thought, however complex. Heavy patterning and communal fixed
formulas in oral cultures serve some of the purposes of writing in
chirographic cultures, but in doing so they of course determine the
kind of thinking that can be done, the way experience is intellectually
organized. In an oral culture, experience is intellectualized mnemonically.
This is one reason why, for a St Augustine of Hippo (AD 354–
430), as for other savants living in a culture that knew some literacy but
still carried an overwhelmingly massive oral residue, memory bulks so
large when he treats of the powers of the mind.

Of course, all expression and all thought is to a degree formulaic in
the sense that every word and every concept conveyed in a word is a
kind of formula, a fixed way of processing the data of experience,
determining the way experience and reflection are intellectually organ-
ized, and acting as a mnemonic device of sorts. Putting experience into
any words (which means transforming it at least a little bit – not the
same as falsifying it) can implement its recall. The formulas character-
izing orality are more elaborate, however, than are individual words,
though some may be relatively simple: the Bewolf-poet’s 'whale-road'
is a formula (metaphorical) for the sea in a sense in which the term
'sea' is not.

FURTHER CHARACTERISTICS OF ORALLY BASED
THOUGHT AND EXPRESSION

Awareness of the mnemonic base of the thought and expression in
primary oral cultures opens the way to understanding some further
characteristics of orally based thought and expression in addition to
their formulaic styling. The characteristics treated here are some of
those which set off orally based thought and expression from chiro-
graphically and typographically based thought and expression, the
characteristics, that is, which are most likely to strike those reared in
writing and print cultures as surprising. This inventory of character-
istics is not presented as exclusive or conclusive but as suggestive,
for much more work and reflection are needed to deepen understand-
ing of orally based thought (and thereby understanding of chiro-
graphically based, typographically based, and electronically based
thought).

In a primary oral culture, thought and expression tend to be of the
following sorts.

(i) Additive rather than subordinative

A familiar instance of additive oral style is the creation narrative in
Genesis 1:1–5, which is indeed a text but one preserving recognizable
oral patterning. The Douay version (1610), produced in a culture with
a still massive oral residue, keeps close in many ways to the additive
Hebrew original (as mediated through the Latin from which the Douay
version was made):

In the beginning God created heaven and earth. And the earth was
void and empty, and darkness was upon the face of the deep; and
the spirit of God moved over the waters. And God said: Be light made.
And light was made. And God saw that it was good; and he
divided the light from the darkness. And he called the light Day, and
the darkness Night; and there was evening and morning one day.

Nine introductory 'ands'. Adjusted to sensibilities shaped more by
writing and print, the New American Bible (1970) translates:

In the beginning, when God created the heavens and the earth, the
earth was a formless wasteland, and darkness covered the abyss,
while a mighty wind swept over the waters. Then God said, 'Let there
be light', and there was light. God saw how good the light was. God
then separated the light from the darkness. God called the light 'day'
and the darkness he called 'night'. Thus evening came, and morning
followed – the first day.

Two introductory 'ands', each submerged in a compound sentence.
The Douay renders the Hebrew we or wu ('and') simply as 'and'. The
New American renders it 'and', 'when', 'then', 'thus', or 'while', to
provide a flow of narration with the analytic, reasoned subordination
that characterizes writing (Chafe 1982) and that appears more natural
in twentieth-century texts. Oral structures often look to pragmatics
(the convenience of the speaker – Sherzer, 1974, reports lengthy public
oral performances among the Cuna incomprehensible to their hearers). Chlorographic structures look more to syntactics (organization of the discourse itself), as Givón has suggested (1979). Written discourse develops more elaborate and fixed grammar than oral discourse does because to provide meaning it is more dependent simply upon linguistic structure, since it lacks the normal full existential contexts which surround oral discourse and help determine meaning in oral discourse somewhat independently of grammar.

It would be a mistake to think that the Douay is simply 'closer' to the original today than the New American is. It is closer in that it renders we or we always by the same word, but it strikes the present-day sensibility as remote, archaic, and even quaint. Peoples in oral cultures or cultures with high oral residue, including the culture that produced the Bible, do not savor this sort of expression as so archaic or quaint. It feels natural and normal to them somewhat as the New American version feels natural and normal to us.

Other instances of additive structure can be found across the world in primary oral narrative, of which we now have a massive supply on tape (see Foley, 1980b, for listing of some tapes).

(ii) Aggregative rather than analytic

This characteristic is closely tied to reliance on formulas to implement memory. The elements of orally based thought and expression tend to be not so much simple integers as clusters of integers, such as parallel terms or phrases or clauses, anithetical terms or phrases or clauses, epithets. Oral folk prefer, especially in formal discourse, not the soldier, but the brave soldier; not the princess, but the beautiful princess; not the oak, but the sturdy oak. Oral expression thus carries a load of epithets and other formulary baggage which high literacy rejects as cumbersome and tiresomely redundant because of its aggregative weight (Ong 1977, pp. 188–212).

The clichés in political denunciation in many low-technology developing cultures – enemy of the people, capitalist war-mongers – that strike high literates as mindless are residual formulary essentials of oral thought processes. One of the many indications of a high, if subsiding, oral residue in the culture of the Soviet Union is (or was a few years ago, when I encountered it) the insistence on speaking there always of 'the Glorious Revolution of October 26' – the episthetic formula here is obligatory stabilization, as were Homeric epic epithets formulas 'wise Nestor' or 'clever Odysseus', or as 'the glorious Fourth of July' used to be in the pockets of oral residue common even in the early twentieth-century United States. The former Soviet Union still announced each year the official epithets for various loci classic in Soviet history.

An oral culture may well ask in a riddle why oaks are sturdy, but it does so to assure you that they are, to keep the aggregate intact, not really to question or cast doubts on the attribution. (For examples directly from the oral culture of the Luba in Zaire, see Faik-Nzuji 1970.) Traditional expressions in oral cultures must not be dismantled: it has been hard work getting them together over the generations, and there is nowhere outside the mind to store them. So soldiers are brave and princesses beautiful and oaks sturdy forever. This is not to say that there may not be other epithets for soldiers or princesses or oaks, even contrary epithets, but these are standard, too; the braggart soldier, the unhappy princess, can also be part of the equipment. What obtains for epithets obtains for other formulas. Once a formulary expression has crystallized, it had best be kept intact. Without a writing system, breaking up thought – that is, analysis – is a high-risk procedure. As Lévi-Strauss has well put it in a summary statement 'the savage [i.e. oral] mind totalizes' (1966, p. 245).

(iii) Redundant or 'copious'

Thought requires some sort of continuity. Writing establishes in the text a 'line' of continuity outside the mind. If distraction confuses or obliterates from the mind the context out of which emerges the material I am now reading, the context can be retrieved by glancing back over the text selectively. Backlooping can be entirely occasional, purely ad hoc. The mind concentrates its own energies on moving ahead because what it backloops into lies quiescent outside itself, always available piecemeal on the inscribed page. In oral discourse, the situation is different. There is nothing to backloop into outside the mind, for the oral utterance has vanished as soon as it is uttered. Hence the mind
must move ahead more slowly, keeping close to the focus of attention much of what it has already dealt with. Redundancy, repetition of the just-said, keeps both speaker and hearer surely on the track.

Since redundancy characterizes oral thought and speech, it is in a profound sense more natural to thought and speech than is sparse linearity. Sparsely linear or analytic thought and speech are artificial creations, structured by the technology of writing. Eliminating redundancy on a significant scale demands a time-obliterating technology, writing, which imposes some kind of strain on the psyche in preventing expression from falling into its more natural patterns. The psyche can manage the strain in part because handwriting is physically such a slow process—typically about one-tenth of the speed of oral speech (Chafe 1982). With writing, the mind is forced into a slowed-down pattern that affords the opportunity to interfere with and reorganize its more normal, redundant processes.

Redundancy is also favored by the physical conditions of oral expression before a large audience, where redundancy is in fact more marked than in most face-to-face conversation. Not everyone in a large audience understands every word a speaker utters, if only because of acoustical problems. It is advantageous for the speaker to say the same thing, or equivalently the same thing two or three times. If you miss the ‘not only . . . you can supply it by inference from the ‘but also . . . ’. Until electronic amplification reduced acoustical problems to a minimum, public speakers as late as, for example, William Jennings Bryan (1860–1925) continued the old redundancy in their public addresses and by force of habit let them spill over into their writing. In some kinds of acoustic surrogates for oral verbal communication, redundancy reaches fantastic dimensions, as in African drum talk. It takes on the average around eight times as many words to say something on the drums as in the spoken language (Ong 1977, p. 101).

