

Writing Is a Technology that Restructures Thought

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I

Literacy is imperious. It tends to arrogate to itself supreme power by taking itself as normative for human expression and thought. This is particularly true in high-technology cultures, which are built on literacy of necessity and which encourage the impression that literacy is an always to be expected and even natural state of affairs. The term "illiterate" itself suggests that persons belonging to the class it designates are deviants, defined by something they lack, namely literacy. Moreover, in high-technology cultures — which, more and more, are setting the style for cultures across the world — since literacy is regarded as so unquestionably normative and normal, the deviancy of illiterates tends to be thought of as lack of a simple mechanical skill. Illiterates should learn writing as they learned to tie their shoelaces or to drive a car. Such views of writing as simply a mechanical skill obligatory for all human beings distort our understanding of what is human if only because they block understanding of what natural human mental processes are before writing takes possession of consciousness. These views also by the same token block understanding of what writing itself really is. For without a deep understanding of the normal oral or oral-aural consciousness and noetic economy of humankind before writing came along, it is impossible to grasp what writing accomplished. . . .

Functionally literate persons, those who regularly assimilate discourse such as this, are not simply thinking and speaking human beings but chirographically thinking and speaking human beings (latterly conditioned also by print and by electronics). The fact that we do not commonly feel the influence of writing on our thoughts shows that we have interiorized the technology of writing so deeply that without tremendous effort we cannot separate it from ourselves or even recognize its presence and influence. If functionally

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... people are asked to think of the word "nevertheless," they will all have present in imagination the letters of the word—vaguely perhaps, but unavoidably—in handwriting or typescript or print. If they are asked to think of the word "nevertheless" for two minutes, 120 seconds, without ever allowing any letters at all to enter their imaginations, they cannot comply. A person from a completely oral background of course has no such problem. He or she will think only of the real word, a sequence of sounds, "ne-ver-the-less." For the real word "nevertheless," the sounded word, cannot ever be present all at once, as written words deceptively seem to be. Sound exists only when it is going out of existence. By the time I get to the "the-less," the "ne-ver" is gone. To the extent that it makes all of a word appear present at once, writing falsifies. Recalling sounded words is like recalling a bar of music, a melody, a sequence in time. A word is an event, a happening, not a thing, as letters make it appear to be. So is thought: "This is paper" is an occurrence, an event in time. We grasp truth articulately only in events. Articulated truth has no permanence. Full truth is deeper than articulation. We find it hard to recognize this obvious truth, so deeply has the fixity of the written word taken possession of our consciousness.

The oral world as such distresses literates because sound is evanescent. Typically, literates want words and thoughts pinned down—though it is impossible to "pin down" an event. The mind trained in an oral culture does not feel the literate's distress: it can operate with exquisite skill in the world of sounds, events, evanescences. How does it manage? Basically, in its noetic operations it uses formulaic structures and procedures that stick in the mind to complement and counteract the evanescent: proverbs and other fixed sayings, epithets, that is, standard, expected qualifiers (the *sturdy* oak, the *brave* warrior, *wise* Nestor, *clever* Odysseus), numerical sets (the three Graces, the seven deadly sins, the five senses, and so on), balance, rhythms of all sorts ("Blessed are the poor in spirit, for theirs is the kingdom of heaven")—anything to make it easy to call back what Homer recognized were "winged words." Primary oral culture also keeps its thinking close to the human life-world, personalizing things and issues, and storing knowledge in stories. Categories are unstable mnemonically. Stories you can remember. In its typical mindset, the oral sensibility is out to hold things together, to make and retain agglomerates, not to analyse (which means to take things apart)—although, since all thought is to some degree analytic, it does analyse to a degree. Pressed by the need to manage an always fugitive noetic universe, the oral world is basically conservative. Exploratory thinking is not unknown, but it is relatively rare, a luxury orality can little afford, for energies must be husbanded to keep on constant call the evanescent knowledge that the ages have so laboriously accumulated. Everybody, or almost everybody, must repeat and repeat and repeat the truths that have come down from the ancestors. Otherwise these truths will escape, and culture will be back on square one, where it started before the ancestors got the truths from their ancestors....

