

COMMUNICATION RESEARCH TRENDS

Centre for the Study of Communication and Culture • Saint Louis University

Writing: Ancient Origins with Modern Implications

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Beginnings of Writing and Today's Computer**

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**Part Two: A Review of Some Recent Studies
on the Origins of Notation and Writing**

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Writing: Ancient Origins with Modern Implications

Foreword

By the Editor

The point of transition from entirely oral cultures to those with at least a literate elite at their core — in other words, the transition from prehistory to history — has long fascinated historians, archaeologists, anthropologists, literary scholars, and many others. As Walter Ong has pointed out (Ong 1988 [1982]), literacy precipitates a perspective on the world that is vastly different from that of people without writing.

Records from the past and written communications in the present give us a different and enhanced sense of continuity with that past as well as with the vast extension and diversity of contemporary human beings, a sense that is unattainable through oral tradition and memory alone. Furthermore, literacy promotes complex thought by imposing order on complex data, as well as by making it more readily and precisely retrievable.

At the same time, there are losses — possibly in such intangibles as our sense of intimate community, built through face-to-face relationships and oral interaction, and other advantages of orality which have diminished so much in literate civilization that we cannot even imagine what they might have meant to our forebears.

It is this frontier of changing mentalities that we wish to explore in this issue of *Trends*. The idea of dealing with such a topic — not exactly consonant with the concerns of recent issues: such as mass media, computers, data-flow, and globalization — was sparked by Walter Ong's interest in the work of Middle-Eastern archaeologist Denise Schmandt-Besserat.

Schmandt-Besserat's studies of the tokens used for simple record-keeping and communication by people of the Fertile

Crescent in the period just before the invention of genuine writing prompt a kind of *deja vu*, or temporally reversed *deja vu*, in an observer living in the computer age. Communication now is becoming increasingly digital, and writing, according to some current archaeological views such as that of Schmandt-Besserat, seems to have begun in an earlier "digital age," from which it evolved into pictographs, cuneiform, syllabaries, and alphabets — "analog" systems whose dominance is only now crumbling, with the advance of a new and immeasurably more complex digital age.

But Schmandt-Besserat's work supplies only one piece in the complex puzzle of the origins of written communication. Other archaeologists have found other pieces of the puzzle. Together, they have gradually developed an emerging understanding of how humans began to write and to expand their horizons of knowledge within the framework of that concurrent invention — civilization — an invention that would have been impossible without writing. I have tried to supplement Ong's review by sketching some other developments in research on the origins of various writing systems in order to provide an overview of that foundational event.

The implications of that event for our history are evident, but its meaning in the present is not so clear. The origins of one of the earliest systems of writing in a digital system of notation nevertheless gives us tantalizing food for speculation in an age when new forms of digital systems are becoming the dominant means of communication over barriers of time and space.

— W. E. Biernatzki, SJ, Editor *CRT*

Part One

Digitization Ancient and Modern: Beginnings of Writing and Today's Computers

Walter J. Ong, SJ

A review essay on *Before Writing* by Denise Schmandt-Besserat (2 vols.: Austin: University of Texas Press, 1992).

Prelude

Recent findings have made it possible to see an intriguing relationship between developments leading into writing in its very earliest form and our only recently devised writing with the digital computer.

Historians of writing have noted that the three major early systems of writing in the world, the Sumerian (c. 3000 BC), the Chinese (c. 1500 BC), and the Mayan (c. AD 300), each developed, independently it appears, from a pictographic stage through a rebus stage to the final stage, which, more or less comprehensively, represents sound itself as such by visual symbols (DeFrancis 1989: 50, 122). These sequential stages are incontestable, but, it now appears, pictography was not the earliest development leading into full writing. The recent exhaustively documented two-volume work of Denise Schmandt-Besserat, *Before Writing* (1992), has now shown conclusively how the Sumerian pictographic stage was preceded by a still earlier stage using three-dimensional tokens which were initially not pictographic or iconographic at all, but were normally hand-made abstract clay figures (cones, spheres, disks, cylinders) constituting numerically discrete units used to process data for reckoning purposes. These are reflections on some deeper implications of Schmandt-Besserat's noteworthy discoveries.

Processing data in terms of numerically

distinct units is what is meant by digitization, and digitization thus appears as the earliest crucial development leading directly into Sumerian writing. A curious affinity would seem to exist here between the digitization enforced by today's computers and the first beginnings of the earliest known full writing, Sumerian cuneiform.

What this might mean is not a simple matter, but one perhaps opening on a deeper understanding both of earlier human culture and of our post-modern age. "Basically," as Florian Coulmas has observed in *The Writing Systems of the World* (1989: 9), "microchips are merely a technical improvement on clay tokens." How is our most supersophisticated modern technology of communication related to the most primitive roots of information processing? Has it returned us somehow to those roots? Or is it perhaps reminding us that we have never left them — at least in the case of alphabetic writing, which initially appeared in the Near East among Semitic peoples in the ambiance of Sumerian cuneiform? Does digitization as such belong fundamentally somehow to the development of writing? Such questions will be raised rather than answered here. Answering them in depth will take some time. Today, we need not be reminded of how tangled the roots of writing have been in the history of the human psyche.

I. Some Digitization in Antiquity

Today we think of digitization commonly, though of course not exclusively, with reference to the binary digitization of the computer and computerized information processing. It must be noted here that digitization is not necessarily binary, as it is in the digital computer, which performs all operations with two digits only, 0 and 1. Division of a mile into 5280 feet is digitization calculating in discrete units within a decimal number system, running 0-1-2-3-4-5-6-7-8-9, rather than within a binary number system, running 0-1. In a binary number system, the counting of four discrete units would be written 1 for one, 10 for two, 11 for three, 100 for four, etc. Here we are considering digitization as concerned with discrete units independently of the way they are expressed in any number system.

Although she had no reason to advert to digitization as such, Schmandt-Besserat's rich discoveries, which are sure to be mined with great profit through coming decades, show

how the first cuneiform writing grew out of what we might style conspicuous digitization, that is, a digitization implemented by the use of three-dimensional tokens, rather than out of a digitization operating on a two-dimensional writing surface, the digitization today typically carried out in writing. The tokens were more conspicuously digitizing than two-dimensional digitization on a writing surface in that they were not only discretely numerable but also so discrete that they were individually manipulable, manually separable from one another. The three-dimensionality and physical manipulability of the tokens makes them and their use a particularly forceful example of digitization. This early digitization gives a new resonance to Jay David Bolter's account of the evolving interrelationships between space and writing in his book *Writing Space* (1991). Space becomes even more spacious when we find three-dimensional digitization leading into the first writing known.

II. A Route Toward Full Writing

It has often been noted that writing as such was not an "invention" in the sense that it was not "a conscious search for the solution to a clearly conceived problem" (DeFrancis 1989: 215). What is often called "full writing," in the sense of "a system of graphic symbols that can be used to convey any and all thought" (*ibid.*, p. 5), was gradually stumbled upon by persons working over centuries to perfect what were initially clumsy and incomplete visual codes. "Full writing" could not be effectively projected in the imagination until after it had been realized. It was at first not easy to imagine a comprehensive set of silent visual marks that could somehow substitute for the bewildering flow of sounds which users of a given language had for ages employed without reflection. The complete transition from sound

to sight was arduous.