The public speaker’s need to keep going while he is running through his mind what to say next also encourages redundancy. In oral delivery, though a pause may be effective, hesitation is always disabling. Hence it is better to repeat something, artfully if possible, rather than simply to stop speaking while fishing for the next idea. Oral cultures encourage fluency, fulsome, volubility. Rhetorians were to call this copia. They continued to encourage it, by a kind of oversight, when they had modulated rhetoric from an art of public speaking to an art of writing. Early written texts, through the Middle Ages and the Renaissance, are often bloated with ‘amplification’, annoyingly redundant by modern standards. Concern with opus remains intense in western culture so long as the culture sustains massive oral residue—which is roughly until the age of Romanticism or even beyond. Thomas Babington Macaulay (1800–59) is one of the many fulsome early Victorians whose pleonastic written compositions still read much as an exuberant, orally composed oration would sound, as do also, very often, the writings of Winston Churchill (1874–1965).

(iv) Conservative or traditionalist

Since in a primary oral culture conceptualized knowledge that is not repeated aloud soon vanishes, oral societies must invest great energy in saying over and over again what has been learned arduously over the ages. This need establishes a highly traditionalist or conservative set of mind that with good reason inhibits intellectual experimentation. Knowledge is hard to come by and precious, and society regards highly those wise old men and women who specialize in conserving it, who know and can tell the stories of the days of old. By storing knowledge outside the mind, writing and, even more, print downgrade the figures of the wise old man and the wise old woman, repeaters of the past, in favor of younger discoverers of something new.

Writing is of course conservative in its own ways. Shortly after it first appeared, it served to freeze legal codes in early Sumeria (Oppenheimer 1964, p. 232). But by taking conservative functions on itself, the text frees the mind of conservative tasks, that is, of its memory work, and thus enables the mind to turn itself to new speculation (Havelock 1963, pp. 254–305). Indeed, the residual orality of a given chirographic culture can be calculated to a degree from the mnemonic load it leaves on the mind, that is, from the amount of memorization the culture’s educational procedures require (Goody 1968a, pp. 13–14).

Of course oral cultures do not lack originality of their own kind. Narrative originality lodges not in making up new stories but in managing a particular interaction with this audience at this time— at every telling the story has to be introduced uniquely into a unique situation,
for in oral cultures an audience must be brought to respond, often vigorously. But narrators also introduce new elements into old stories (Goody 1977, pp.29-30). In oral tradition, there will be as many minor variants of a myth as there are repetitions of it, and the number of repetitions can be increased indefinitely. Praise poems of chiefs invite entrepreneurship, as the old formulas and themes have to be made to interact with new and often complicated political situations. But the formulas and themes are reshuffled rather than supplanted with new materials.

Religious practices, and with them cosmologies and deep-seated beliefs, also change in oral cultures. Disappointed with the practical results of the cult at a given shrine when there are infrequent, vigorous leaders – the ‘intellectuals’ in oral society, Goody styles them (1977, p. 30) – invent new shrines and with these new conceptual universes. Yet these new universes and the other changes that show a certain originality come into being in an essentially formalic and thematic poetic economy. They are seldom if ever explicitly touted for their novelty but are presented as fitting the traditions of the ancestors.

(v) Close to the human lifeworld
In the absence of elaborate analytic categories that depend on writing to structure knowledge at a distance from lived experience, oral cultures must conceptualize and verbalize all their knowledge with more or less close reference to the human lifeworld, assimilating the alien, objective world to the more immediate, familiar interaction of human beings. A chirographic (writing) culture and even more a typographic (print) culture can distance and in a way denature even the human, itemizing such things as the names of leaders and political divisions in an abstract, neutral list entirely devoid of a human action context. An oral culture has no vehicle so neutral as a list. In the latter half of the second book, the Iliad presents the famous catalogue of the ships – over four hundred lines – which compiles the names of Grecian leaders and the regions they ruled, but in a total context of human action: the names of persons and places occur as involved in doings (Havelock 1963, pp. 176-80). The normal and very likely the only place in Homeric Greece where this sort of political information could be found in verbalized form was in a narrative or a genealogy, which is not a neutral list but an account describing personal relations (cf. Goody and Watt 1968, p. 32). Oral cultures know few statistics or facts divorced from human or quasi-human activity.

An oral culture likewise has nothing corresponding to how-to-do-it manuals for the trades (such manuals in fact are extremely rare and always crude even in chirographic cultures, coming into effective existence only after print has been considerably interiorized – Ong 1967b, pp. 28-9, 234, 258). Trades were learned by apprenticeship (as they still largely are even in high-technology cultures), which means from observation and practice with only minimal verbalized explanation. The maximum verbal articulation of such things as navigation procedures, which were crucial to Homeric culture, would have been encountered not in any abstract manual-style description at all but in such things as the following passage from the Iliad i. 141-4, where the abstract description is embedded in a narrative presenting specific commands for human action or accounts of specific acts:

- As for now a black ship let us draw to the great salt sea
  And therein oarsmen let us advisedly gather and thereupon a
  hecatomb
  Let us set and upon the deck Chryseis of fair cheeks
  Let us embark. And one man as captain, a man of counsel, there must be.

(quoted in Havelock 1963, p. 81; see also ibid., pp. 174–5). Primary oral culture is little concerned with preserving knowledge of skills as an abstract, self-subsisting corpus.

(vi) Agonistically toned
Many, if not all, oral or residually oral cultures strike literates as extraordinarily agonistic in their verbal performance and indeed in their lifestyle. Writing fosters abstractions that disengage knowledge from the arena where human beings struggle with one another. It separates the knower from the known. By keeping knowledge embedded in the human lifeworld, orality situates knowledge within a context of
struggle. Proverbs and riddles are not used simply to store knowledge but to engage others in verbal and intellectual combat: utterance of one proverb or riddle challenges bearers to top it with a more apposite or a contradictory one (Abrahams 1968; 1972). Bragging about one’s own prowess and/or verbal tongue-lashings of an opponent figure regularly in encounters between characters in narrative: in the Iliad, in Beowulf, throughout medieval European romance, in The Mabinog Epic and countless other African stories (Okpewho 1979; Obiechina 1975), in the Bible, as between David and Goliath (1 Samuel 17:43–7). Standard in oral societies across the world, reciprocal name-calling has been fitted with a specific name in linguistics: flying (or flting). Growing up in a still dominantly oral culture, certain young black males in the United States, the Caribbean, and elsewhere, engage in what is known variously as the ‘dozens’ or ‘joning’ or ‘sounding’ or by other names, in which one opponent tries to outdo the other in vilifying the other’s mother. The dozens is not a real fight but an art form, as are the other stylized verbal tongue lashings in other cultures.

Not only in the use to which knowledge is put, but also in the celebration of physical behavior, oral cultures reveal themselves as agonistically programmed. Enthusiastic description of physical violence often marks oral narrative. In the Iliad, for example, Books viii and x would at least rival the most sensational television and cinema shows today in outright violence and far surpass them in exquisitely gory detail, which can be less repulsive when described verbally than when presented visually. Portrayal of gross physical violence, central to much oral epic and other oral genres and residual through much early literacy, gradually wanes or becomes peripheral in later literary narrative. It survives in medieval ballads but is already being spoofed by Thomas Nashe in The Unfortunate Tragedy (1594). As literary narrative moves toward the serious novel, it eventually pulls the focus of action more and more to interior crises and away from purely exterior crises.

The common and persistent physical hardships of life in many early societies of course explain in part the high evidence of violence in early verbal art forms. Ignorance of physical causes of disease and disaster can also foster personal tensions. Since the disease or disaster is caused by something, in lieu of physical causes the personal malevolence of another human being — a magician, a witch — can be assumed and personal hostilities thereby increased. But violence in oral art forms is also connected with the structure of orality itself. When all verbal communication must be by direct word of mouth, involved in the give-and-take dynamics of sound, interpersonal relations are kept high — both attractions and, even more, antagonisms.

The other side of agonistic name-calling or vituperation in oral or residually oral cultures is the fulsome expression of praise which is found everywhere in connection with orality. It is well known in the much-studied present-day African oral praise poems (Finnegan 1970; Opland 1975) as all through the residually oral western rhetorical tradition stretching from classical antiquity through the eighteenth century. ‘I come to bury Caesar, not to praise him’, Marcus Antonius cries in his funeral oration in Shakespeare’s Julius Caesar (v. ii. 79), and then proceeds to praise Caesar in rhetorical patterns of encomium which were drilled into the heads of all Renaissance schoolboys and which Erasmus used so wittily in his Praise of Folly. The fulsome praise in the old, residually oral, rhetoric tradition strikes persons from a high-literacy culture as insincere, flatulent, and comically pretentious. But praise goes with the highly polarized, agonistic, oral world of good and evil, virtue and vice, villains and heroes.

