IN THIS SHORT PAPER, I want to take a very long perspective on literacy. And I will argue that from the point of view history affords, if I read it aright, our culture's belated and somewhat hysterical efforts to rescue literacy are at best misguided, and in any case doomed.

So that you will know from the outset my personal views on the matter, I must tell you that I do not present my argument and conclusions with any satisfaction in literacy's demise. I am not one of those whose hearts are filled with romantic yearning for the imagined blessings of a recovered orality. Like you, I am myself a highly successful product of 500 years of print. My habits of mind, even the shape of my utterances, conform to the structures and cadences of inscribed thought. My profession and all my strategies in conducting my art as a teacher assume a culture of documents, and a high level of skill in reading them. Though my political biases and a humane respect for non-literate cultures urge me to deny it, my very conceptions of intelligence, of reason itself, are tied up with the conditions and institutions of literacy. And so—though you may also deny it—are yours. The plain fact is that we have never known an alternative to literate habits of thought, and we are hard pressed, after naming Socrates, to imagine how we might conduct ourselves in a radically different state of affairs. And so I tell you what I have to say with deep regret for the passing of an era that was my own, and with a terrible anxiety in the face of the unknown. My fondest wish is that you will tell me, when I have done, how I am wrong.

My argument rests on the assumption, which I will not elaborate here, that

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the history of human invention is best read as a history of problem-solving in response to change. I do not mean that problem-solving is the source of all inventiveness. Much of our creativity arises, of course, out of what Suzanne Langer would call pure symbolific play. What I mean is that those inventions that have large-scale cultural impact do so because they solve some pressing problem encountered by a people trying to cope with change.

Writing, in my view, is just such an invention. The history of its origins and spread is everywhere tied to cultures whose complexity of social and economic organization gave rise to two problems that the spoken word could not address: one was the need for a means of transmitting large amounts of information accurately across distance and time; and the second was a need to control access to information—to protect it from those for whom it was not intended. I will not review here the long stages of development through which writing systems passed, and the variety of deficiencies from which each suffered, until we arrived at the ideal solution, some 3000 years ago, in the alphabet. Suffice it to say that, given the technological limitations of the time, the alphabet was the ideal solution to the cultural problems I have described. As Havelock points out, its small number of symbols and their simple shapes made for relative ease in teaching and learning the code, yet permitted full coverage of the significant sounds of a language. Better yet, because it worked on a phonetic principle the code was useless to those who did not understand the spoken language to which the code was the key. Thus access to information codified in alphabetic script could be controlled through systems of acculturation and, more importantly, schooling. That is the key, of course, to the great flexibility of the alphabet as an instrument of political ideology. It can be used to hoard secrets and power in the hands of a few, or to democratize information and power, by deciding who goes to school. But that is a bit aside my main theme, for the moment at least.

For something peculiar happened in the evolution of writing systems. What began as a set of mnemonic devices tied to visual experience shifted at midpoint to a set of mnemonic devices tied to auditory experience, and ended up, when the Greeks had done, as a system of marks that has no reference to sensory experience at all. And here I must pause to charge Marshall McLuhan, Harold Innis, Walter Ong, and others who have echoed them with a very great error. McLuhan it was, I believe, who said it first: that writing is the extension of the eye. Nothing could be farther from the truth. Writing is not the extension of the eye. It is not the extension of the ear. Nor of the hand, or the skin, or of any other organ of sensory perception and experience. Writing is through and through an extension of another part of us altogether—of the abstracted, conceptual, digital, deductive mind. What the alphabet did was separate thought from sensation, knowledge from experience, utterance from context, speech from speaker, and truth from presence, space, and time. Along with the idea of zero and place notation in numbering systems—themselves dependent on forms of writing for their elaboration—alphabetic reading and
writing constructed a new meaning of thought and knowledge, a new epistemology, so different from the epistemology of the senses and of sense-based speech that we have only just begun to penetrate how it works. If I seem to belabor the point, it is because our habits of thinking and talking about writing have suffered so monumentally from misdirected analogy. We say that writing is merely a “secondary code for speech,” obscuring the fact that it is a different sort of code altogether. We say that it is “disembodied voice,” as though disembodied voice can exist in nature and is not something totally new under the sun. We say that written words stand for spoken words, and that spoken words stand for things—neither of which is true, or at best, true only in such a complex and mysterious way that we haven’t the least idea what “stand for” means.

But let me collect myself and assume you grant my point. Here is what it means: I am saying that writing and reading were radical departures from the ways of knowing for which we are biologically suited and in every waking moment of our lives rely on still. One hundred million years of evolution lie behind our ability to apprehend the world through our organs of sight and hearing. At least 20 million years of evolution lie behind our ability to augment and correct seeing and hearing through co-present speech. All that lies behind literacy—this sense-less, timeless, placeless world of abstracted thought—is a driving set of cultural needs for communicating across distance and time, and a primitive technology for doing it.

I said earlier that the alphabet was the ideal answer to those needs—for its time. But it was a woefully deficient technology all the same, because it could not transmit visual, auditory, and other sensory information across time and space along with abstracted thought. Ironically, it is this very inadequacy in writing as a technology—its sense-lessness—that drove mind to a different plane altogether and led to all those constructions—logic, deduction, critical reasoning, science—that we now identify with rational thought.