I recall seeing a videotape at the University of Dayton in January of 1989 in which a Methodist mission worker was explaining how she had devised a way of writing the previously altogether unwritten language of a native people in one of the South Sea islands where she was living and working. The people were not receptive to the idea. "Our language cannot be written," they insisted. "English and French and other languages can be written, but not ours. We speak it and we know that it cannot." Presumably, they believed that in written languages the spoken language was itself derived from writing — an idea that some purist teachers of English and, correspondingly, of other modern written languages find sympathetic enough. But, even

so, despite their misconceptions, the response of these South Sea islanders shows how far apart written language and spoken language can be, how difficult imagining the bridge between what is purely sound and representation of sound exclusively in sight.

Verbal communication had come into existence in human societies initially as sound and to this day is rooted in sound in the sense that sound has been the ultimate foundation, direct or indirect, of all known languages everywhere (DeFrancis 1989: 3-19, 47-49, 217), including sign languages, although the latter develop their own special life independent of sound (Wolkomir 1998). No known language has developed out of script alone, independently of oral antecedents direct or indirect. Articulate thought is initially tied directly into sound as into no other sensory field, despite the massive advantages of tying it subsequently into vision in incalculably numerous and complex ways.

The stages leading from sound into full writing, as earlier indicated here, have been commonly studied as beginning with pictographs. A pictograph is a visual illustration, such as a drawing or a painting, used to "stand for" a visualizable object, as a tree or a dog or a tent, and thus used to represent words for such objects in human speech. (Clues concerning precisely how to relate strings of pictographs to one another, how to structure a group of them grammatically, are commonly ambiguous at best.) The next step, the *rebus*, is crucial. For a rebus is the drawing of a thing which is used not simply to stand for the thing pictured, but rather to call forth the *sound* of the *word* suggested by the thing the rebus pictures, as when a picture of a bee is used by English-speakers to call forth the sound *be*. Rebuses signal a major break-through: *visual* designs that stand not for objects but for *sounds*.

Pictographic systems are numerous across the world, but by far most have died without developing into even the rebus stage or, a fortiori, into full writing. Pictographic systems

are all exceedingly limited in what they can express (DeFrancis 1989: 47) — none can express, for example, what this present paragraph says. Rebuses as such are more expressive but, as such, are still of very limited serviceability — again, none can express what this paragraph says. Rebus systems have often been dead-ends, perishing without developing into full writing.

The basic difference between an oral utterance and a text reproducing the utterance should be noted here. An oral utterance is not an object but an event. It leaves no physical residue. Sound exists only when it is going out of existence. Written texts are objects. They can be stored or moved around from one place to another, as sounds cannot be. Today, in addition, texts can of course be put through all sorts of internal as well as external visible movements on an electronic screen, where bits of text can chase one another, absorb one another, turn upside down, shrink, swell up, or simply explode into smithereens. Yet, for all their new active intrusion into present time through physical movement, and for all the exterior sound effects in which they may be immersed, texts as texts never take themselves out of their abiding silence, which is to say, they never read themselves. A text in front of you is in itself totally mute. Living persons read, calling forth from within themselves the sounds that the visual marks encode.

In computerized sound readings of an inscribed text, the text is not reading itself. The voice the listener hears is not produced by the text but by a machine, a computer in which an originally live human voice has been electronically tied to the text's visual signals — or to most of them, for perhaps no computerized sound reader encodes *all* textual visual signals in any given writing system.

The discontinuity between sounded words and sight is what a full writing system bridges. It provides a visual code for the oral sounds in which human verbal expression initially comes into existence. The massive and diversified data showing that all full writing, in any form

of inscription at all, does just this in however various ways have been assembled and painstakingly analyzed by DeFrancis in his *Visible Speech: The Diversified Oneness of Writing Systems* (1989). DeFrancis notes that, when it had finally evolved to its mature form,

Sumerian cuneiform writing "has the distinction of being the earliest system of full writing ever created" (p. 71). Its historical primacy here gives Sumerian cuneiform particular relevance as the primary focus of this present study.

III. Prehistory of Cuneiform Writing

The prehistory of Sumerian cuneiform writing, we now know, begins with the use of the three-dimensional movable tokens earlier referred to. These are deployed and manipulated for accounting purposes. The tokens at first are basically not pictographic or otherwise iconographic, not images of a particular object or commodity, but are simply "small clay counters of many shapes, such as cones, spheres, disks, and cylinders, which served for accounting in prehistory" (Schmandt-Besserat 1992: I: 6). They are mostly 1-2 centimeters across, with larger subtypes 3-5 centimeters across (*ibid.* I: 17). The tokens are not originally iconographic. Initially a sheep, for example, will not be represented by a token shaped to resemble a sheep but by a geometrical shape to which the meaning "sheep" has been assigned.

After having labored for nearly two decades with a data bank now consisting of over 10,000 such Near East tokens and their sequels, dating from c. 8000 to c. 3100 BC (*ibid.* I: 13, 18, 198), Schmandt-Besserat has described in painstaking detail the stages leading from the one-to-one token-based tallying system initially developed for keeping count of agricultural produce and livestock to the development of cuneiform writing. Her work ties in with earlier archaeological and interpretive work by many others whom she cites (*ibid.* I: 8-9), notably A. Leo Oppenheim, Pierre Amiet, and Maurice Lambert. But *Before Writing* claims to be and is uniquely inclusive, "the first systematic study of tokens, based on the analysis and interpretation of a

selection of eight thousand specimens from 116 sites in Iran, Iraq, the Levant, and Turkey," stored in museums of the Near East, North Africa, Europe, and North America (*ibid.* I: 7). The specimens have been excavated over the years by numbers of archaeologists and carefully dated individually.

Near Eastern archaeological sites actually provide information of even earlier primitive reckoning devices consisting of simple notches or other incisions on bones, dating from as early as c. 15,000 BC (Schmandt Besserat 1992: I: 118 and *passim*). These notches or incisions are also digital, for they reckon in terms of discrete numerical units (one notch equals one commodity unit), but notches or other incisions on bones serving as reckoning units are not individually maneuverable and could not be so useful for calculating operations as the individual separate, movable, three-dimensional tokens, each token representing a commodity unit, could be.

The development of the use of tokens in the Near East is crucial to the subsequent development of writing, but, as Schmandt-Besserat explains (1992: I: 195):

Because they were minuscule, colorless, innocuous-looking artifacts, tokens have been mostly ignored, though they are a unique source of information on major aspects of culture during five thousand years of Near Eastern prehistory, including two critical periods: the beginnings of agriculture and cities. They were the precursor of writing and document communication in

prehistory. They were the precursors of numerals and shed light on the origin of mathematics.

It is noteworthy that the earliest tokens, which have just been referred to here and which Schmandt-Besserat describes as "plain" tokens, are objects of human manufacture, not naturally occurring objects such as pebbles, twigs, or grains, which have been used by many earlier cultures for reckoning in tallying systems — one pebble the equivalent of one coconut, another pebble the equivalent of another coconut, etc. (1992: I: 161). The tokens she later describes as "complex" tokens, as will be later explained here, were *a fortiori* objects of human manufacture. As humanly manufactured objects, the tokens are like writing, which also is made up not of natural units, but is a product of human manufacturing.

Beginning around 8000 BC (Schmandt-Besserat 1992: I: 198) and continuing through five millennia (*ibid.* I: 44), the tokens were hand-molded out of clay, sometimes afterwards baked in an oven or fired in a kiln. In later periods a relatively small number were cut out of stone (*ibid.* I: 20-31).