The agonistic dynamics of oral thought processes and expression have been central to the development of western culture, where they were institutionalized by the ‘art’ of rhetoric, and by the related dialectic of Socrates and Plato, which furnished agonistic oral verbalization with a scientific base worked out with the help of writing. More will be said about this later.

(vii) Empathetic and participatory rather than objectively distanced

For an oral culture learning or knowing means achieving close, empathetic, communal identification with the known (Havelock 1963, pp. 145–6), ‘getting with it’. Writing separates the knower from the known and thus sets up conditions for ‘objectivity’, in the sense of personal disengagement or distancing. The ‘objectivity’ which Homer and other oral performers do have is that enforced by formulaic expression: the individual’s reaction is not expressed as simply individual or ‘subjective’ but rather as encased in the communal reaction, the
communal 'soul'. Under the influence of writing, despite his protest against it, Plato had excluded the poets from his Republic, for studying them was essentially learning to react with 'soul', to feel oneself identified with Achilles or Odysseus (Havelock 1963, pp. 197–233). Treating another primary oral setting over two thousand years later, the editors of The Mwindo Epic (1971, p. 37) call attention to a similar strong identification of Candi Rureke, the performer of the epic, and through him of his listeners, with the hero Mwindo, an identification which actually affects the grammar of the narration, so that on occasion the narrator slips into the first person when describing the actions of the hero. So bound together are narrator, audience, and character that Rureke has the epic character Mwindo himself address the scribes taking down Rureke’s performance: ‘Scribe, march!’ or ‘O scribe you, you see that I am already going.’ In the sensibility of the narrator and his audience the hero of the oral performance assimilates into the oral world even the transcribers who are de-oralizing it into text.

(viii) Homeostatic

By contrast with literate societies, oral societies can be characterized as homeostatic (Goody and Watt 1968, pp. 31–4). That is to say, oral societies live very much in a present which keeps itself in equilibrium or homeostasis by sloughing off memories which no longer have present relevance.

The forces governing homeostasis can be sensed by reflection on the condition of words in a primary oral setting. Print cultures have invented dictionaries in which the various meanings of a word as it occurs in datable texts can be recorded in formal definitions. Words thus are known to have layers of meaning, many of them quite irrelevant to ordinary present meanings. Dictionaries advertise semantic discrepancies.

Oral cultures of course have no dictionaries and few semantic discrepancies. The meaning of each word is controlled by what Goody and Watt (1968, p. 29) call ‘direct semantic ratification’, that is, by the real-life situations in which the word is used here and now. The oral mind is uninterested in definitions (Laura 1976, pp. 48–99). Words acquire their meanings only from their always consistent actual habitat, which is not, as in a dictionary, simply other words, but includes also gestures, vocal inflections, facial expression, and the entire human, existential setting in which the real, spoken word always occurs. Word meanings come continuously out of the present, though past meanings of course have shaped the present meaning in many and varied ways, no longer recognized.

It is true that oral art forms, such as epic, retain some words in archaic forms and senses. But they retain such words, too, through current use – not the current use of ordinary village discourse but the current use of ordinary epic poets, who preserve archaic forms in their special vocabulary. These performances are part of ordinary social life and so the archaic forms are current, though limited to poetic activity. Memory of the old meaning of old terms thus has some durability, but not unlimited durability.

When generations pass and the object or institution referred to by the archaic word is no longer part of present, lived experience, though the word has been retained, its meaning is commonly altered or simply vanishes. African talking drums, as used for example among the Lokele in eastern Zaire, speak in elaborate formulas that preserve certain archaic words which the Lokele drummers can vocalize but whose meaning they no longer know (Carrington 1974, pp. 41–2; Ong 1977, pp. 94–5) Whatever these words referred to has dropped out of Lokele daily experience, and the term that remains has become empty. Rhymes and games transmitted orally from one generation of small children to the next even in high-technology culture have similar words which have lost their original referential meanings and are in effect nonsense syllables. Many instances of such survival of empty terms can be found in Opie and Opie (1952), who, as literates, of course manage to recover and report the original meanings of the terms lost to their present oral users.

Goody and Watt (1968, pp. 31–3) cite Laura Bohannan, Emrys Peters, and Godfrey and Monica Wilson for striking instances of the homeostasis of oral cultures in the handing on of genealogies. Some decades ago among the Tiv people of Nigeria the genealogies actually used orally in settling court disputes have been found to diverge considerably from the genealogies carefully recorded in writing by the British forty years earlier (because of their importance then, too, in
court disputes). The later Tiv have maintained that they were using the same genealogies as forty years earlier and that the earlier written record was wrong. What had happened was that the later genealogies had been adjusted to the changed social relations among the Tiv: they were the same in that they functioned in the same way to regulate the real world. The integrity of the past was subordinate to the integrity of the present.

Goody and Watt (1968, p. 33) report an even more strikingly detailed case of ‘structural amnesia’ among the Gonja in Ghana. Written records made by the British at the turn of the twentieth century show that Gonja oral tradition then presented Ndwura Jakpa, the founder of the state of Gonja, as having had seven sons, each of whom was ruler of one of the seven territorial divisions of the state. By the time sixty years later when the myths of state were again recorded, two of the seven divisions had disappeared, one by assimilation to another division and the other by reason of a boundary shift. In these later myths, Ndwura Jakpa had five sons, and no mention was made of the two extinct divisions. The Gonja were still in contact with their past, tenacious about this contact in their myths, but the part of the past with no immediately discernible relevance to the present had simply fallen away. The present imposed its own economy on past remembrances. Packard (1980, p. 157) has noted that Claude Lévi-Strauss, T. O. Beidelman, Edmund Leach and others have suggested that oral traditions reflect a society’s present cultural values rather than idle curiosity about the past. He finds this is true of the Bashu, as Harms (1980, p. 178) finds it also true of the Bobangi.

The implications here for oral genealogies need to be noted. A West African griot or other oral genealogist will recite those genealogies which his hearers listen to. If he knows genealogies which are no longer called for, they drop from his repertoire and eventually disappear. The genealogies of political winners are of course more likely to survive than those of losers. Henige (1980, p. 255), reporting on Ganda and Myoro kinglists, notes that the ‘oral mode . . . allows for inconvenient parts of the past to be forgotten’ because of ‘the exigencies of the continuing present’. Moreover, skilled oral narrators deliberately vary their traditional narratives because part of their skill is their ability to adjust to new audiences and new situations or simply to be coquettish. A West African griot employed by a princely family

(Okpewho 1979, pp. 25–6, 247, n. 33; p. 248, n. 36) will adjust his recitation to compliment his employers. Oral cultures encourage triumphalism, which in modern times has regularly tended somewhat to disappear as once-oral societies become more and more literate.

(ix) Situational rather than abstract

All conceptual thinking is to a degree abstract. So ‘concrete’ a term as ‘tree’ does not refer simply to a singular ‘concrete’ tree but is an abstraction, drawn out of, away from, individual, sensible actuality; it refers to a concept which is neither this tree nor that tree but can apply to any tree. Each individual object that we style a tree is truly ‘concrete’, simply itself, not ‘abstract’ at all, but the term we apply to the individual object is in itself abstract. Nevertheless, if all conceptual thinking is thus to some degree abstract, some uses of concepts are more abstract than other uses.

Oral cultures tend to use concepts in situational, operational frames of reference that are minimally abstract in the sense that they remain close to the living human lifeworld. There is a considerable literature bearing on this phenomenon. Havelock (1973) has shown that pre-Socratic Greeks thought of justice in operational rather than formally conceptualized ways and the late Anne Amory Parry (1973) made much the same point about the epithet anymōn applied by Homer to Aegisthus: the epithet means not ‘blameless’, a tidy abstraction with which literates have translated the term, but ‘beautiful-in-the-way-a-warrior-ready-to-fight-is-beautiful’.

No work on operational thinking is richer for the present purpose than A. R. Luria’s Cognitive Development: Its Cultural and Social Foundations (1976). At the suggestion of the distinguished Soviet psychologist Lev Vygotsky, Luria did extensive fieldwork with illiterate (that is, oral) persons and somewhat literate persons in the remotest areas of Uzbekistan (the homeland of Avicenna) and Kirghizia in the Soviet Union during the years 1931–2. Luria’s book was published in its original Russian edition only in 1974, forty-two years after his research was completed, and appeared in English translation two years later.

Luria’s work provides more adequate insights into the operation of
orally based thought than had the theories of Lucien Lévy-Bruhl (1923), who concluded that ‘primitive’ (in fact, orally based) thought was ‘prelogical’ and magical in the sense that it was based on belief systems rather than on practical actuality, or than had the proposals of Lévy-Bruhl’s opponents such as Franz Boas (not George Boas, as erroneously in Luria 1976, p. 8), who maintained that primitive peoples thought as we do but used a different set of categories.