II

Writing was an intrusion, though an invaluable intrusion, into the early human lifeworld, much as computers are today. It has lately become fashionable in some linguistic circles to refer to Plato's condemnation of writing in the *Phaedrus* and the Seventh Letter. What is seldom if ever noticed, however, is that Plato's objections against writing are essentially the very same objections commonly urged today against computers by those who object to them (Ong 1982: 79–81). Writing, Plato has Socrates say in the *Phaedrus*, is inhuman, pretending to establish outside the mind what in reality can only be in the mind. Writing is simply a thing, something to be manipulated, something inhuman, artificial, a manufactured product. We recognize here the same complaint that is made against computers: they are artificial contrivances, foreign to human life.

Secondly, Plato's Socrates complains, a written text is basically unresponsive. If you ask a person to explain his or her statement, you can get at least an attempt at explanation: if you ask a text, you get nothing except the same, often stupid words which called for your question in the first place. In the modern critique of the computer, the same objection is put, "Garbage in, garbage out." So deeply are we into literacy that we fail commonly to recognize that this objection applies every bit as much to books as to computers. If a book states an untruth, ten thousand printed refutations will do nothing to the printed text: the untruth is there for ever. This is why books have been burnt. Texts are essentially contumacious.

Thirdly, Plato's Socrates urges, writing destroys memory. Those who use writing will become forgetful, relying on an external source for what they lack in internal resources. Writing weakens the mind. Today, some parents and others fear that pocket calculators provide an external resource for what ought to be the internal resource of memorized multiplication tables. Presumably, constant repetition of multiplication tables might produce more and more Albert Einsteins. Calculators weaken the mind, relieve it of the setting-up exercises that keep it strong and make it grow. (Significantly, the fact that the computer manages multiplication and other computation so much more effectively than human beings do, shows how little the multiplication tables have to do with real thinking.)

Fourthly, in keeping with the agnostic mentality of oral cultures, their tendency to view everything in terms of interpersonal struggle, Plato's Socrates also holds it against writing that the written word cannot defend itself as the natural spoken word can: real speech and thought always exist essentially in the context of struggle. Writing is passive, out of it, in an unreal, unnatural world. So, it seems, are computers: if you punch the keys they will not fight back on their own, but only in the way they have been programmed to do....

The new technology of writing, it is now clear, was operating in Plato's lifeworld in ways far too convoluted for even Plato to understand. The technology of writing was not merely useful to Plato for broadcasting his critique

of writing, but it also had been responsible for bringing the critique into existence. Although there was no way for Plato to be explicitly aware of the fact, his philosophically analytic thought, including his analysis of the effects of writing, was possible only because of the effects that writing was having on mental processes. We know that totally oral peoples, intelligent and wise though they often are, are incapable of the protracted, intensive linear analysis that we have from Plato's Socrates. Even when he talks, Plato's Socrates is using thought forms brought into being by writing. In fact, as Eric Havelock has beautifully shown in his *Preface to Plato* (1963), Plato's entire epistemology was unwittingly a programmed rejection of the archaic preliterate world of thought and discourse. This world was oral, mobile, warm, personally interactive (you needed live people to produce spoken words). It was the world represented by the poets, whom Plato would not allow in his Republic, because, although Plato could not formulate it this way, their thought processes and modes of expression were disruptive of the cool, analytic processes generated by writing. . . .