IV. From Tallying to Cardinal Numbers

Citing numerous works by others as well as earlier work of her own, Schmandt-Besserat reviews the evidence showing how widespread such tallying by tokens in one-to-one correspondence with commodity units (sheep, cattle, measures of grain, etc.) has been in the ultimate development of counting within many cultures. She notes that historians of mathematics find that our present way of counting by the use of cardinal numbers which are applicable to any sort of object or concept — 1, 2, 3, 4...27, 28... — walnuts or years or clouds or sunsets or smells or flavors or feelings, or imaginative images, or whatever

Usually occurring in geometric forms, as earlier noted, the plain tokens are shaped very infrequently into rough "naturalistic shapes such as vessels and animals" (*ibid.* I: 27). But most early tokens were abstract geometric shapes. To each different geometric shape a specific meaning was assigned: one shape representing a sheep, another shape a measure of grain, and so on. The tokens were employed initially (*ibid.* I: 39, 187, 197, and *passim*) in a system of simple tallying, using one-to-one correspondence. In a one-to-one correspondence system, four sheep were represented by four clay tokens each of the shape assigned to a sheep. This one-to-one correspondence system did not entail the notion of "fourness" as such at all, that is, any notion such as ours of a "set" of "four sheep" or of "four" of anything else. You had one sheep and one sheep and one sheep and one sheep, each represented by an individual token, until you came to the last of the tokens being used in a given tally, with no attention to "four" of anything. A tally, in the strict sense of this term, does not use counting at all. That is, it works only by one-to-one correspondence, with no twos or threes or fours, etc.

— is the term of a very long evolution.

After simple tallying and before the exploitation of cardinal numbers, one finds what Schmandt-Besserat styles "complex tokens," beginning around 4400 BC (1992: I: 24-25, 198). These complex tokens were more diversified and marked by greater use of "naturalistic forms." For example, as has earlier been noted, while some few plain tokens were only occasionally given forms related to objects they "stood for" (a plain token *might* at times be modeled to resemble crudely a dog's head if it was to "stand for" a dog), the complex tokens quite often were

shaped as more conspicuously recognizable objects or parts of objects they represented — for example, a particular animal head for a given animal. This was in keeping with the otherwise more complex organization of complex tokens, which often bore also a profusion of markings such as parallel lines and/or crosses and/or "punctuations," that is, depressions punched in various patterns on a token's surface (*ibid.* I: 14, 82). Such markings on "complex tokens" could serve to differentiate otherwise similar tokens, for example, by sex so as to distinguish ewes from rams. Thus complex tokens exploited a repertoire of forms far greater than that of the "plain tokens."

The advent of complex tokens was connected with the beginning of the redistributive economy that marks urban life, when certain urban dwellers (merchants) received animals and agricultural produce from farmers and redistributed the animals and produce as demanded and paid for by city dwellers (*ibid.* I: 176-177). The latter, in turn, could again redistribute what they got from the farmers to the temple bureaucracy or elsewhere. Within the city, other urban dwellers became manufacturers of new products for distribution to other persons by barter or otherwise.

In the varied urban settings, the complex tokens could readily differentiate the growing variety of commodities being dealt with, as the plain tokens could not. However, the use of complex tokens (Schmandt-Besserat 1992: I: 49-92) did not signal the total abandonment of the plain tokens, although it did open the way for many further developments in the history of information processing — for information processing was exactly what the use of tokens was all about. The markings on the complex tokens are not all decipherable, but some are, for they continue after the development of cuneiform writing, which at times notes explicitly the meaning of certain otherwise undecipherable token markings (*ibid.* I: 151).

With the advent of complex tokens, earlier types of counting were not immediately

displaced by cardinal numbers, even when operations did not all continue in the one-to-one correspondence stage of tallying (*ibid.* I: 185-187). Intermediate between the use of tallying and the use of cardinal numbers, came the use of "concrete" counting. Concrete counting uses not just one-to-one correspondence but also "sets." One complex token alone was now at times used to symbolize three sheep, in place of the original three separate tokens representing one sheep and one sheep and one sheep. Here we find operative the notion of a numerical set, a number of things of the same kind lumped together. Simple one-for-one tallying is transcended. But the number symbols are not applicable to anything at all, as in the case with cardinal numbers. The numbers are "concrete," in the sense that there are different sets of numbers representing different commodities. Three sheep are symbolized by one token, but this token is specialized in that it can represent only three sheep. Three jars of oil can be represented by one symbol alone, but it can represent only three *jars of oil*.

Cardinal numbers appear at a later stage and, as noted earlier, represent a major advance in thought. The "sets" in *concrete* counting are not abstract but are all sets of one or another kind of thing: a set of sheep or a set of cattle, and so on. *Cardinal* numbers are different: they are pure abstractions, human constructions. Cardinal numbers are *empty* sets. They are more difficult to conceive of than "concrete" numbers attached to named items. Outside the mind, in nature, there can be no such thing as free-floating numbers of nothing at all, applicable to anything. Outside the mind, in nature, there are simply individual existents. The "empty" sets which we style cardinal numbers, can be filled with any kind of item: the number 2 or 6 or 365 can "contain" indifferently trees or rocks or days or colors or thoughts or clouds or carnivorous animals or pixels, and on *ad infinitum*. "Sets" of things of the same kind — a "set" or group of six trees or six dogs or seven days such as

occurs in concrete counting — can be conceived of more readily than purely cardinal numbers.

V. Simplicity to Complexity: Urban Life

Schmandt-Besserat notes field work and studies which show that many cultures, some still extant, count only to two or three and after that, designate all quantities simply as "many." Until the past century, the Weddas of Sri Lanka had "no specific word for numbers beyond expressions such as "a single," "a pair," "one more," and "many" (1992: I: 184). Wishing to indicate how many coconuts he had, a Wedda resorted to one-to-one tallying, without any count at all. He gathered a bundle of sticks and "to each coconut assigned one stick: one nut=one stick. When he had matched each individual coconut with an individual stick, he merely pointed to his pile of sticks and said, 'that many'" (*ibid.* I: 185). Later, the pile of sticks enabled him to verify directly that all his coconuts were there — which might be all he wanted to know. If he found that there were one or two more sticks with no corresponding coconuts, something was wrong. He might have been robbed. The use of abstract cardinal numbers could be initially inconvenient not only because such numbers do not occur in nature but also because simple tallying by matching stick-to-coconut could be quite serviceable with no counting at all.

It is noteworthy also that tokens as such were useful for multilingual data processing since they did not represent words as such, but, like the Weddas' sticks, were simply one-for-one coordinates for commodities, and thus could be understood by persons speaking languages other than that spoken by the originator of the tokens (Schmandt-Besserat 1992: I: 161, 164). In scrupulous detail, Schmandt-Besserat carefully traces the sequence of changes whereby further stages of

tallying, of "concrete counting," and eventually of counting by cardinal numbers followed one another in the Near East in the use of clay tokens. These stages were not clear-cut. As has been noted earlier, they often overlapped: a given place might be calculating at some places in one stage and at other places in another, or even using earlier and later forms of calculating simultaneously in the same place. One can observe that the propensity of tokens to generate cardinal-number counting is striking evidence of their affiliation to digitization in its common meaning of conversion of data to numerical form or calculation by numerical methods or discrete units.

With cardinal numbers, the mind could focus on numbers as such, pure and simple, in themselves not referring to anything other than themselves. Mathematics became possible, and with mathematics, it would appear, so did Platonic "ideas" and their attendant philosophy.