In an elaborate framework of Marxist theory, Luria attends to some degree to matters other than the immediate consequences of literacy, such as ‘the unregulated individualistic economy centered on agriculture’ and ‘the beginnings of collectivization’ (1976, p. 14), and he does not systematically encode his findings expressly in terms of oral-literacy differences. But despite the elaborate Marxist scaffolding, Luria’s report clearly turns in fact on the differences between orality and literacy. He identifies the persons he interviews on a scale ranging from illiteracy to various levels of moderate literacy and his data fall clearly into the classes of orally based versus hierarchically based noetic processes. The contrasts that show between illiterates (by far the larger number of his subjects) and literates as such are marked and certainly significant (often Luria notes this fact explicitly) and they show what work reported on and cited by Carothers (1959) also shows: it takes only a moderate degree of literacy to make a tremendous difference in thought processes.

Luria and his associates gathered data in the course of long conversations with subjects in the relaxed atmosphere of a tea house, introducing the questions for the survey itself informally, as something like riddles, with which the subjects were familiar. Thus every effort was made to adapt the questions to the subjects in their own milieu. The subjects were not leaders in their societies, but there is every reason to suppose that they had a normal range of intelligence and were quite representative of the culture. Among Luria’s findings the following may be noted as of special interest here.

(1) Illiterate (oral) subjects identified geometrical figures by assigning them the names of objects, never abstractly as circles, squares, etc. A circle would be called a plate, sieve, bucket, watch, or moon; a square would be called a mirror, door, house, apricot drying-board. Luria’s subjects identified the designs as representations of real things they knew. They never dealt with abstract circles or squares but rather with concrete objects. Teachers’ school students on the other hand, moderately literate, identified geometrical figures by categorical geometric names: circles, squares, triangles, and so on (1976, pp. 32–9). They had been trained to give school-room answers, not real-life responses.

(2) Subjects were presented with drawings of four objects, three belonging to one category and the fourth to another, and were asked to group together those that were similar or could be placed in one group or designated by one word. One series consisted of drawings of the objects hammer, saw, log, hatchet. Illiterate subjects consistently thought of the group not in categorical terms (three tools, the log not a tool) but in terms of practical situations – ‘situational thinking’ – without referring to all of the classification ‘tool’ as applying to all but the log. If you are a workman with tools and see a log, you think of applying the saw to it, not of keeping the tool away from what it was made for – in some weird intellectual game. A 25-year-old illiterate peasant: ‘They’re all alike. The saw will saw the log and the hatchet will chop it into small pieces. If one of these has to go, I’ll throw out the hatchet. It doesn’t do as good a job as a saw’ (1976, p. 56). ‘Told that the hammer, saw, and hatchet are all tools, he discounts the categorical class and persists in situational thinking: ‘Yes, but even if we have tools, we still need wood – otherwise we can’t build anything’ (ibid.). Asked why another person had rejected one item in another series of four that he felt all belonged together, he replied, ‘Probably that kind of thinking runs in his blood’.

By contrast an 18-year-old who had studied at a village school for only two years, not only classified a similar series in categorical terms but insisted on the correctness of the classification under attack (1976, p. 74). A barely literate worker, aged 56, mingled situational grouping and categorical grouping, though the latter predominated. Given the series axe, hatchet, sickle to complete from the series saw, ear of grain, log, he completed the series with the saw – ‘They are all farming tools’ – but then reconsidered and added about the grain, ‘You could reap it with the sickle’ (1976, p. 72). Abstract classification was not entirely satisfying.

At points in his discussions Luria undertook to teach illiterate subjects some principles of abstract classification. But their grasp was never
firm, and when they actually returned to working out a problem for themselves, they would revert to situational rather than categorical thinking (1976, p. 67). They were convinced that thinking other than operational thinking, that is, categorical thinking, was not important, uninteresting, trivializing (1976, pp. 54–5). One recalls Malinowski’s account (1923, p. 502) of how ‘primitives’ (oral peoples) have names for the fauna and flora that are useful in their lives but treat other things in the forest as unimportant generalized background: ‘That is just “bush”. ’Merely a flying animal.’

(3) We know that formal logic is the invention of Greek culture after it had interiorized the technology of alphabetic writing, and so made a permanent part of its noetic resources the kind of thinking that alphabetic writing made possible. In the light of this knowledge, Luria’s experiments with illiterates’ reactions to formally syllogistic and inferential reasoning are particularly revealing. In brief, his illiterate subjects seemed not to operate with formal deductive procedures at all which is not the same as to say that they could not think or that their thinking was not governed by logic, but only that they would not fit their thinking into pure logical forms, which seem to have found uninteresting. Why should they be interesting? Syllogisms relate to thought, but in practical matters no one operates in formally stated syllogisms.

Precious metals do not rust. Gold is a precious metal. Does it rust or not? Typical responses to this query included: ‘Do precious metals rust or not? Does gold rust or not?’ (peasant, 18 years of age); ‘Precious metal rusts. Precious gold rusts’ (34-year-old illiterate peasant) (1976, p. 104). In the Far North, where there is snow, all bears are white. Nowyna Zembala is in the Far North and there is always snow there. What color are the bears? Here is a typical response, ‘I don’t know. I’ve seen a black bear. I’ve never seen any others… Each locality has its own animals’ (1976, pp. 108–9). You find what color bears are by looking at them. Who ever heard of reasoning out in practical life the color of a polar bear? Besides, how am I sure that you know for sure that all bears are white in a snowy country? When the syllogism is given to him a second time, a barely literate 45-year-old chairman of a collective farm manages ‘To go by your words, they should all be white’ (1976, p. 114). ‘To go by your words’ appears to indicate awareness of the formal intellectual structures. A little literacy goes a long way. On the other hand, the chairman’s limited literacy leaves him more comfortable in the person-to-person human lifeworld than in a world of pure abstractions: ‘To go by your words…’ It is your responsibility, not mine, if the answer comes out in such a fashion.

Referring to work by Michael Cole and Sylvia Scribner in Liberia (1973), James Fernandez (1980) pointed out that a syllogism is self-contained: its conclusions are derived from its premises only. He notes that persons not academically educated are not acquainted with this special ground rule but tend rather in their interpretation of given statements, in a syllogism as elsewhere, to go beyond the statements themselves, as one does normally in real-life situations or in riddles (common in all oral cultures). I would add the observation that the syllogism is thus like a text, fixed, boxed-off, isolated. This fact dramatizes the choreographic base of logic. The riddle belongs in the oral world. To solve a riddle, caniness is needed: one draws on knowledge, often deeply subconscious, beyond the words themselves in the riddle.

(4) In Luria’s field work, requests for definitions of even the most concrete objects met with resistance. ‘Try to explain to me what a tree is.’ ‘Why should I? Everyone knows what a tree is, they don’t need me telling them’, replied one illiterate peasant, aged 22 (1976, p. 86). Why define, when a real-life setting is infinitely more satisfactory than a definition? Basically, the peasant was right. There is no way to refute the world of primary orality. All you can do is walk away from it into literacy.

‘How would you define a tree in two words?’ ‘In two words? Apple tree, elm, poplar. ’Say you go to a place where there are no cars. What will you tell people [a car is]?’ ‘If I go, I’ll tell them that buses have four legs, chairs in front for people to sit on, a roof for shade and an engine. But when you get right down to it, I’d say: “If you get in a car and go for a drive, you’ll find out.” ’ The respondent enumerates some features but turns back ultimately to personal, situational experience (1976, p. 87).

By contrast, a literate collective-farm worker, aged 30: ‘It’s made in a factory. In one trip it can cover the distance it would take a horse ten days to make – it moves that fast. It uses fire and steam. We first have to set the fire going so the water gets steaming hot – the steam gives the
machine its power... I don’t know whether there is water in a car, must be. But water isn’t enough, it also needs fire’ (1976, p. 90). Although he was not well informed, he did make an attempt to define a car. His definition, however, is not a sharp-focused description of visual appearance — this kind of description is beyond the capacity of the oral mind — but a definition in terms of its operations.