III

In downgrading writing, Plato was thinking of writing as an external, alien technology, as many people today think of the computer. Because we have by today so deeply interiorized writing, made it so much a part of ourselves, as Plato's age had not yet made it fully a part of itself, we find it difficult to consider writing to be a technology as we commonly assume printing and the computer to be. Yet writing (and especially alphabetic writing) is a technology, calling for the use of tools and other equipment, styli or brushes or pens, carefully prepared surfaces such as paper, animal skins, strips of wood, as well as inks or paints, and much more. Writing technologies have differed in different parts of the world. In their own indigenous technologies of writing, East Asia—China, Korea, and Japan—typically used not pens but brushes, not liquid ink in inkhorns or inkwells, but ink blocks, on which the wet brush was rubbed as in making water-colour paintings, in this sense "painting" rather than "writing" (etymologically, "scratching") their texts. . . .

Although we take writing so much for granted as to forget that it is a technology, writing is in a way the most drastic of the three technologies of the word. It initiated what printing and electronics only continued, the physical reduction of dynamic sound to quiescent space, the separation of the word from the living present, where alone real, spoken words exist.

IV

Once reduced to space, words are frozen and in a sense dead. Yet there is a paradox in the fact that the deadness of the written or printed text, its removal from the living human lifeworld, its rigid visual fixity, assures its endurance and its potential for being resurrected into limitless living contexts by a limitless number of living readers. The dead, thing-like text has poten-

tials far outdistancing those of the simply spoken word. The complementary paradox, however, is that the written text, for all its permanence, means nothing, is not even a text, except in relationship to the spoken word. For a text to be intelligible, to deliver its message, it must be reconverted into sound, directly or indirectly, either really in the external world or in the auditory imagination. All verbal expression, whether put into writing, print, or the computer, is ineluctably bound to sound forever.

Nevertheless, by contrast with natural, oral speech, writing is completely artificial. There is no way to write "naturally." Oral speech is fully natural to human beings in the sense that every human being in every culture who is not physiologically or psychologically impaired learns to talk. Moreover, while talk implements conscious life, its use wells up naturally into consciousness out of unconscious or subconscious depths, though of course with the conscious as well as unconscious co-operation of society. Despite the fact that they govern articulation and thought processes themselves, grammar rules or structures normally originate, live, and function far below the level at which articulation functions. You can know how to use the grammatical rules or structures and even how to set up new rules or structures that function clearly and effectively without being able to state what they are. Of all the hundreds of thousands of grammar rules or structures that have been at work in all the tens of thousands of languages and dialects of humankind, only the tiniest fraction have ever been articulated at all.

Writing or script differs as such from speech in that it is not inevitably learned by all psychologically or physiologically unimpaired persons, even those living in highly literate cultures. Moreover, the use of writing or script does not inevitably well up out of the unconscious without the aid of stated rules. The process of putting spoken language into writing is governed by consciously contrived, articulated procedures: for example, a certain pictogram will be consciously determined to stand for a certain specified word or concept, or *a* will be consciously ruled to represent a certain phoneme, *b* another, and so on. (This is not at all to deny that the writer-reader situation created by writing is deeply involved with unconscious processes which are at work in composing written texts once one has learned the explicit, consciously controlled rules for transposing sound into a visual code.)

To say writing is artificial is not to condemn it but to praise it. Like other artificial creations and indeed more than any other, writing is utterly invaluable and indeed essential for the realization of fuller, interior, human potentials. Technologies are not mere exterior aids but also interior transformations of consciousness, and never more than when they affect the word. Such transformations of consciousness can be uplifting, at the same time that they are in a sense alienating. By distancing thought, alienating it from its original habitat in sounded words, writing raises consciousness. Alienation from a natural milieu can be good for us and indeed is in many ways essential for fuller human life. To live and to understand fully, we need not only proximity but also distance. This writing provides for, thereby accelerating the evolution of consciousness as nothing else before it does.

Technologies are artificial, but—paradox again—artificiality is natural to human beings. Technology, properly interiorized, does not degrade human life but on the contrary enhances it. The modern orchestra, for example, is a result of high technology. A clarinet is an instrument, which is to say a tool. A piano is an intricate, hand-powered machine. An organ is a huge machine, with sources of power—pumps, bellows, electric generators, motors—in motion before the organ is touched by its operator. . . .