Schmandt-Besserat points out that tokens were major developments in societies in which they are found, central enough to Near Eastern cultures to be used for ceremonial purposes such as funerary offerings (1992: I: 41, 103-104, etc.). Throughout (e.g., *ibid.* I: 11), she expresses her awareness that her work, for all its thoroughness, will of course have to be supplemented by further work. But it is safe to say that she has shown in great particularity and with great success the over-all pattern of the developments growing out of the use of clay tokens in prechirographic and protochirographic cultures of the Near East (*ibid.* I: 195-199). She is careful to relate tokens and their evolution and sequels to the larger human context, social, economic, technological, and other.

VI. Concrete to Abstract

Use of "concrete counting" such as is found in many early cultures exists residually today even in high-tech cultures, which regularly use cardinal numbers for counting anything and everything and which are otherwise hospitable to all sorts of abstractions. Many languages today, including English, still retain some few instances of "concrete counting." Thus, in English, the term *trio*, for example, merges the number 3 with the item counted — you can have a trio of musicians, but not of rivers or planets or thunderstorms (Schmandt-Besserat 1992: I: 186). Or again, we speak of a "brace" of quail, but a "pair" of dice, or a "couple" of hours or of people or of acres. You never have a brace of hours or a pair of miles. Developmental psychologists report that toddlers asked to count a number of pencils find something like concrete counting more congenial. They find it easier to count more homogeneous elements, such as blue pencils or red pencils, but have to be coaxed into counting the total of both blue and red pencils together (*ibid.* I: 186). The complex concrete ways of counting from one to ten still imperative in modern Japanese are well known (see Ogawa and Sato 1963: 58-69): one series of numbers is used for thin, flat objects such as paper; another for machines and vehicles; another for smaller things such as nuts, candy, cakes, boxes, watches (but not pills or grain); another series for stick-like or linear things such as pencils, trees, lines, hairs, rails, belts; another for bound sheets of paper such as books or notebooks; another for insects, worms, fish, cats and smaller dogs; another for larger animals such as horses and elephants

and larger dogs; another for birds (with which are included here rabbits!); another for people; another for days; and so on. This object-discriminatory counting remains in a sense basically "concrete."

Counting by cardinal numbers, as suggested earlier, is by contrast quite definitely abstract in that cardinal numbers are not of themselves linked to anything but other cardinal numbers. Although they may have been generated by dealing at first with fixed kinds of things, when they become cardinal numbers they are separated or "abstracted" from everything else.

In the evolution of the use of tokens, one can recognize signs of the underlying movement from the more totalizing or aggregative mentality marking oral cultures generally, a mentality at times represented by numbers bound to a certain kind of commodity, to the more analytic or disjunctive thinking marked by distinctions or separations. Cardinal numbers are in themselves "empty," as has been seen, and thus in themselves distinct from everything they encompass. (See Ong 1988 [1982]: 38-39, with references to Claude Lévi-Strauss and others). With the developments in handcrafted tokens toward the more abstract, writing is in the offing among the ancient Sumerians. Of course, it should be noted that all human thinking is to some degree abstract. Abstraction does not by any means originate with writing, but writing — abetted today by its sequel, computerization — encourages the development of abstraction to an extent so great as to be by today quite incalculable.

VII. Cumbrous Clay Envelopes to the Stylus

At one point in the development of the tokens, it became a practice to store plain tokens in pod-like envelopes made of hollow

clay, often closed with a cylinder seal (Schmandt-Besserat 1992: I: 68-69) for more or less permanent records or archives (*ibid.* I:

68-69, 198), or, alternatively, to perforate and string numbers of tokens together on a cord, with its two ends sealed to each other by a lump of clay embedding both ends and thereby both "identifying the account and preventing any tampering" (*ibid.* I: 109), and also serving for more or less permanent recording. In a subsequent development, beginning c. 3500 BC some envelopes bear on the outside marks corresponding to the number of tokens inside: thus, five enclosed tokens (each representing, for example, one sheep) were indicated by five corresponding outside marks, and so on. These marks were sometimes made as simple lines, or sometimes made by impressing a given kind of token (e.g., the token for a sheep) the requisite number of times on the outside of the clay envelope when the clay was still wet (*ibid.* I: 198-199 and *passim*). With these stable collections of individual tokens, some sort of representation of a "set" (5 in the instance here; or 7, 10, etc.) had been accomplished, but the number for the set was not fully abstract but still "concrete" in the sense just mentioned: each token represented by the individual mark referred to one unit of only the specific type of commodity that the token represented. But a container inevitably grouped the individual marks into a set of five or whatever number of units the container held and thus doubtless furthered thinking in sets in place of single-unit tallies. This use of clay pod-like containers or envelopes is found in the period c. 3700-1200 BC (*ibid.* I: 198).

With their enclosed set of tokens, the pod-like clay containers or envelopes were serviceable to prevent cheating that might be carried on by changing the marks on the outside: If you added to an original five marks another sixth one, breaking open the container would detect the fraud. But this created a problem: To verify the number of marks of a given commodity made on the outside of the container, the container had to be broken open. At this point, the tokens that had been inside could themselves be added to, or subtracted from, or dispersed — so that, in effect,

verification by resort to the inside tokens was a one-time verification, and thus of relatively little worth. Strings of a given number of tokens, with the ends of the string tied and sealed in a lump of hardened clay, were more useful than tokens in a pod — the number of tokens was stabilized and always visible: they could be counted over and over again as discrete units for recording or verification purposes.

But the strings of tokens were cumbersome to store and manipulate. A new step was taken when in the period 3500-3100 BC the pods or envelopes with their enclosed tokens were superseded by simple clay tablets with impressed markings on their surfaces like those which had been made on the clay containers, but of course, with no enclosures, that is, with no tokens inside since the flat clay tablets had no inside in which to store tokens or anything else. They were much thicker than a sheet of paper today, but no more than a sheet of paper did they have a hollow interior. On the early containers "the markings only repeated the information encoded in tokens for the convenience of accountants" (Schmandt-Besserat 1992: I: 154).

With the tablet stage, a new technology came into play: reed styluses altogether replaced the tokens (*ibid.* I: 137-139). Impressing a plain token into the surface of a clay envelope-pod produced only an imprint of that kind of token. Tokens produced only signs of themselves. Reed styluses were truly instruments, designed not to reproduce their own shapes as reeds, but to produce any number of differing signs. Once it became the practice to incise signs by designing them with a reed stylus instead of simply impressing fixed-design tokens into the clay surface of containers or of early tablets, a way to full writing was opened, for the stylus was a versatile writing instrument suited to forming designs of limitless sorts, including stylized pictographs of commodities and objects for which there had never been any equivalent in tokens (*ibid.* I: 199, 159, and *passim*). Thus

used "abstractly," that is, not for their own concrete shapes but for other designs that they could create, styluses belonged to the more abstract world encouraged by writing. Cuneiform (that is, "wedge-shaped") writing was the product of using styluses to form various and limitless designs out of wedge-shaped gouges on a wet clay surface, subsequently dried or baked or fired for permanency.

VIII. Numeracy Before Literacy

The succession from token impressions to stylus-created markings is clear from massive diggings at Uruk, well known as "the first and foremost Sumerian city," located in southern Mesopotamia (now modern Iraq). Uruk has yielded "the largest and most varied collection of complex tokens ever recovered in a fourth-millennium site" (Schmandt-Besserat 1992: I: 49). Here archaeological soundings at the deepest levels have surfaced complex tokens marked on the outside by impressing various plain tokens into the complex tokens' surfaces, while soundings at higher archaeological levels (representing more recent deposits) have surfaced "the first precursors of the Sumerian *incised signs*, traced with a stylus" (*ibid.* I: 68).