(5) Luria’s illiterates had difficulty in articulate self-analysis. Self-analysis requires a certain demolition of situational thinking. It calls for isolation of the self, around which the entire lived world swirls for each individual person, removal of the center of every situation from that situation enough to allow the center, the self, to be examined and described. Luria put his questions only after protracted conversation about people’s characteristics and their individual differences (1976, p. 148). A 38-year-old man, illiterate, from a mountain pasture camp was asked (1976, p. 150), ‘What sort of person are you, what’s your character like, what are your good qualities and shortcomings? How would you describe yourself?’ ‘I came here from Uch-Kurgan, I was very poor, and now I’m married and have children.’ ‘Are you satisfied with yourself or would you like to be different?’ ‘It would be good if I had a little more land and could sow some wheat.’ Externals command attention. ‘And what are your shortcomings?’ ‘This year I sowed one pole of wheat, and we’re gradually fixing the shortcomings.’ More external situations. ‘Well, people are different — calm, hot-tempered, or sometimes their memory is poor. What do you think of yourself?’ ‘We behave well — if we were bad people, no one would respect us’ (1976, p. 15). Self-evaluation modulated into group evaluation (‘we’) and then handled in terms of expected reactions from others. Another man, a peasant aged 36, asked what sort of person he was, responded with touching and humane directness: ‘What can I say about my own heart? How can I talk about my character? Ask others; they can tell you about me. I myself can’t say anything.’ Judgement bears in on the individual from outside, not from within.

These are a few samples from Luria’s many, but they are typical. One could argue that responses were not optimal because the respondents were not used to being asked these kinds of questions, no matter how cleverly Luria could work them into riddle-like settings. But lack of familiarity is precisely the point: an oral culture simply does not deal in such items as geometrical figures, abstract categorization, formally logical reasoning processes, definitions, or even comprehensive descriptions, or articulated self-analysis, all of which derive not simply from thought itself but from text-formed thought. Luria’s questions are schoolroom questions associated with the use of texts, and indeed closely resemble or are identical with standard intelligence test questions got up by literates. They are legitimate, but they come from a world the oral respondent does not share.

The subject’s reactions suggest that it is perhaps impossible to devise a test in writing or even an oral test shaped in a literate setting that would assess accurately the native intellectual abilities of persons from a highly oral culture. Gladwin (1970, p. 219) notes that the Pulawat Islanders in the South Pacific respect their navigators, who have to be highly intelligent for their complex and demanding skill, not because they consider them ‘intelligent’ but quite simply because they are good navigators. Asked what he thought of a new village school principal, a Central African responded to Carrington (1974, p. 61), ‘Let’s watch a little how he dances’. Oral folk assess intelligence not as extrapolated from contrived textbook quizzes but as situated in operational contexts.

Plying students or anyone else with analytic questions of this sort appears at a very late stage of textuality. Such questions are in fact missing not only from oral cultures, but also from writing cultures. Written examination questions came into general use (in the West) only well after print had worked its effects on consciousness, thousands of years after the invention of writing. Classical Latin has no word for an ‘examination’ such as we ‘take’ today and try to ‘pass’ in school. Until the past few generations in the West, and still in perhaps most of the world today, academic practice has demanded that students in class, ‘recite’, that is, feed back orally to the teacher statements (formulas — the oral heritage) that they had memorized from classroom instruction or from textbooks (Ong 1967b, pp. 53–76).

Proponents of intelligence tests need to recognize that our ordinary intelligence test questions are tailored to a special kind of consciousness, one deeply conditioned by literacy and print, ‘modern consciousness’ (Berger 1978). A highly intelligent person from an oral or residually oral culture might be expected normally to react to Luria’s
type of question, as many of his respondents clearly did, not by answering
the seemingly mindless question itself but by trying to assess the
total puzzling context (the oral mind totalizes). What is he asking me
this stupid question for? What is he trying to do? (See also Ong 1978,
p. 4). “What is a tree?” Does he really expect me to respond to that
when he and everyone else has seen thousands of trees? Riddles I can
work with. But this is no riddle. Is it a game? Of course it is a game, but
the oral person is unfamiliar with the rules. The people who ask such
questions have been living in a barrage of such questions from infancy
and are not aware that they are using special rules.

In a society with some literacy, such as that of Luria’s subjects,
illiterates can and often do of course have experience of literately
organized thinking on the part of others. They will, for example, have
heard someone read written compositions or have heard conversations
such as only literates can engage in. One value that Luria’s work is that it
shows that such passing acquaintance with literate organization of
knowledge has, at least so far as his cases show, no discernible effect on
illiterates. Writing has to be personally interiorized to affect thinking
processes.

Persons who have interiorized writing not only write but also speak
literately, which is to say that they organize, to varying degrees, even
their oral expression in thought patterns and verbal patterns that they
would not know of unless they could write. Because it does not follow
these patterns, literates have considered oral organization of thought
naive. Oral thinking, however, can be quite sophisticated and in its own
way reflexive. Navaho narrators of Navaho folkloric animal stories can
provide elaborate explanations of the various implications of the stories
for an understanding of complex matters in human life from the
physiological to the psychological and moral, and are perfectly aware
of such things as physical inconsistencies (for example, coyotes with
amber balls for eyes) and the need to interpret elements in the stories
symbolically (Toelken 1976, p. 156). To assume that oral peoples are
essentially unintelligent, that their mental processes are “crude”, is the
kind of thinking that for centuries brought scholars to assume falsely
that because the Homeric poems are so skillful, they must be basically
written compositions.

Nor must we imagine that orally based thought is “prelogical” or
‘illogical’ in any simplistic sense—such as, for example, in the sense
that oral folk do not understand causal relationships. They know very
well that if you push hard on a mobile object, the push causes it to
move. What is true is that they cannot organize elaborate concatenations
of causes in the analytic kind of linear sequences which can only
be set up with the help of texts. The lengthy sequences they produce,
such as genealogies, are not analytic but aggregative. But oral cultures
can produce amazingly complex and intelligent and beautiful organiza-
tions of thought and experience. To understand how they do so, it will
be necessary to discuss some of the operations of oral memory.

ORAL MEMORIZATION

Verbal memory skill is understandably a valued asset in oral cultures.
But the way verbal memory works in oral art forms is quite different
from what literates in the past commonly imagined. In a literate culture
verbatim memorization is commonly done from a text, to which the
memorizer returns as often as necessary to perfect and test verbatim
mastery. In the past, literates have commonly assumed that oral mem-
oration in an oral culture, normally achieved the same goal of abso-
lutely verbatim repetition. How such repetition could be verified
before sound recordings were known was unclear, since in the absence
of writing the only way to test for verbatim repetition of lengthy
passages would be the simultaneous recitation of the passages by two
or more persons together. Successive recitations could not be checked
against each other. But instances of simultaneous recitation in oral
cultures were hardly sought for. Literates were happy simply to assume
that the prodigious oral memory functioned somehow according to
their own verbatim textual model.

In assessing more realistically the nature of verbal memory in pri-
mary oral cultures, the work of Milman Parry and Albert Lord again
proved revolutionary. Parry’s work with the Homeric poems focused
the issue. Parry demonstrated that the Iliad and the Odyssey were basically
oral creations, whatever circumstances governed their commitment to
writing. At first blush, this discovery would seem to have confirmed the
assumption of verbatim memorization. The Iliad and the Odyssey were
strictly metrical. How could a singer produce on demand a narrative
more under control — but only seems to be, for real, indivisible time carries us to real death. (This is not to deny that spatial reductionism is immeasurably useful and technologically necessary, but only to say that its accomplishments are intellectually limited, and can be deceiving.) Similarly, we reduce sound to oscillograph patterns and to waves of certain 'lengths', which can be worked with by a deaf person who can have no knowledge of what the experience of sound is. Or we reduce sound to script and to the most radical of all scripts, the alphabet.

Oral man is not so likely to think of words as 'signs', quiescent visual phenomena. Homer refers to them with the standard epithet 'winged words' — which suggests evanescence, power, and freedom: words are constantly moving, but by flight, which is a powerful form of movement, and one lifting the flier free of the ordinary, gross, heavy, 'objective' world.

In contending with Jean Jacques Rousseau, Derrida is of course quite correct in rejecting the persuasion that writing is no more than incidental to the spoken word (Derrida 1976, p. 7). But to try to construct a logic of writing without investigation in depth of the orality out of which writing emerged and in which writing is permanently and ineluctably grounded is to limit one's understanding, although it does produce at the same time effects that are brilliantly intriguing but also at times psychedelic, that is, due to sensory distortions. Freeing ourselves of chirographic and typographic bias in our understanding of language is probably more difficult than any of us can imagine, far more difficult, it would seem, than the 'deconstruction' of literature, for this 'deconstruction' remains a literary activity. More will be said about this problem in treating the internalizing of technology in the next chapter.

THE NEW WORLD OF AUTONOMOUS DISCOURSE

A deeper understanding of pristine or primary orality enables us better to understand the new world of writing, what it truly is, and what functionally literate human beings really are: beings whose thought processes do not grow out of simply natural powers but out of these powers as structured, directly or indirectly, by the technology of writing. Without writing, the literate mind would not and could not think as it does, not only when engaged in writing but normally even when it is composing its thoughts in oral form. More than any other single invention, writing has transformed human consciousness.