I am arguing, you see, that literacy is a form of deviance, a lunge of mind in a direction at right angles, so to speak, from where we would seem to have been headed by virtue of our cognitive history and biological organization. I say “at right angles” because the modalities and conclusions of literate, digital reasoning do not so much complement the logic of the senses as contradict it. The two modes are so different that their conjunction leads us, time and again, not merely to puzzlement but to paradox. And the ultimate irony, perhaps, is this: that we stand now at a point where the literate, digitalizing mind presents us with knowledge of the universe that our senses cannot fathom. We know more than we can understand.

Now, I do not believe that biology is destiny—or that history is destiny, either. But I would argue that some departures from our organic makeup and cognitive past are so extreme that only desperate need and the full resources of culture can preserve them. Even then, their survival is precarious. So it had been with literacy. Wherever a culture does not depend on it for survival, or had
diverted its attention elsewhere, the senses have rushed in to assert their priority and the abstracted word had died. Whatever its religious significance may be, I take the story of Moses and his tribe as a parable on this point. Moses came out of the mountain with the command that the Jews must put aside their senses, and worship only the disembodied Word. And the second command was this: they must make no images, no carvings, no statues, lest they fall again to idolatry and be forever prisoners of the sensuous world. And the people swore, and they swore again, to keep those commands. But every time Moses went for a nap, he came back to find them raising another golden calf. In the Christian extension of the parable, even God, in his infinite mercy, finally bows to human biology, and for the salvation of a sensory species that cannot follow the Word alone, embodies the Word for a time in flesh. But even that is not enough. After the Crucifixion the risen Christ encounters his disciples on the road to Emmaus. “I have lived and talked and eaten with you,” He says. “With your own eyes you saw me die, and with your own hands you wrapped my body and buried me. With your own eyes you see me now before you again, and you hear me speak. Now will you believe?” And Thomas answers, speaking for us all, “Not unless I touch.”

The wonder of literacy is not that it flourished so briefly, but that it flourished at all, with all of the senses warring against it. The reason it did, I say again, is that cultures needed telecommunication in order to survive. But their primitive technology could only transmit that part of the human package that is the abstract, digital mind. Writing was all there was, and we seized upon it, and transformed our own minds to its shape.

For five years I have struggled to answer the question, Why do people watch TV, when all the world of books, with all its incomparable riches, lies open to easy reach? Why don’t they read? But I asked from the bias of literacy, that has come to disdain the senses and delight in the pure play of mind. So I could not find any answer, until I turned the question around. Not, Why don’t people read, but Why did they ever read? And the answer is so simple that you will think I say it in jest: We read because we couldn’t invent TV. But our senses never gave up their clamor, and as soon as the literate mind could do it, we remedied the deficiencies in writing that gave birth to the literate mind. We restored human appearance, if not presence, to the word, and reinvested it with color and movement and sound. If you will forgive an almost blasphemous analogy, we followed God’s example, two thousand years ago, in making the Word flesh. And for much the same reason: because the human, sensory creature cannot comprehend the word alone. The struggle is too great. And so we created a technology for experience at a distance that a child can comprehend by virtue of biology and the natural development of speech—a technology more consonant with the peculiar package that is human than writing could ever be. That is why it has swept away books and all else before it and holds all who see it in thrall. Thus the literate mind itself put an end to the peculiar conditions that required and nourished it, and eradicated its own reason to be.
The literate era was an anomaly, an accident, a wrinkle in time. It was generated out of need and an incomplete technology, with an unforeseeable consequence for the development of human mind. But the kind of mind that grew out of books, as it happens, is too great for the flesh to bear—too strange and divergent for the senses to grasp and comprehend. But neither will leave the other in peace. So we have invented two great new technologies, one for each: television to restore some measure of the senses; the computer to house the disembodied mind. What state of affairs this will lead to, none of us can see.

Nor can I see what our role is, who stand between one era and the next. We are anomalies ourselves, transitional creatures, neither here nor there—cartoon figures trapped on a frail limb far from the main trunk of cultural evolution with the saw in our hands, looking back in the moment of realization that we have just hacked it through, before the limb falls. It has happened before in the long story of the emergence of human culture and mind. If you will accept an even more egregious insult, our nearest relation in the story is Neanderthal, standing at a fork in history, his brain too big for his body, looking in puzzled wonder at the others who have come. Well, we were the others then, so no one grieves for Neanderthal. But I think the tables have been turned, and at least part of our fear for the young who will not read is fear of them, and grief for our line's passing away.

But I do not wish to end on such a somber note, so let me strive for optimism and a more flattering view. We literates are, after all, the ultimate extension of a peculiar line of development—the outcome of a noble, if short, experiment: the housing in sensory flesh of a powerful digital mind. We stand at a moment in history where the two seem likely to diverge, each to work out its destiny in a different way. Perhaps our task will be to mediate between them—between the excesses of restored sensation and the blindness of sense-less mind. Our stand, I assume, is with the human kind, and so our business is with the young. But how do we prepare them, and for what? Five hundred years of literacy have estranged us from the past, and even if we could recover it, it would not be the same. Television will not restore orality, because it does not restore presence. It has its own peculiarities—disembodied bodies, to name the strangest—and will require new and different compensations, pose new problems, chart new directions for the sensate human mind. And so will the computer, as we try to make adjustments to what it cannot provide. We cannot hide in monasteries, and prepare for the day when orality, or literacy, will return. This time, we have not forgotten but outgrown them, and no pleas for time or campaigns for literacy will squeeze human minds and culture back into their wornout shapes. We have an urgent problem before us, and an awesome responsibility, and I will close by putting it to you as forcefully as I may: How are we to prepare the young, whom we already scarcely know, for a future we cannot imagine, from a past that has been swept away?