Pictographs, which the stylus made possible and encouraged, show a relative abstractness. Even though each pictograph more or less resembled what it "stood for" and in that sense was "concrete," pictographs also reveal a relative abstractness in that they have never been found repeated in one-to-one correspondence as tokens and token imprints had been — that is, pictographs never occur, for example, with one pictograph to represent one sheep, another pictograph to represent a second sheep, etc. Instead, at the pictograph stage, multiples of pictographs were indicated by a mark for one of the cardinal numbers (2, 3, 4, 6, 10, and so on), which as has been seen

For all this, the evolution of writing as such moved at a snail's pace. As noted earlier above, the stages of development in the use of the plain tokens and their various sequels overlapped, and, after the development of clay tablets and even of clay tablets marked with a stylus, some use of tokens still lingered, although it dwindled (*ibid.* I: 198).

are significantly abstract concepts, no longer entailing the "concrete counting" which had separate kinds of numbers for different kinds of items being counted.

Cardinal numbers could of course possibly have been much earlier known and used orally in Sumerian culture and other cultures independently of any inscriptions. But, in fact, as the foregoing account here indicates, they came into use in the inscriptions themselves in a quite indirect way, as a late spinoff from a millennia-old technology, the technology of manufacturing three-dimensional clay tokens for reckoning items present within the ambience of the user's lifeworld.

This circumstantial prehistory of writing worked out in painstaking detail by Schmandt-Besserat shows the tortuous complexity of the road to writing among the Sumerians (who, we recall again, developed the first full writing in the world). Their writing clearly does not begin with two-dimensional pictographic designs, as chirographic folk of today might imagine. The history is psychologically and even physiologically far more complicated and introverted. The road to writing was worked out of a three-dimensional representational world. We think of early writing as typically using two-dimensional designs to represent things or concepts. In reality here, the first steps toward writing among the Sumerians used three-dimensional things to represent

other three-dimensional things. There writing emerged from a kind of prototypic objectocentrism in a way which might have serious implications for theories of logocentrism.

In any event, the prototypical three-dimensional world of the Sumerians record-keeping was initially a world of digitization, always processing data of various sorts in

discrete numerical units. In Sumerian history, numeracy is antecedent to literacy, Schmandt-Besserat has made clear. Other writing systems may have other prehistories. However, the Sumerian system was temporally antecedent to the development of all other writing systems, though discontinuous from other systems except perhaps to some degree the alphabet.

IX. Technologizing the Evanescent Oral Word

Oral speech, the only form of verbalization known to *Homo sapiens* since the species first appeared some 150,000 years ago, until only some 6000 years ago, is not a technology and involves no technology at all. The spoken word consists of sound produced in present time from living organisms. Oral speech needs no tools and, in itself, leaves no residue. Sounds are not things but events, as has earlier been seen. Sound is evanescent, not of itself enduring. Sound exists only when it is going out of existence.

As sounds, spoken words are also events, sound events in time, existing only when they are going out of existence. Sound always signals the present use of power. I can see a buffalo, smell a buffalo, touch a buffalo, and taste a buffalo when the buffalo is inert or dead. But if I hear a buffalo, I had better watch out. Something is going on.

Sound is always "alive," indicating that some physical action is going on. Although we tend to, or learn to, disregard the fact, writing inevitably and always misrepresents each and every word it records in the sense that writing makes the word seem somehow present as a whole all at once. No word, of however short duration, can be present all at once. In reading a fixed text, the reader must introduce the coded marks constituting the visible text into the temporal and evanescent sound world, either exteriorly in vocal sound or in his or her imagination. This is what reading consists in: *sounding* in a *moving* time sequence what is

signaled by an immobile *visual code*. When I read the word "existence" from a fixed text, either by audible vocalizing or in my auditory imagination, I project into moving time the motionless textual codification: when I get to the "-tence," the "exis-" is gone. Otherwise, if the syllables were all sounded simultaneously, the sound, and thus of course the text itself, would be unintelligible, even though in the text the word from beginning to end, and whole pages of words, exist all at once, as they cannot when vocalized by a speaker or reader.

This is not at all to say that the written word is no more than a stand-in for the oral word. When words are written, they undergo all sorts of changes which can affect human thought and the entire human lifeworld. About these changes, there is now a huge literature, being added to daily (see Ong 1982 [1988]: *passim*, with the hundreds of references there, and consult the plethora of current data bases).

At the root of the changes from sound to visual text is the fact that, unlike oral speech, writing is a technology, just as much as Sumerian token production was. Writing is a physical product manufactured by working with materials and with tools. Over the centuries, writing would become more and more technological, which is to say more and more artificial. This does not make it inhuman but eminently more human. For there is nothing more natural for a human being than to be artificial. The technology of writing is

subject to many non-technological human activities.

To make inscriptions, of which handwriting is the earliest form, a better and better product, writing would become more and more technological. Artisans would develop better and better prepared surfaces of papyrus, parchment, and eventually paper, specially manufactured pens or brushes and ink, inkhorns of hollow cattle horns (ink must be mordant, biting into the surface to which it is applied, and, when stored, its corrosive effects are resisted by horns in earlier ages when glass was expensive). To sharpen the goose-quill writing pens, small knives would be made (we still speak of and use "pen knives," though seldom any more to sharpen pens).

Writing not only uses tools but does so in order to create a physical object distinct from the person producing the object. That is, it

manufactures a text. Any text is a technological product, a physical object distinct from the person producing it. Most of the books in the world today have been written by people now dead, often long dead. The author's absence makes no difference: without him or her, the text still "holds" the same words.

Technologies of writing have varied in different cultures. For example, in East Asia writing was for centuries done with carefully manufactured brushes rather than with pens, and ink for the brushes was not liquid but supplied by a solid ink block. Here we cannot attend to all the diverse writing technologies developed over the ages (see Clanchy, 1979, and DeFrancis, 1989) but will remain with some of the developments following the Sumerian and related Near East developments, particularly those involving the alphabet.

X. The Alphabet: Orality-Friendly and Computer-Friendly

The alphabet was "invented" only once, among the Semitic peoples of the Near East, following on the development of cuneiform writing by the Sumerians (who were neighbors but, as earlier noted, apparently were not a Semitic people). All alphabets in the world — from the Greek and Roman to the Korean and later alphabets — trace, directly or indirectly, to the Semitic alphabet (Ong 1982 [1988]: 85-93). This suggests that the alphabet was desperately difficult to come upon. Like the first writing of the Sumerians, it was stumbled into by persons not making "a conscious search for the solution to a clearly conceived problem" (DeFrancis 1989: 215) but working for better ways of bridging the orality-writing gap, which they were only gradually managing to deal with effectively and expertly.

No other writing system has been accommodated to so many different languages and cultures as has the alphabet (DeFrancis 1989: 174-208). The designs of the various

letters of the alphabet can vary from one alphabet to another. A given alphabet may represent the phoneme *m* by a design not visually resembling the *m* of the Roman (and English) alphabet, and so with all letters. Alphabets also may and do vary somewhat in the number of letters they use to accommodate the varying number of phonemes in various languages. But, whatever the design and number of the letters, the basic alphabetic principle can accommodate to any and all spoken languages. The reason is that this basic principle operates in the *visual* field in the basic way *oral* speech operates in *all* languages: oral speech combines meaningless units of sounds to make meaningful words. In the word *dog*, the sound *d* means nothing, the sound *o* means nothing, and the sound *g* means nothing. But put together in the proper order, in English they mean *dog*. Ideally, an alphabet for a given language works this same way in the field of vision, where it has a

separate meaningless letter for each individual phoneme in the language — phonemes being sounds that in a given language distinguish one meaning from another: in English the sound *p* in *pit* and the sound *f* in *fit* are two different phonemes yielding two different meanings although each is followed by the same sound, *-it*. All alphabets have this basic principle, but all at times compromise to a degree. To represent all its phonemes, English, for example, would need some forty letters. In fact, English uses the letter *a* for three different phonemes in *ape*, *at*, *all*. English also uses different letters or combinations of letters for the same phoneme, as the *f*, *ph*, and *gh*, in *fish*, *phone*, *cough*. But the principle remains generally applicable: one letter for each phoneme, one meaningless visual mark (letter) for each meaningless differentiating sound (phoneme).