The fact is that by using the mechanical contrivance a clarinetist or pianist or an organist can express something poignantly human that cannot be expressed without the mechanical contrivance. To achieve such expression effectively, of course, the musician has to have interiorized the technology, made the tool or machine a second nature, a psychological part of himself or herself. Art imitates nature. Art follows nature, and joins itself to nature. Art is second nature. But it is not nature. *Natura* in Latin, like *physis* in Greek, means birth. We are not born with art but add it to ourselves. Mastering a musical tool, making it one's own, calls for years of mechanical "practice," learning how we can make the tool do mechanically all that it can do. Little boys and girls know how boring it can be. Yet such shaping of the tool to one's self, learning a technological skill, is hardly dehumanizing. The use of a technology can enrich the human psyche, enlarge human spirit, set it free, intensify its interior life.

I instance the modern orchestra here to make the point that writing is an even more deeply interiorized technology than the performance of instrumental music is. To understand what writing is, which means to understand it in relation to its past, to orality, one must honestly face the fact that it is a technology. . . .

VII

One of the most generalizable effects of writing is separation. Separation is also one of the most telling effects of writing and hence can serve here to give some final form to this discussion. Writing is diaeretic. It divides and distances, and it divides and distances all sorts of things in all sorts of ways. . . .

Many of the phenomena here associated with separation or division or distancing could also be discussed under various other headings, some of them less abstract headings than separation or division, but few other headings would be so handily inclusive. My observations here on separation or distancing will be condensed and, if only for that reason, should serve, I hope, to open discussion and to suggest further study. Here, then, are some of the ways in which writing separates or divides. Writing ties together so many things in so many interrelations that some of the itemizations here inevitably overlap.

1. Writing separates the known from the knower. It promotes "objectivity." Any writing system does this, but the alphabet does so most of all, since it most thoroughly dissolves all sounds into spatial equivalents. Havelock (1976) has shown how the ancient Greeks' invention of the first fully vocalic alphabet, the

most radical of all writing systems, gave them their intellectual ascendancy by providing access to the thorough intellectual "objectivity" that led to modern science, and modern forms of thought generally, although the science of the ancient Greeks remained far more rhetorically structured and far more embedded in the human lifeworld than our science is today. . . .

Enhanced separation of the known from the knower is probably the most fundamental value of writing, from its beginnings to the present. Between knower and known writing interposes a visible and tangible object, the text. The objectivity of the text helps impose objectivity on what the text refers to (see Olson). Eventually writing will create a state of mind in which knowledge itself can be thought of as an object, distinct from the knower. This state of mind, however, is most fully realized only when print intensifies the object-like character of the text.

However, whatever its intimate effects on knowledge, the physical text is not itself knowledge, for knowledge, verbalized or other, can exist only in a knowing subject. In place of knowledge once possessed and formulated verbally by a living person, texts substitute coded marks outside any knower which a knowing subject possessed of the code can use to generate knowledge in himself or herself. Knowledge itself is not object-like: it cannot be transferred from one person to another physically even in oral communication, face-to-face, or *a fortiori* in writing. I can only perform actions—produce words—which enable you to generate the knowledge in yourself. The concept of "medium" or "media" applied to human communication uses an analogy which is useful but nevertheless so gross, and so inconspicuously gross, that it regularly falsifies what human communication is. I myself try to avoid the term now, though I have used it in earlier books and articles. "Medium" applies properly to manual or machine transferral of pattern, not to human communication. Since knowledge cannot be physically transferred verbally from one human person to another but must always be created by the hearer or reader within his or her own consciousness, interpretation is always in play when one listens or when one reads.