Writing establishes what has been called 'context-free' language (Hirsch 1977, pp. 21–3, 26) or 'autonomous' discourse (Olson 1980a), discourse which cannot be directly questioned or contested as oral speech can be because written discourse has been detached from its author.

Oral cultures know a kind of autonomous discourse in fixed ritual formulas (Olson 1980a, pp. 187–94; Chafe 1982), as well as in vatic sayings or prophecies, for which the utterer himself or herself is considered only the channel, not the source. The Delphic oracle was not
responsible for her oracular utterances, for they were held to be the voice of the god. Writing, and even more print, has some of this vatic quality. Like the oracle or the prophet, the book relays an utterance from a source, the one who really ‘said’ or wrote the book. The author might be challenged if only he or she could be reached, but the author cannot be reached in any book. There is no way directly to refute a text. After absolutely total and devastating refutation, it says exactly the same thing as before. This is one reason why ‘the book says’ is popularly tantamount to ‘it is true’. It is also one reason why books have been burnt. A text stating what the whole world knows is false will stale falsehood forever, so long as the text exists. Texts are inherently contumacious.

PLATO, WRITING AND COMPUTERS

Most persons are surprised, and many distressed, to learn that essentially the same objections commonly urged today against computers were urged by Plato in the Phaedrus (274–7) and in the Seventh Letter against writing. 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. It is a thing, a manufactured product. The same of course is said of computers. Secondly, Plato’s Socrates urges, writing destroys memory. Those who use writing will become forgetful, relying on an external resource for what they lack in internal resources. Writing weakens the mind. Today, parents and others fear that pocket calculators provide an external resource for what ought to be the internal resource of memorized multiplication tables. Calculators weaken the mind, relieve it of the work that keeps it strong. Thirdly, a written text is basically unresponsive. If you ask a person to explain his or her statement, you can get an explanation; if you ask a text, you get back 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’. Fourthly, in keeping with the agonistic mentality of oral cultures, 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 a context of give-and-take between real persons.

Writing is passive, out of it, in an unreal, unnatural world. So are computers.

A fortiori, print is vulnerable to these same charges. Those who are disturbed by Plato’s misgivings about writing will be even more disturbed to find that print created similar misgivings when it was first introduced. Hieronimo Scafarcio, who in fact promoted the printing of the Latin classics, also argued in 1477 that already ‘abundance of books makes men less studious’ (quoted in Lowry 1979, pp. 29–31): it destroys memory and enfeebles the mind by relieving it of too much work (the pocket-computer complaint once more), downgrading the wise man and wise woman in favor of the pocket compendium. Of course, others saw print as a welcome leveling: everyone becomes a wise man or woman (Lowry 1979, pp. 31–2).

One weakness in Plato’s position was that, to make his objections effective, he put them into writing, just as one weakness in anti-print positions is that their proponents, to make their objections more effective, put the objections into print. The same weakness in anti-computer positions is that, to make them effective, their proponents articulate them in articles or books printed from tapes composed on computer terminals. Writing and print and the computer are all ways of technologizing the word. Once the word is technologized, there is no effective way to criticize what technology has done with it without the aid of the highest technology available. Moreover, the new technology is not merely used to convey the critique: in fact, it brought the critique into existence. Plato’s philosophically analytic thought, as has been seen (Havelock 1963), including his critique of writing, was possible only because of the effects that writing was beginning to have on mental processes.

In fact, as Havelock has beautifully shown (1963), Plato’s entire epistemology was unwittingly a programmed rejection of the old oral, mobile, warm, personally interactive lifeworld of oral culture (represented by the poets, whom he would not allow in his Republic). The term idea, form, is visually based, coming from the same root as the Latin vide, to see, and such English derivatives as vision, visible, or videotape. Platonic form was form conceived of by analogy with visible form. The Platonic ideas are voiceless, immobile, devoid of all warmth, not interactive but isolated, not part of the human lifeworld at all but
Utterly above and beyond it. Plato of course was not at all fully aware of the unconscious forces at work in his psyche to produce this reaction, or overreaction, of the literate person to lingering, retardant orality.

Such considerations alert us to the paradoxes that beset the relationships between the original spoken word and all its technological transformations. The reason for the tantalizing involutions here is obviously that intelligence is relentlessly reflexive, so that even the external tools that it uses to implement its workings become ‘internalized’, that is, part of its own reflexive process.

One of the most startling paradoxes inherent in writing is its close association with death. This association is suggested in Plato’s charge that writing is inhuman, thing-like, and that it destroys memory. It is also abundantly evident in countless references to writing (and/or print) traceable in printed dictionaries of quotations, from 2 Corinthians 3:6, ‘The letter kills but the spirit gives life’ and Horace’s reference to his three books of Odes as a ‘monument’ (Odes iii.30.1), presaging his own death, on to and beyond Henry Vaughan’s assurance to Sir Thomas Bodley that in the Bodleian Library at Oxford ‘every book is thy epitaph’. In Pippa Passes, Robert Browning calls attention to the still widespread practice of pressing living flowers to death between the pages of printed books, ‘faded yellow blossoms/twixt page and page’. The dead flower, once alive, is the psychic equivalent of the verbal text. The paradox lies in the fact that the deathiness of the 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 potentially infinite number of living readers (Ong 1977, pp. 230–71).

WRITING IS A TECHNOLOGY

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 (Havelock 1963), 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. Clanchy (1979, pp. 88–115) discusses the matter circumstantially, in its western medieval context, in his chapter entitled ‘The technology of writing’. Writing is in a way the most drastic of the three technologies. It initiated what print and computers only continue, the reduction of dynamic sound to quiescent space, the separation of the word from the living present, where alone spoken words can exist.

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. Talk implements conscious life but it well up into consciousness out of unconscious depths, though of course with the conscious as well as unconscious co-operation of society. Grammar rules live in the unconscious in the sense that you can know how to use the rules and even how to set up new rules without being able to state what they are.

Writing or script differs as such from speech in that it does not inevitably well up out of the unconscious. The process of putting spoken language into writing is governed by consciously contrived, articulate rules: for example, a certain pictogram will stand for a certain specific word, or a will represent a certain phoneme, b another, and so on. (This is not to deny that the writer–reader situation created by writing deeply affects unconscious processes involved in composing in writing, once one has learned the explicit, conscious rules. More about this later.)

To say writing is artificial is not to condemn it but to praise it. Like other artificial creations and indeed more than any other, it 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 can be uplifting. Writing heightens consciousness. Alienation from a natural milieu can be good for us and indeed is in many ways essential for full human life. To live and to understand fully, we need not only proximity but also distance. This writing provides for consciousness as nothing else 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 the result of high technology. A violin is an instrument, which is to say a tool. An organ is a huge machine, with sources of power – pumps, bellows, electric generators – totally outside its operator. Beethoven’s score for his Fifth Symphony consists of very careful directions to highly trained technicians, specifying exactly how to use their tools. Legato: do not take your finger off one key until you have hit the next. Staccato: hit the key and take your finger off immediately. And so on. As musicologists well know, it is pointless to object to electronic compositions such as Morton Subotnik’s The Wild Bull on the grounds that the sounds come out of a mechanical contrivance. What do you think the sounds of an organ come out of? Or the sounds of a violin or even of a whistle? The fact is that by using a mechanical contrivance, a violinist or an organist can express something poignantly human that cannot be expressed without the mechanical contrivance. To achieve such expression of course the violinist or organist has to have interiorized the technology, made the tool or machine a second nature, a psychological part of himself or herself. This calls for years of ‘practice’, learning how to make the tool do what it can do. Such shaping of a tool to oneself, learning a technological skill, is hardly dehumanizing. The use of a technology can enrich the human psyche, enlarge the human spirit, intensify its interior life. Writing is an even more deeply interiorized technology than instrumental musical performance is. But to understand what it is, which means to understand it in relation to its past, to orality, the fact that it is a technology must be honestly faced.

WHAT IS ‘WRITING’ OR ‘SCRIPT’?

Writing, in the strict sense of the word, the technology which has shaped and powered the intellectual activity of modern man, was a very late development in human history. Homo sapiens has been on earth perhaps some 50,000 years (Leaky and Lewin 1979, pp. 141 and 168). The first script, or true writing, that we know, was developed among the Sumerians in Mesopotamia only around the year 3500 BC (Diringer 1953; Gelb 1963).