The alphabet is unique among writing systems in that it is distinctively orality-friendly and computer-friendly. It is orality-friendly because, as has just been noted, it operates visually the way all speech in any language operates orally: oral words are made up of meaningless sounded phonemes, alphabetically spelt words are made up of corresponding meaningless visible letters, one for each phoneme as a general principle (with some exceptions, as noted, that must be learned individually).

The alphabet is computer-friendly for reasons allied to those which make it orality-friendly: the English alphabet provides the computer with 26 meaningless letters out of which an absolutely unlimited number of

meaningful words can be constructed. The editor's Foreword states that *Webster's Third New International Dictionary* (1961) lists over 350,000 words and that "it would have been easy to make the vocabulary larger," but that would have called for a multi-volume work. The multi-volume *Oxford English Dictionary* (1989) contains only 290,500 "main entries," but provides more information on its entries. No one knows, or can know, how many words there are in English — or any other living language — made out of the repertoire of phonemes in a given language. Words can be added in indefinite numbers and are being added to English annually and daily and hourly. The English alphabet, like other alphabets, opens into a computer hacker's unbounded paradise.

Nonalphabetic writing systems, notably the Chinese, which can have advantages of various sorts over the alphabet, are severely handicapped for computer use (DeFrancis 1989: 266-267, etc.), chiefly because they lack a system of "clean" characters divested of all meaning. Chinese today can be written in an alphabetic text known as Pinyin, but cultural resistance to Pinyin is massive, and Pinyin would indeed make impossible the retention and conveyance of the rich layers of multiplex meanings with which individual Chinese characters are visually loaded. But to try to manage efficiently on a computer over 40,000 different characters, each loaded with often multiple nondetachable meanings, is a challenge that computer programmers simply cannot meet directly.

XI. Digitization, Alphabetization, and Print

The various alphabets have generally a fixed order in which the individual letters are situated when the alphabet is recited. In English, the order *a, b, c, d, ...z* is as fixed as that of the numerical digits *0, 1, 2, 3, ...9*. Our word *alphabet* derives from the first two

letters of the Hebrew alphabet, fixed in order with the rest of the alphabet: aleph (*a*) and beth (*b*). An individual who does not "know the alphabet" — which is to say, cannot repeat its letters automatically in their accepted fixed order — is impossibly handicapped in an

alphabetic literate culture. Alphanumeric systems are forms of digitization. Merging the order of the letters of the alphabet with the order of cardinal numbers, alphanumeric systems can of course be used in handwritten script as well as its sequels, printing from movable alphabetic type and, most intensively, in computer operations.

From its beginning in the mid-1400s, letterpress printing from movable alphabetic type created and used a huge number of separate, discrete, countable, cast type metal units, each bearing on its face an individual letter of the alphabet or a cardinal number or one of various other symbols — punctuation marks, %, #, and so on, all presorted in regular sequence into a case of type for use in composing text. Each individual type or numerical or other symbol is quite discrete, physically movable as a unit. These discrete units were assembled and locked into position by the tens of thousands and more in a printer's form (also spelt forme). The form was then locked into a printing press for the production of printed text.

(With the invention of the Linotype in 1884, separate letters could be cast together on one "slug" of type metal the required length of each line, so that a page of type was made up of prefabricated lines of letters and other writing units combined into text.)

The maneuvers in alphabetic letterpress printing involved digitization in that they called for operations with discrete units in carefully calculated fashion and with measurements galore for the line, the form, the size of the bed of the press, etc. More recent developments in print, beginning with offset printing and now running through the preparation of press-ready copy on computer disks, have drastically reorganized printing procedures and in doing so have only

advertised more and more spectacularly the connection of print with digitization. The binary digitization of the computer governs the present-day equivalents of the earlier and grosser forms of digitization, speeding them up astronomically.

But before our more recent and far more complicated digitizing developments, the world opened by print had shown its digitizing tendencies in ways still not all accounted for. The very existence of print soon favored the production in great quantity of dichotomized or binary outlines structured as today's binary computer flowcharts. Such outlines were known but rare in previous manuscript cultures because hand-copying of detailed branched dichotomized outlines was arduous and sure to result in many errors. Once such binary outlines had been set up and locked into place in type, hammering out perfect copies by the hundreds was easy.

Probably the most spectacular binary representations produced by print can be found in the hundreds of editions of printed books featuring dichotomized (that is, binary) outlines of human knowledge produced by the sixteenth-century educational reformer Peter Ramus (Pierre de la Ramée, 1515-1572) and his thousands of followers (Ong 1958 and 1983). In these binary outlines, found in hundreds of editions of books by Ramus and his followers, they constructed by the dozens what are in effect binary flowcharts suitable for computer programs without including as yet any idea at all of what a computer might be (see the scores of outlines in Ong 1983: vii-viii; Freedman 1985 and 1993; and the discussion in Leith 1990: 73-91). Ramism, supported by the digitizing bent of print, is a major span in the bridge between print and the computer.

XII. Some Digitizing Associations of Human Thought

The full history of digitization is certainly more complex than are the developments followed here, however central these may be. Aware of their limited scope, as well as their importance as leading into and on beyond the first full writing system known, what are we to make of these developments?

The movement of verbalization from its initial oral field of speech into the visual field of writing and its sequels of print and electronics was momentous and has by now been the subject of a vast number of studies. The development of digitization, more and more dominant in information and communication systems today, is tied to this movement from sound to sight. Vision presents its objects as extended in space. Texts, written or printed or electronic, exist in visual space, and hence are extended and divisible objects (see Bolter 1991). As visual, texts invite, at least in the imagination, division into discrete numerical units, which is to say, digitization.

Although the development of writing and print and more recently of electronics moved the dominating economy of verbal communication from the oral-aural world to the visual world of the text, it by no means eliminated the oral, for, after the invention of writing, people kept talking as much as ever or, even more. If a text functions truly as a text, it must be read — that is, moved in one way or another, directly or indirectly, from the silent world of the stable visual surface into the always moving, "alive" world of sound. It is thus bound to time, for all sound is an event in time, existing, as has been seen, only when it is going out of existence. Texts can seem to de-emphasize sound, but they can never eliminate it.

The complementary ally of vision is touch, for both vision and touch have to do with the extension of objects in space. The intimate relationship of vision and touch can be seen in the development of Braille texts for the blind.

Here touch, not sight, transforms the oral into the spatial.

But vision and touch contrast in their separate relationships to space. Where touch demands maximum proximity — physical contact between the sensory apparatus and its object — vision demands always at least some distance, and in this sense encourages abstraction, in the sense of the distancing of the knower and the known. Physical contact between eyeball and its object makes vision impossible. The eye must be at some distance from its object in order to see, and it negotiates immense distances with ease. We not only see mountain ranges a hundred miles away or more, but we also see stars which are billions of light years away (and thus no longer in the place to which direct eyesight assigns them).