2. Whereas oral cultures tend to merge interpretation of data with the data themselves, writing separates interpretation from data. Asked to repeat exactly what they have just said, persons from a primary oral culture will often give an interpretation of what they originally said, insisting and clearly believing that the interpretation is exactly what they said in the first place (Olson, citing Ruth Finnegan). They have difficulty in grasping what literates mean by word-for-word repetition. The text provides a new scenario. The text is a visual given, a datum, separate from any utterer or hearer or reader. What one says (or writes) about the text is something else, distinct from the text-object and what it as such represents. This is not to deny that any understanding of a text always involves interpretation: for what the object-like text represents is not an object, but words. It is simply to state that the status of interpretation becomes different with writing.

3. Writing distances the word from sound, reducing oral-aural evanescence to the seeming quiescence of visual space. But this distancing is not total or permanent, for every reading of a text consists of restoring it, directly or indirectly, to sound, vocally or in the imagination.

4. Whereas in oral communication the source (speaker) and the recipient (hearer) are necessarily present to one another, writing distances the source of the

communication (the writer) from the recipient (the reader), both in time and in space. It is as easy to read a book by a person long dead or by a person thousands of miles away as it is to read one by a friend sitting at your elbow. Oral communication provides no comparable condition until the invention of sound recordings, which, however, depend on writing for their existence and, despite their aura of immediacy, distance speaker and hearer even more than writing does, interposing between the two mechanisms far more complicated than those of writing and print, and abolishing all direct relationship to lived time.

5. Writing distances the word from the plenum of existence. In their original, spoken condition, words are always part of a context that is predominantly non-verbal, a modification of a field of personal relationships and object-relationships. The immediate context of spoken words is never simply other words. The immediate context of textualized words is simply other words.

6. By distancing the word from the plenum of existence, from a holistic context made up mostly of non-verbal elements, writing enforces verbal precision of a sort unavailable in oral cultures. Context always controls the meaning of a word. In oral utterance, the context always includes much more than words, so that less of the total, precise meaning conveyed by words need rest in the words themselves. Thus in a primary oral culture, where all verbalization is oral, utterances are always given their greater precision by nonverbal elements, which form the infrastructure of the oral utterance, giving it its fuller, situational meaning. Not so much depends on the words themselves. In a text, the entire immediate context of every word is only other words, and words alone must help other words convey whatever meaning is called for. Hence texts force words to bear more weight, to develop more and more precisely "defined" — that is, "bordered" or contrastive meanings. Eventually, words used in texts come to be defined in dictionaries, which present the meaning of words in terms of other words. Oral cultures present the meaning of words by using them (Goody 1968). Oral people are generally altogether uninterested in defining words by other words (Ong 1982: 53–4, citing Luria 1976). What the word "tree" means is determined by putting the word in non-verbal context, as in pointing to a tree, not by saying in words what "tree" means.

7. Writing separates past from present. Primary oral cultures tend to use the past to explain the present, dropping from memory what does not serve this purpose in one way or another, thus homogenizing the past with the present, or approximating past to present. To use Jack Goody's term, their relationship with the past is homeostatic. By freezing verbalization, writing creates a distanced past which is full of puzzles because it can refer to states of affairs no longer effectively imaginable or can use words no longer immediately meaningful to any living persons.

8. Writing separates "administration" — civil, religious, commercial, and other — from other types of social activities. "Administration" is unknown in oral cultures, where leaders interact non-abstractly with the rest of society in tight-knit, often rhetorically controlled, configurations. "Administration" can have two senses: (1) a distinct group able to oversee and manage, in a more or less abstractly structured fashion, complex social wholes or activities or (2) the work such a group actually does. In both senses administration comes into being with the development of written documentation and scribal expertise. At first, in more marginally textualized society, administrators relied on scribes for exploitation of the possibilities of textuality but, with wider and deeper textualization, eventu-

ally found it advantageous to be able to read and write themselves (Stock 1983; Cressy, Laqueur, and Stevens in Resnick 1983).

9. Writing makes it possible to separate logic (thought structure of discourse) from rhetoric (socially effective discourse). The invention of logic, it seems, is tied not to any kind of writing system but to the completely vocalic phonetic alphabet and the intensive analytic activity which such an alphabet demands of its inventors and subsequently encourages in all sorts of noetic fields. All formal logic in the world, down to that used for computers, stems from the ancient Greeks (the later development of some formal logic in India, which may have been an independent development, came only after Greek logic had effectively taken over and of course after India had use of the alphabet).