Human beings had been drawing pictures for countless millennia before this. And various recording devices or aids-mémoire had been used by various societies: a notched stick, rows of pebbles, other tallying devices such as the quipu of the Incas (a stick with suspended cords onto which other cords were tied), the ‘winter count’ calendars of the Native American Plains Indians, and so on. But a script is more than a mere memory aid. Even when it is pictographic, a script is more than pictures. Pictures represent objects. A picture of a man and a house and a tree of itself says nothing. (If a proper code or set of conventions is supplied, it might: but a code is not picturable, unless with the help of another unpicturable code. Codes ultimately have to be explained by something more than pictures: that is, either in words or in a total human context, humanly understood.) A script in the sense of true writing, as understood here, does not consist of mere pictures, of representations of things, but is a representation of an utterance, of words that someone says or is imagined to say.

It is of course possible to count as ‘writing’ any semiotic mark, that is, any visible or sensible mark which an individual makes and assigns a meaning to. Thus a simple scratch on a rock or a notch on a stick interpretable only by the one who makes it would be ‘writing’. If this is what is meant by writing, the antiquity of writing is perhaps comparable to the antiquity of speech. However, investigations of writing which take ‘writing’ to mean any visible or sensible mark with an assigned meaning merge writing with purely biological behavior. When does a footprint or a deposit of feces or urine (used by many species of animals for communication – Wilson 1975, pp. 228–9) become ‘writing’? Using the term ‘writing’ in this extended sense to include any semiotic marking trivializes its meaning. The critical and unique breakthrough into new worlds of knowledge was achieved within human consciousness not when simple semiotic marking was devised but when a coded system of visible marks was invented whereby a writer could determine the exact words that the reader would generate from the text. This is what we usually mean today by writing in its sharply focused sense.

With writing or script in this full sense, encoded visible markings
engage words fully so that the exquisitely intricate structures and references evolved in sound can be visibly recorded exactly in their specific complexity and, because visibly recorded, can implement production of still more exquisite structures and references, far surpassing the potentials of oral utterance. **Writing, in this ordinary sense, was and is the most momentous of all human technological inventions. It is not a mere appendage to speech. Because it moves speech from the oral to a new sensory world, that of vision, it transforms speech and thought as well. Notches on sticks and other aids-mémoire lead up to writing, but they do not restructure the human lifeworld as true writing does.**

True writing systems can and usually do develop gradually from a cruder use of mere memory aids. Intermediate stages exist. In some coded systems the writer can predict only approximately what the reader will read off, as in the system developed by the Vai in Liberia (Scribner and Cole 1978) or even in ancient Egyptian hieroglyphics. The tightest control of all is achieved by the alphabet, although even this is never quite perfect in all instances. If I mark a document ‘read’, this might be a past participle (pronounced to rhyme with ‘red’) indicating that the document has been gone over, or it might be an imperative (pronounced to rhyme with ‘reed’) indicating that it is to be gone over. Even with the alphabet, extra-textual context is sometimes needed, but only in exceptional cases – how exceptional will depend on how well the alphabet has been tailored to a given language.

**MANY SCRIPTS BUT ONLY ONE ALPHABET**

Many scripts across the world have been developed independently of one another (Diringer 1953; Diringer 1960; Gelb 1963): Mesopotamian cuneiform 3500 BC (approximate dates here from Diringer 1962), Egyptian hieroglyphics 3000 BC (with perhaps some influence from cuneiform), Minoan or Mycenaean ‘Linear B’ 1200 BC, Indus Valley script 3000–2400 BC, Chinese script 1500 BC, Mayan script AD 50, Aztec script AD 1400.

Scripts have complex antecedents. Most if not all scripts trace back directly or indirectly to some sort of picture writing, or, sometimes perhaps, at an even more elemental level, to the use of tokens. It has been suggested that the cuneiform script of the Sumerians, the first of all known scripts (c. 3500 BC), grew at least in part out of a system of recording economic transactions by using clay tokens encased in small, hollow but totally closed pod-like containers or bullae, with indentations on the outside representing the tokens inside (Schmandt-Besserat 1978). Thus the symbols on the outside of the bulla – say, seven indentations – carried with them, inside the bulla, evidence of what they represented – say, seven little clay artefacts distinctively shaped, to represent cows, or ewes or other things not yet decipherable – as though words were always proffered with their concrete significations attached. The economic setting of such pregraphic use of tokens could help associate them with writing, for the first cuneiform script, from the same region as the bullae, whatever its exact antecedents, served mostly workaday economic and administrative purposes in urban societies. Urbanization provided the incentive to develop record keeping. Using writing for imaginative creations, as spoken words have been used in tales or lyric, that is, using writing to produce literature in the more specific sense of this term, comes quite late in the history of script.

Pictures can serve simply as aids-mémoire, or they can be equipped with a code enabling them to represent more or less exactly specific words in various grammatical relation to each other. Chinese character writing is still today basically made up of pictures, but pictures stylized and codified in intricate ways which make it certainly the most complex writing system the world has ever known. Pictographic communication such as found among early Native American Indians and many others (Mackay 1978, p. 32) did not develop into a true script because the code remained too unfixed. Pictographic representations of several objects served as a kind of allegorical memorandum for parties who were dealing with certain restricted subjects which helped determine in advance how these particular pictures related to each other. But often, even then, the meaning intended did not come entirely clear.

Out of pictographs (a picture of a tree represents the word for a tree), scripts develop other kinds of symbols. One kind is the ideograph, in which the meaning is a concept not directly represented by the picture but established by code: for example, in the Chinese pictograph a stylized picture of two trees does not represent the words ‘two
trees' but the word 'woods'; stylized pictures of a woman and child side-by-side represent the word 'good', and so on. The spoken word for woman is [ny], for child [diŋ], for good [hua]: the pictorial etymology, as here, need have no relationship to the phonemic etymology. Writers of Chinese relate to their language quite differently from Chinese speakers who cannot write. In a special sense, numerals such as 1, 2, 3 are interlinguistic ideographs (though not pictographs): they represent the same concept but not the same sound in languages which have entirely different words for 1, 2, 3. And even within the lexicon of a given language, the signs 1, 2, 3 and so on are in a way connected directly with the concept rather than the word: the words for 1 ('one') and 2 ('two') relate to the concepts '1st' and '2nd' but not to the words 'first' and 'second'.

Another kind of pictograph is rebus writing (the picture of the sole of a foot could represent in English also the fish called a sole, sole in the sense of only, or soul as paired with body; pictures of a mill, a walk, and a key in that order could represent the word 'Milwaukee'). Since at this point the symbol represents primarily a sound, a rebus is a kind of phonogram (sound-symbol), but only mediately: the sound is designated not by an abstract coded sign, as a letter of the alphabet, but by a picture of one of the several things the sound signifies.

All pictographic systems, even with ideographs and rebuses, require a dismaying number of symbols. Chinese is the largest, most complex, and richest: the K’ang-hsi dictionary of Chinese in AD 1716 lists 40,545 characters. No Chinese or Sinologist knows them all, or ever did. Few Chinese who write can write all of the spoken Chinese words that they can understand. To become significantly learned in the Chinese writing system normally takes some twenty years. Such a script is basically time-consuming and elitist. There can be no doubt that the characters will be replaced by the roman alphabet as soon as all the people in the People’s Republic of China master the same Chinese language (‘dialect’), the Mandarin now being taught everywhere. The loss to literature will be enormous, but not so enormous as a Chinese typewriter using over 40,000 characters.

One advantage of a basically pictographic system is that persons speaking different Chinese ‘dialects’ (really different Chinese languages, mutually incomprehensible, though basically of the same structure) who are unable to understand one another’s speech can understand one another’s writing. They read off different sounds for the same character (picture), somewhat as a Frenchman and a Luba and a Vietnamese and an Englishman will know what each other means by the Arabic numerals 1, 2, 3, and so on, but will not recognize the numeral if pronounced by one of the others. (However, the Chinese characters are basically pictures, though exquisitely stylized, as 1, 2, 3 are not.)

Some languages are written in syllabaries, in which each sign represents a consonant and a following vowel sound. Thus the Japanese Katakana syllabary has five separate symbols respectively for ko, ke, ki, ku, five others for ma, me, mi, ma, mu, and so on. The Japanese language happens to be so constituted that it can utilize a syllabary script: its words are made up of parts always consisting of a consonantal sound followed by a vowel sound (n functions as a quasi-syllable), with no consonant clusters (as in ‘pitchfork’, ‘equipment’). With its many different kinds of syllables, and its frequent consonant clusters, English could not be effectively managed in a syllabary. Some syllabaries are less developed than Japanese. In that of the Vai in Liberia, for example, there is not a full one-to-one correspondence between the visual symbols and the units of sound. The writing provides only a kind of map to the utterance it registers, and it is very difficult to read, even for a skilled scribe (Scribner and Cole 1978, p. 456).