For distancing, sight is more serviceable than touch, for touch always involves immediate awareness of the sensing being as well as awareness of the object sensed. I do not see myself seeing, hear myself hearing, smell myself smelling, or taste myself tasting, but I do feel myself feeling. We tell hardness from softness or the hot from the cold, or the rough from the smooth, etc. — for touch is not one sense but a bundle of many senses — by feeling self and object simultaneously and experiencing the interaction between the two. Still, despite its involvement with the knowing subject, touch more irrefutably than sight provides evidence of the discreteness of objects which digitization demands. Feeling the space or distance between two objects is often surer evidence that the space is there than observation by sight.

Human understanding of anything profits from its affiliation with both touch and sight in the sense that human knowledge is maximized when it commands both proximity and distance. To know something as fully as possible, we need to be close to it (physically

or experientially, intellectually, emotionally, and in every other possible way) and we need at the same time to be distanced from it, to have it "in perspective," an object notably distinct from ourselves. Sound is more distancing than touch (as well as more distancing than the other senses of smell and taste), but never at all so distancing as is sight.

Eric Havelock (1963), with many others since, has made the point that one of the principal advantages of (visually perceived) writing is the distancing of the knower from the known. Writing represents the object of knowledge as "out there," in the text. The hearers listened to Homeric oral epic songs not to be able to analyze Achilles' and others' characters or motives, not to stand back at a psychological distance and assess the characters and motives "objectively," but to identify with the characters and their motives. The same nonanalytic, appropriative sensibility is found in hearers of other oral epics across the world to this day (Foley 1987: and *passim*). The auditors listen not to achieve abstract understanding of their culture and its heroes but precisely to be "with it" (close to it, merged with it). With writing, merging of oneself with the thing known could be and often was downplayed: unlike oral speech, a written text was something "out there," separate from the reader, and knowing came to be felt more and more as a matter of dealing with "objects," separate from the self and analyzable, that is, admitting of intellectual "dissection."

Given that writing is a technological product storing knowledge outside the human individual and thus encouraging a sense of the known as separate from the knower, it appears to be no accident that the prehistory of writing begins with enumeration of visible, material commodities, object-things seen and/or felt as distinct from human thinkers and verbalizers, such as Schmandt-Besserat finds in the commodities with which the Near East tokens deal. This is to say that the object-world in oral mythopoetic cultures innocent of writing tends to be psychologically merged with the

subjective world more intimately than is usual in chirographic, or, even more, in print cultures. Plato, who wanted to do away with mythology in favor of hard-nosed *logos*, although he professed to despise the textualized word, nevertheless produced large numbers of texts and evinces deep textual-visualist alliances (Ong 1988 [1982]: 78-83) in his insistence that the philosopher was not to identify himself with the object of his thought but ideally to distance himself maximally from all physical objects by betaking himself to the purportedly pure, immaterial, immobile world of "ideas" (the Greek root of which refers to vision and is allied to this English term). This Platonic ideal of distantiation we know was connected with the currency of written texts, unknown in Homer's milieu.

Writing, as has been seen, had been historically exceedingly hard to achieve. The first full writing in human history, as several studies reviewed here have shown, was arrived at only circuitously. Schmandt-Besserat's work shows that the route was more circuitous and complex than had been thought. The earliest known immediate antecedent of writing was not a system of marks on a two-dimensional surface apprehended by vision such as matured texts would be, but rather a three-dimensional system of accounting which was both visual and highly tactile in operation, and was in fact a system of digitization in the ordinary sense of this term, calculation by discrete units — as three-dimensional moveable objects, *very* discrete — even grossly so. Originally, writing was not so much a "communication" device (involving interchange between two conscious persons) — although it was this to some extent — as it was a simple "information" system (a coding system), although it was not entirely this either. The way into writing remains, psychologically and sociologically, somewhat mysterious. At the heart of the mystery is the role that digitization, now matured in the computer, played in the ways human beings stumbled into writing in the first place.

References

- Barrow, John D. 1992. *Pi in the Sky: Counting, Thinking, and Being*. Oxford: Clarendon Press.
- Bolter, Jay David. 1991. *Writing Space: The Computer, Hypertext, and the History of Writing*. Hillsdale, NJ/Hove/London: Lawrence Erlbaum Associates.
- Clanchy, M. T. 1979. *From Memory to Written Record: England, 1066-1307*. Cambridge, MA: Harvard University Press.
- Coulmas, Florian. 1989. *The Writing Systems of the World*. Oxford: Basil Blackwell.
- DeFrancis, John. 1989. *Visible Speech: The Diverse Oneness of Writing Systems*. Honolulu: University of Hawaii Press.
- DeFrancis's work is impressively comprehensive and up-to-date. The literature with which his work interlocks is massive and dizzying, and, for the most part, I make reference to his work alone when dealing with matters where his positions are relevant and are notably well-founded; referring to his ample notes and bibliography the reader who may want to examine other authors perhaps contesting or qualifying DeFrancis's positions. The alternative would be impossible clutter.
- Foley, John Miles (ed.). 1987. *Comparative Research in Oral Traditions: A Memorial for Milman Parry*. Columbus, OH: Slavica Publisher.
- Foley, John Miles (ed.). 1981. *Oral Traditional Literature: A Festschrift for Albert Bates Lord*. Columbus, OH: Slavica Publishers.
- Freedman, Joseph S. 1993. "The Diffusion of the Writings of Petrus Ramus in Central Europe, c.1570-c.1630." *Renaissance Quarterly* 46.1 (Spring): 98-153. Reproduces scores of printed outlines, mostly binary or dichotomized, showing the intrinsic relationship of individual subjects in academic curricula to one another. The binary outlines here are the equivalent of binary computer flow-charts (see Ong 1983: vii-viii). The science of discovering these relationships was known as *technologia* or, in English, technology (the *logos* or science of the interrelationship of each *techne* or art to the others — the original meaning of the term "technology").
- Freedman, Joseph S. 1985. "Philosophical Instruction within the Institutional Framework of Central European Schools and Universities during the Reformation Era." *History of Universities, Vol 5*. Oxford: Oxford University Press. 117-166. Reproduces many outlines continuous with those in Freedman's work here above.
- Gronbeck, Bruce E., Thomas J. Farrell, and Paul A. Soukup, eds. 1991. *Media, Consciousness, and Culture: Explorations of Walter Ong's Thought*. Newbury Park, CA/London/New Delhi: Sage Publications.
- Havelock, Eric A. 1963. *Preface to Plato*. Cambridge, MA: Belknap Press of Harvard University Press.
- Leith, Philip. 1990. *Formalism in AI and Computer Science*. New York/London: Ellis Horwood Division of Simon and Schuster.
- Ogawa, Yoshio, and Jun'ichi Sato. 1963. *Colloquial Japanese in Four Weeks*. Tokyo: Daigakusyoin.
- Ong, Walter J. 1988. *Orality and Literacy: The Technologizing of the Word*. London/New York: Methuen, 1982 — all printings 1988 ff., London/New York: Routledge.
- Ong, Walter J. 1983. *Ramus, Method, and the Decay of Dialogue*. Cambridge, MA: Harvard University Press. (Paperback edition with added Author's Preface). Originally: Cambridge, MA: Harvard University Press, 1958.
- Ong, Walter J. 1967. *The Presence of the Word*. London/New Haven: Yale University Press.
- Ong, Walter J. 1958. *Ramus and Talon Inventory*. Cambridge, MA: Harvard University Press. 1958.
- Schmandt-Besserat, Denise. 1992. *Before Writing*. Foreword by William W. Hallo. Vol. I: *From Counting to Cuneiform*. Vol. II: *A Catalogue of Near Eastern Tokens*. Austin: University of Texas Press. To avoid clutter, Schmandt-Besserat's references to other authors' works and to her own earlier works on which she bases one or another statement are not repeated here. The authors and works can easily be identified and retrieved by consulting the pages in *Before Writing* to which reference is here made.
- Schmandt-Besserat, Denise. 1979. "Reckoning before Writing." *Archaeology*. Vol. 32: 23-31. All references in the text to Schmandt-Besserat are to the preceding comprehensive work listed here, which subsumes material in this present work.