10. Writing separates academic learning (*mathesis* and *mathēma*) from wisdom (*sophia*), making possible the conveyance of highly organized abstract thought structures independently of their actual use or of their integration into the human lifeworld. Wisdom regards not abstractions but holistic situations and operations in the density of the real human lifeworld. Learning by apprenticeship, with which academic learning contrasts, had kept even specialized knowledge integrated into this lifeworld and had helped to keep wisdom as the noetic ideal as well as the practical ideal. When cultures first assimilate writing, however, they tend to put wise sayings into texts. New technologies of the word always reinforce earlier conditions of utterances but at the same time transform them. But wise sayings in texts are denatured: they do not function the way they function in oral cultures. Oral cultures do not recite lists of decontextualized wise sayings, such as are found in biblical wisdom literature, but, in fact, quite commonly and even typically use such sayings separately as parrying devices in real-life agonistic oral exchange. Once wise sayings are written down, oral culture is weakening, though its demise may take many hundreds of years. Today Ibo entrepreneurs in Onitsha in Nigeria are printing and selling collections of proverbs to marginally oral people who are unaware of the fuller implications of literacy, much as Erasmus was doing for residually oral Europeans almost five hundred years ago.

11. Writing can divide society by giving rise to a special kind of diglossia, splitting verbal communication between a "high" language completely controlled by writing even though also widely spoken (Learned Latin in the European Middle Ages) and a "low" language or "low" languages controlled by speech to the exclusion of writing. Besides Learned Latin, the other high languages created and sustained by writing to produce similar diglossia have been Sanskrit, Classical Arabic, Rabbinical Hebrew (all alphabetically written) and Classical Chinese (written, but not in the alphabet). In all these cases the high language has been not only a written language but also a sex-linked language, no longer a mother tongue, used only by males (with exceptions so few as to be negligible). As social structures changed with the advance of technologies and women worked their way out of the massive responsibilities of pre-technological household management (which often included highly skilled crafts and even major manufacturing activities) and into academic education, the diglossia was reduced and gradually eliminated. As women entered academia, some did learn the high languages, but only when these were on the wane and no longer used as languages of instruction or of normal academic discourse. Of the tens of thousands of books written in Learned Latin through the eighteenth century and beyond, virtually none are by women. Instead, women helped put the low, vernacular languages in competition with the high language. Eventually one or an-

other dialect of various low languages was taken over by writing and replaced the original high language. This has happened to all the high languages just mentioned—which are in fact the major high languages of the world—with the partial exception of Classical Arabic in the still linguistically fluid Arabic-speaking world.

12. Writing differentiates grapholects, those “low”-language dialects which are taken over by writing and erected into national languages, from other dialects, making the grapholect a dialect of a completely different order of magnitude and effectiveness from the dialects that remain oral. The grapholect which we know as standard English has an active or recuperable vocabulary of perhaps a million and a half words, as compared with the relatively few thousand words available in dialects without written resources (see, for example, Laughlin 1975 on Tzotzil). For this exponential development, the lexicon of a grapholect requires print as well as writing, for dictionaries are print products. (Imagine reproducing multiple copies of *Webster’s Third International Dictionary* or of the *Oxford English Dictionary* by hand).

