursued, and results are compared. Questions are widely circulated. What students appropriate in the process are ways of thinking, procedures for testing hypotheses, and means and methods for ascertaining progress in the process. Professional educators, aware of cognitive processes and freed from the burden of administrative work, no longer rehash the past but design interactive environments for students to learn in. Teachers involve themselves in this interaction, and continue to evolve as knowledge itself evolves. Instead of inculcating the discipline of one dominant language, they leave open choices for short- and long-term commitments, their own included.

Not having to force themselves to think in an imposed language, students are freed from the constraints of assigned tasks. They are challenged by the responsibility to make their own choices and carry them through. In the process, differences among students will become apparent, but so will the ability to understand how being different, in a context of cooperative interactions, is an asset and not a liability. Motivation is seeded in the satisfaction of discovery and the ability to easily integrate in a framework of practical experiences that are no longer mimicked in education, but practiced in discovery.

In order to accomplish these goals-obviously in a greater number of manifestations than the ones just described-we need to free education from its many inherited assumptions. Progress can no longer be understood as exclusively linear. Neither can we continue to

apply a deterministic sequence of cause and effect in domains of non-deterministic interdependencies, characteristic of distributed cooperative efforts. Neither hierarchy nor dualism can be cultivated in the educational environment because the dynamics of association and interaction is based on patterns of changing roles within a universe focused on optimal parameters, not

threatened by the radical disjunction of success vs. failure. Complexity must be acknowledged, not done away with through methods that worked in the Industrial Age but which fail in the new

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pragmatic context.

The literacy-based educational establishment will probably dismiss the proposals set forth as pie-in-the-sky, as futuristic at best. Its representatives will claim that the problem at hand needs solutions, not a futuristic model based on some illusory self-organizing nuclei supported by the economy. They will argue that the suggested model of education is less credible than perfecting a practice that at least has some history and achievements to report. The public, no matter how critical of education, will ask: Is it permissible, indeed responsible, to assume that a new philosophy of education will generate new student attitudes, especially in view of the reality of metal detectors installed in schools to prevent students from carrying weapons? Is it credible to describe experiences in discovery involving high aesthetic quality, while mediocrity makes the school system appear hopelessly damned? Self-motivation is described as though teenage pregnancy and classes where students bring their babies are the concern of underpaid teachers but not of visionaries. More questions in the same vein are in the air. To propose an analogy, selling water in the desert is not as simple as it sounds.

Translated into the language of our considerations, all this means that education cannot be changed independent of change in society. Education is not an autonomous system. Its connections to the rest of the pragmatic context are through students, teachers, parents, political institutions, economic realities, racial attitudes, culture, and patterns of behavior in our commercial democracy. In today's education, parochial consid-

erations take precedence over global concerns. Bureaucratic rules of accumulated imbecility literally annihilate the changes for a better future of millions of students. What appears as the cultivation of the mind and spirit is actually no more than the attempt to polish a store window while the store itself lost its usefulness long ago. It makes no sense to require millions of students to drive daily to schools that can no longer be maintained, or to pass tests when standards are continuously lowered in order to somehow justify them.

Understanding differences cannot be limited to education, or reduced to a generalized practice of viewing TV (digital or not). It has to effectively become the substance of political life. While all are equal with respect to the law, while all are free and encouraged to become the best they can be, society has to effectively abandon expectations of homogeneity and uniformity, and to dedicate energies to enhancing the significance of what makes its members different. This translates into an education freed from expectations that are not rooted in the process of self-affirmation as scientists, dancers, thinkers, skilled workers, farmers, sportspeople and many other pragmatically sanctioned professionals. The direction is clear: to become less obsessed with a job, and more concerned with a work that satisfies them, and thus their friends and relatives. The means and methods for moving in this direction will not be disburbed by states or other organizations. We have to discover them, test, and refine, aware of the fact that what replaces the institution of education is the open-ended process through which we emerge as educated individuals.

Access to knowledge in the form of interactive projects, pursued by classes constituted of individuals as different as the world is, is not trivial, and obviously not cheap. The networked world, the many challenges of new means of communication already in place, the new medium of digital TV-closer to reality than many realize-and computers, are already widely available. A major effort to provide support to many who are not yet connected to this world, at the expense of the current bureaucracy of education, will provide the rest. Instead of investing in buildings, bureaucracies, norms, and regulations, instead of rebuilding crumbling schools, and

recycling teachers who intellectually died long ago in the absence of any real challenge, we can, and should, design a global education system. Such a system will effect change not only in one country, not only in a group of rich countries, but all over the world. The practice of networking and the competence in integrating work produced independently in functional modules can be attained by tackling real problems, as these are encountered by each person, not invented assignments by teachers or writers of manuals.

Education can succeed or fail only on the terms of efficiency expected in our pragmatic framework. Scores, religiously accounted for in literacy-based political life, are irrelevant. Practical experiences of self-constitution are not multiple-choice examinations. They involve the person in his entirety, and result in instances of personal growth and increased social awareness. A global world requires a live global system of education that embodies the best we can afford, and is driven by the immense energy of variety.

Footing the bill

Instead of an education financed by the always controversial redistribution of social resources, interactive learning will be supported by its real beneficiaries. That a biogenetics company, for instance, can do this better than an orga-

nization engaged in bureaucratic self-perpetuation is a fair assumption. Freed from the costs associated with buildings and high administrative overhead, education should take place in the environ-

ment of interactions characteristic of the pragmatic framework. As extensions of industries and services, of institutions and individual operations, education would cease to be training for a hypothetical employer. Like the practical experience for which it is constituted, education points to the precise reward and fulfillment, not to vague ideals that prove hollow after the student has paid tens of thousands of dollars to learn them. Vested in the benefits of a company whose potential depends on their future performance, students can be better motivated. Will business cooperate? As things stand now, business is in the paradoxical situation of criticizing the inadequacies of an education that has many of the same characteristics as outmoded ways of doing business. ER

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