Many writing systems are in fact hybrid systems, mixing two or more principles. The Japanese system is hybrid (besides a syllabary, it uses Chinese characters, pronounced in its own non-Chinese way); the Korean system is hybrid (besides hangeul, a true alphabet, perhaps the most efficient of all alphabets, it uses Chinese characters pronounced its own way): the ancient Egyptian hieroglyphic system was hybrid (some symbols were pictographs, some ideographs, some rebuses); Chinese character writing itself is hybrid (mixed pictographs, ideographs, rebuses, and various combinations, often of extreme complexity, cultural richness and poetic beauty). Indeed, because of the tendency of scripts to start with pictographs and move to ideographs and rebuses, perhaps most writing systems other than the alphabet are to some degree hybrid. And even alphabetic writing becomes hybrid when it writes 1 instead of one.
The most remarkable fact about the alphabet no doubt is that it was invented only once. It was worked up by a Semitic people or Semitic peoples around the year 1500 BC, in the same general geographic area where the first of all scripts appeared, the cuneiform, but two millennia later than the cuneiform. (Diringer 1962, pp. 121–2, discusses the two variants of the original alphabet, the North Semitic and the South Semitic.) Every alphabet in the world – Hebrew, Ugaritic, Greek, Roman, Cyrillic, Arabic, Tamil, Malayalam, Korean – derives in one way or another from the original Semitic development, though, as in Ugaritic and Korean script, the physical design of the letters may not always be related to the Semitic design.

Hebrew and other Semitic languages, such as Arabic, do not to this day have letters for vowels. A Hebrew newspaper or book still today prints only consonants (and so-called semi-vowels [j] and [w], which are in effect the consonantal forms of [i] and [u]): if we were to follow Hebrew usage in English we would write and print ‘csnts’ for ‘consonants’. The letter aleph, adapted by the ancient Greeks to indicate the vowel alpha, which became our roman ‘a’, is not a vowel but a consonant in Hebrew and other Semitic alphabets, representing a glottal stop (the sound between the two vowel sounds in the English ‘huh-uh’, meaning ‘no’). Late in the history of the Hebrew alphabet, vowel ‘points’, little dots and dashes below or above the letters to indicate the proper vowel, were added to many texts, often for the benefit of those who did not know the language very well, and today in Israel these ‘points’ are added to words for very young children learning to read – up to the third grade or so. Languages are organized in many different ways, and the Semitic languages are so constituted that they are easy to read when words are written only with consonants.

This way of writing only with consonants and semi-consonants (y as in ‘you’, w) has led some linguists (Gelb 1963; Havelock 1963, p. 129) to call what other linguists call the Hebrew alphabet a syllabary, or perhaps an unvocalized or ‘reduced’ syllabary. However, it appears somewhat awkward to think of the Hebrew letter beth (ב) as a syllable when it in fact simply represents the phoneme [b], to which the reader has to add whatever vowel sound the word and context call for. Besides, when vowel points are used, they are added to the letters (above or below the line) just as vowels are added to our consonants. And modern Israelis and Arabs, who agree on so little else, both generally agree that both are writing letters in an alphabet. For an understanding of the development of writing out of orality, it appears at least unobjectionable to think of the Semitic script simply as an alphabet of consonants (and semivowels) for which readers, as they read, simply and easily supply the appropriate vowels.

When this is all said, however, about the Semitic alphabet, it does appear that the Greeks did something of major psychological importance when they developed the first alphabet complete with vowels. Havelock (1976) believes that this crucial, more nearly total transformation of the word from sound to sight gave ancient Greek culture its intellectual ascendancy over other ancient cultures. The reader of Semitic writing had to draw on non-textual as well as textual data: he had to know the language he was reading in order to know what vowels to supply between the consonants. Semitic writing was still very much immersed in the non-textual human lifeworld. The vocalic Greek alphabet was more remote from that world (as Plato’s ideas were to be). It analyzed sound more abstractly into purely spatial components. It could be used to write or read words even from languages one did not know (allowing for some inaccuracies due to phonemic differences between languages). Little children could acquire the Greek alphabet when they were very young and their vocabulary limited. (It has just been noted that for Israeli schoolchildren to about the third grade vowel ‘points’ have to be added to the ordinary consonantal Hebrew script.)

The Greek alphabet was democratizing in the sense that it was easy for everyone to learn. It was also internationalizing in that it provided a way of processing even foreign tongues. This Greek achievement in abstractly analyzing the elusive world of sound into visual equivalents (not perfectly, of course, but in effect fully) both presaged and implemented their further analytic exploits.

It appears that the structure of the Greek language, the fact that it was not based on a system like the Semitic that was hospitable to omission of vowels from writing, turned out to be a perhaps accidental but crucial intellectual advantage. Kerckhove (1981) has suggested that, more than other writing systems, the completely phonetic alphabet favors left-hemisphere activity in the brain, and thus on neurophysiological grounds fosters abstract, analytic thought.
The reason why the alphabet was invented so late and why it was invented only once can be sensed if we reflect on the nature of sound. For the alphabet operates more directly on sound as sound than the other scripts, reducing sound directly to spatial equivalents, and in smaller, more analytic, more manageable units than a syllabary: instead of one symbol for the sound ba, you have two, b plus a.

Sound, as has earlier been explained, exists only when it is going out of existence. I cannot have all of a word present at once: when I say 'existence', by the time I get to the 'tence', the 'exist-' is gone. The alphabet implies that matters are otherwise, that a word is a thing, not an event, that it is present all at once, and that it can be cut up into little pieces, which can even be written forwards and pronounced backwards: p-a-t-t can be pronounced 'trap'. If you put the word 'part' on a sound tape and reverse the tape, you do not get 'trap', but a completely different sound, neither 'part' nor 'trap'. A picture, say, of a bird does not reduce sound to space, for it represents an object, not a word. It will be the equivalent of any number of words, depending on the language used to interpret it: oiseau, uccello, pájaro, Vogel, 새, tori, 'bird'.

All script represents words as in some way things, quiescent objects, immobile marks for assimilation by vision. Rebus or phonograms, which occur irregularly in some pictographic writing, represent the sound of one word by the picture of another (the 'sole' of a foot representing the 'soul' as paired with body, in the fictitious example used above). But the rebus (phonogram), though it may represent several things, is still a picture of one of the things it represents. The alphabet, though it probably derives from pictograms, has lost all connection with things as things. It represents sound itself as a thing, transforming the evanescent world of sound to the quiescent, quasi-permanent world of space.

The phonetic alphabet invented by ancient Semites and perfected by ancient Greeks, is by far the most adaptable of all writing systems in reducing sound to visible form. It is perhaps also the least aesthetic of all major writing systems: it can be beautifully designed, but never so exquisitely as Chinese characters. It is a democratizing script, easy for everybody to learn. Chinese character writing, like many other writing systems, is intrinsically elitist: to master it thoroughly requires protracted leisure. The democratizing quality of the alphabet can be seen in South Korea. In Korean books and newspapers the text is a mixture of alphabetically spelt words and hundreds of different Chinese characters. But all public signs are always written in the alphabet alone, which virtually everyone can read since it is completely mastered in the lower grades of elementary school, whereas the 1800 han, or Chinese characters, minimally needed besides the alphabet for reading most literature in Korean, are not commonly all mastered before the end of secondary school.

Perhaps the most remarkable single achievement in the history of the alphabet was in Korea, where in AD 1443 King Sejong of the Yi Dynasty decreed that an alphabet should be devised for Korean. Up to that time Korean had been written only with Chinese characters, laboriously adapted to fit (and interact with) the vocabulary of Korean, a language not at all related to Chinese (though it has many Chinese loan words, mostly so Koreanized as to be incomprehensible to any Chinese). Thousands upon thousands of Koreans—all Koreans who could write—had spent or were spending the better part of their lives mastering the complicated Sino-Korean chirography. They were hardly likely to welcome a new writing system which would render their laboriously acquired skills obsolete. But the Yi Dynasty was powerful and Sejong's decree in the face of massive anticipated resistance suggests that he had comparably powerful ego structures. The accommodation of the alphabet to a given language has generally taken many years, or generations. Sejong's assembly of scholars had the Korean alphabet ready in three years, a masterful achievement, virtually perfect in its accommodation to Korean phonemics and aesthetically designed to produce an alphabetic script with something of the appearance of a text in Chinese characters. But the reception of this remarkable achievement was predictable. The alphabet was used only for unscholarly, practical, vulgarian purposes. 'Serious' writers continued to use the Chinese character writing in which they had so laboriously trained themselves. Serious literature was elitist and wanted to be known as elitist. Only in the twentieth century, with the greater democratization of Korea, did the alphabet achieve its present (still less than total) ascendancy.