13. Writing divides or distances more evidently and effectively as its form becomes more abstract, which is to say more removed from the sound world into the space world of sight. “Abstract” in fact means removed, distanced, from *abstrahere*, to draw out or to draw away from. The alphabet in its various forms is the most abstract writing form. We have already noted that Tzeng and Wang (1983) have reported—though more work remains to be done here—how writing and reading Chinese characters involve the right cerebral hemisphere of the brain more than do writing and reading the alphabet, which involve the left hemisphere more. The right hemisphere normally implements totalizing, intuitive, less abstractive or less analytic processes; the left hemisphere is more analytic—and more involved in the alphabet. As has been seen, formal logic, modern science, and ultimately the computer have their historical roots in the fully vocalic alphabet, the most analytic of the writing systems, dissolving all sound as such into spatial equivalents, in principle, if never completely in fact. (The alphabet, it should be recalled, was invented only once: all alphabets in the world—Greek, Roman, Glagolitic, Cyrillic, Arabic, Sanskrit, Korean, etc.—derive in one way or another, directly or indirectly, from the ancient Semitic alphabet, which, however, in contrast to Greek, did not and still does not have letters for vowels.)

14. Perhaps the most momentous of all its diaretic effects in the deep history of thought is the effect of writing when it separates being from time. This separation has been detailed in a recent major monograph by Eric Havelock (1983), “The Linguistic Task of the Presocratics, Part One: Ionian Science in Search of an Abstract Vocabulary.” We know that all philosophy depends on writing because all elaborate, linear, so-called “logical” explanation depends on writing. Oral persons can be wise, as wise as anyone, and they can of course give some explanation for things. But the elaborate, intricate, seemingly endless but exact cause-effect sequences required by what we call philosophy and by extended scientific thinking are unknown among oral peoples, including the early Greeks before their development of the first vocalic alphabet. Havelock’s newly seminal work, however, goes beyond showing that elaborate explanatory thinking depends upon writing and the revisionary, back-tracking operations made possible by such a time-obviating mechanism. His new monograph shows more precisely that the development of the content, the subject-matter of metaphysics itself, with

its concentration on being as being, depended internally upon the elaboration of writing. Havelock’s work is based upon extraordinarily careful analysis of presocratic texts and upon cautious reconstruction of antecedents of the texts. Here I can only attempt to suggest in a quite sweeping but, I believe, accurate way what Havelock’s point comes to as related to the line of thought I have been pursuing.

Oral speech and thought narrativizes experience and the environment, whereas philosophy, which comes into being slowly after writing, is radically anti-narrative. Plato did not want story-telling poets in his republic. The philosophical enterprise required the coinage of a large number of abstract nouns. Havelock (1983: 20) cites some which around the end of the fifth century B.C. had become common tender for dealing with the cosmic environment: matter (*hylé*), dimension (*megethios*), space (*chióra*), body (*kenon*), void (*kenón*), motion (*kinésis* or *phora*), change (*alloiósis*, *metabolé*), rest (*stasis*). Besides such nouns, “the conceptual task also required the elimination of verbs of doing and acting and happening . . . in favor of a syntax which states permanent relationships between conceptual terms systematically.” (p. 14). In this new noetic economy, Heraclitus suggests (p. 25) that “is” (*esti*) should replace the use of all other verbs and even of the past and future of the verb “to be” (*einai*). Parmenides brings this reorganization of thought to completion: the imagistic, narrativistic Homeric references to the world are replaced “by the thought world of conceptual science” (pp. 28–9). In brief, the Homeric verb *kinéin*, which refers not so much to our concept of “motion” as to the earlier concept of “commotion” (the disturbance inherent in any kind of real action, not a disembodied abstraction such as *kinésis*), yields to *einai*, “to be,” which is not commotion at all (p. 38). Becoming becomes being. The mobile oral world has been supplanted by the quiescent text, and Plato’s immutable ideas have been provided with their action-free, seemingly timeless chirographic launching pad.

One is struck by similarities between the ancient Greek situation reported by Havelock and that which Luria found among illiterates as compared to literates among the folk he studied in the southwestern Soviet Union (reported in Ong 1982: 49–57). Asked “What is a tree? Define a tree,” the illiterate peasant replies, “Why should I? Everyone knows what a tree is.” To learn what a thing is, one does not use definitions. To grasp an object’s essence, one does not talk about the object, but, as has earlier been noted here, one *points* to the object physically or metaphorically. One deals with existing beings as such indexically, not verbally. Words in an oral culture are used typically not to set up static definitions but to discourse actively on the way a thing acts or behaves or operates in the human lifeworld. Words in oral cultures paradigmatically go with action and with things that act. As writing is interiorized, verbalization migrates from a predominantly action frame to a predominantly “being” frame: the verb *to be* becomes more urgent than it had ever been in an oral culture. The quest is on to find Aristotle’s *ti ên einai*, that is, “what it is to be” or “what being is.” . . .

VIII

Print and electronics continue with new intensification and radical transformations the diaretic programme initially set in motion by writing. They separate knower from known more spectacularly than writing does. Between

the knower and the known print interposes elaborate mechanical contrivances and operations of a different order of complexity than writing. The computer achieves the ultimate (thus far) in separation of the knower and the known (the subject of discourse): between the two it interposes limitlessly complex structures of mechanically articulated "bits" of information, each consisting of the ultimate in divisive patterning, the dichotomy or binary division, which translates into "yes-no" or "is-isn't." Putting the simplest statement of, say, a dozen words on to a page in a word processor involves operations inside the machine, totally remote from the human lifeworld, which are thousands, perhaps millions, of times more complex than writing or even letterpress printing, though unimaginably less complex than the activities of the human cerebrum. . . .

In the case of the computer we are clearly dealing with physical separation of knower and known. But in the case of writing as well, it is the physical separation, the interposition of the text, created by a technology, that makes possible the psychological separation between the self and the object of its knowledge. Moreover, as is evident in computer programming, new tracks for thought are imposed by the new technologies. And the software of the computer vigorously interposes even another consciousness or other consciousnesses—the programmer or programmers—between the knower and the known.

XI

As the digital computer can be to a degree, so writing is self-corrective to a degree. It has in itself the cure for the chirographic squint commonly afflicting cultures that have deeply interiorized writing. Because it so radically separates knower from known, writing can distance us from writing itself. Writing has enabled us to identify the orality that was antecedent to it and to see how radically it differs from that orality. Writing has the power to liberate us more and more from the chirographic bias and confusion it creates, though complete liberation remains impossible. For all states of the word—oral, chirographic, typographic, electronic—impose their own confusions, which cannot be radically eliminated but only controlled by reflection.

In the noetic world, separation ultimately brings reconstituted unity. This is true of naming at the oral stage. Calling an object a "tree," as has been seen, puts the object "out there," as different from the knower. In place of empathetic identification, the name sets up a relatively clear subject-object relationship. But this very relationship makes for a new kind of intimacy. Now, in certain ways, the knower can deal with the tree better on its own terms, rather than on terms unreflectively imposed by the knower. He or she can better appreciate what the tree is on its own as distinct from the knower—although of course distinctness from the knower is never totally realized. With the use of names, the inarticulate identification of the infant with the surrounding world is replaced by verbally implemented distancing. The new distancing submerges the original empathetic identification in a flood of new

awarenesses but does not entirely do away with it. And indeed, as distancing increases beyond those ranges made available by oral naming through the vaster distances opened by writing and print—and now electronics—the original empathetic identification becomes more and more recuperable at the level of conscious reflectivity. That is to say, with writing and its sequels, empathetic identification can be attended to as we are attending to it now, and as oral folk could not attend to it. Of course, the original innocence of the pristine empathetic identification can never be repossessed directly. Civilization entails such discomforts, for that is what they are. (Freud's title should be translated "Civilization and its Discomforts" [*Unbehagen*], not "Discontents.") Human knowledge demands both proximity and distance, and these two are related to one another dialectically. Proximity perceptions feed distancing analyses, and vice versa, creating a more manageable intimacy.

As a time-obviating, context-free mechanism, writing separates the known from the knower more definitely than the original orally grounded manoeuvre of naming does, but it also unites the knower and the known more consciously and more articulately. Writing is a consciousness-raising and humanizing technology.