Part Two

A Review of Some Recent Studies on the Origins of Notation and Writing By W. E. Biernatzki, SJ

I. Paleolithic Notation

Alexander Marshack. *The Roots of Civilization: The Cognitive Beginnings of Man's First Art, Symbol, and Notation*. New York: McGraw-Hill. 1972.

Alexander Marshack. *The Roots of Civilization - Revised and Expanded*. Mount Kisco, NY: Moyer Bell Ltd. 1991.

Alexander Marshack. "Images of the Ice Age." *Archaeology*, Vol. 48, No. 4 (July-August, 1995), pp. 28-36, 38-39.

Alexander Marshack. "A Middle Paleolithic Symbolic Composition from the Golan Heights: The Earliest Known Depictive Image." *Current Anthropology*, Vol. 37, No. 2 (April 1996), pp. 357-365.

Elkins, James. "On the Impossibility of Close Reading: The Case of Alexander Marshack." *Current Anthropology*. Vol. 37, No. 2 (April 1996), pp. 185-226 (with comments from invited experts).

Alexander Marshack's interest in Upper Paleolithic notation systems began, paradoxically, with his collaboration on a book about the United States space program, in the early 1960s. His task was to supply "the historical and scientific background for the lunar program" (Marshack 1991: 10). In his struggles "to get a clear picture of how or why the space age had developed, or what ... it meant" (*ibid.*), Marshack was drawn further and further back into the history and prehistory of humankind's efforts to understand and record their perceptions of natural phenomena. He was impressed with the continuity he found between the human intellectual activities involved in the space program and those of people, with the same basic mental capacities, in both contemporary "primitive" societies and as far back as the Upper Paleolithic cultures of the late Pleistocene (p. 11).

The continuities he found contrasted sharply with prevailing historical theories that

characterized science, near-science, civilization, and writing — which made history itself possible — all as beginning "suddenly," with little indication of the antecedents out of which they had developed. "I was disturbed by the series of 'suddenlies'," he says (1992: 11).

It seems likely that such already-refined and complex cultural products could not, like the goddess Athena, have "sprung fully-armed from the brow of Zeus," but must have gone through a long period — centuries, millennia, even tens of thousands of years — of incubation, accretion, and gradual development before they appeared in the historical record — or even the archaeological record. Any description of that development would depend on the refinement of methods of archaeological analysis that could coax latent meanings out of the dead, static and voiceless evidences from prehistory.

An aspect fundamental to a scientific view

of the world is what Marshack calls "time-factoring," the consciousness of time, its cyclical manifestations and attempts to measure and record its passage. As agriculture and animal husbandry became significant sources of human subsistence, in the late Pleistocene and early Holocene, time, too, became more important to humans than it had been in a hunting-gathering subsistence economy. Game animals and naturally-occurring foods were affected by annual cycles of hot and cold, or wet and dry seasons, and human survival always had depended on appropriate responses to them, but those cycles became even more critical as people were forced to become attentive to their effects on the reproductive seasons of the animals they herded and the growing seasons of the crops they planted and harvested. Those cycles and the even more mysterious cycles of the moon and changes in positions of stars and planets assumed greater significance for primitive gardeners and herders.

Marshack's attention focused on a large number of incised bones from the Neolithic and Upper Paleolithic periods found in museum collections. Close analysis suggested that some of them could be interpreted as "calendars," with the incisions grouped to represent the changes observed in the moon as it went through its monthly cycles (Marshack 1991: 27-34, 125-168, and *passim*; Marshack 1972: *passim*). He extended his studies —

which included microscopic analysis of incisions to deduce such information as the relative order of the different strokes, the kinds of cutting tools used, the left- or right-handedness of the artisans, and distinguishing man-made cuts from animal tooth-marks. He also extended his studies back in time to include notations that might have been made by Neanderthals (e.g., 1991: 349, and figure 209; and 1996). In addition to stone and bone artifacts, he has analyzed cave paintings and such items as a small piece of carbonized, fossilized cord found in association with the cave paintings of Lascaux, in France, to gain as full as possible a picture of human life and symbolic activity in various periods, but especially the Upper Paleolithic (1991: 367-373; 1995).

Elkins (1996) has raised questions about Marshack's methodology of "close reading" of the archaeological evidence, particularly the inscribed bones. While expressing respect for Marshack's work, he finds a number of assumptions in it that have not yet been addressed, and that consequently leave unanswered questions about how to evaluate it (Elkins 1996: 200-201).

Schmandt-Besserat (1992: 160) seems to represent the reactions of many to Marshack's theory of lunar notations when she says that it "cannot be proven or disproven nor can it be ignored" (as quoted by Elkins, 1996: 186).

II. "Old Europe" and "The Goddess"

Marija Gimbutas. *The Civilization of the Goddess*. San Francisco: HarperSanFrancisco. 1991.

Ronald S. Stroud. "The Art of Writing in Ancient Greece." In Wayne M. Senner (ed.). *The Origins of Writing*. Lincoln, Nebraska/London: University of Nebraska Press. 103-119. 1989.

Archaeologists have long recognized the existence of an Upper Paleolithic and Neolithic "Mother-Goddess" cult in the Balkans, Anatolia and the Levant (e.g., Neuman 1953; Stone 1976; Gimbutas 1982). Gimbutas and others have credited the culture that surrounded that cult, as it existed in the Balkans and around the western shore of the

Black Sea between about 6000 and 4000 BC, to an independent civilization which they say shows evidence of having had a written script around 2000 years prior to the earliest cuneiform in Mesopotamia or hieroglyphs in Egypt (Gimbutas 1991:308). According to Gimbutas, the Old European script:

... was developed ... from a long use of graphic symbolic signs found only within the context of an increasingly sophisticated worship of the Goddess. Inscriptions appear on religious items only, indicating that these signs were intended to be read as sacred hieroglyphs. (*ibid.*, p. 308)

The script was first noted in a site of the early Vinča culture in Transylvania in 1874, then most notably at Cluj, Transylvania, in 1961. Altogether, it has been found in nearly 100 sites in the vicinity of the Black Sea, according to Gimbutas; and she regards it as "a universal feature of the most advanced cultures of Old Europe during the sixth and fifth millennia BC" (*ibid.*, p. 309).

Gimbutas cites Winn (1981) as having catalogued 210 recognizable signs, and goes on to claim that

This juxtaposition of images goes beyond simple repetitive magic to become an abstraction capable of expressing subtle distinctions. It is for this reason I believe that the Old European sign system developed into a script from extensive use of very ancient symbolism. It is possible that certain symbols could have a phonetic value much earlier than the sixth millennium B.C. (*ibid.*, p. 316).

Stamp seals with handles bearing this script have been dated from the seventh and sixth millennia, from this area (p. 316), and cylinder seals were in use by about 5000 BC (p. 319). By that time, according to the same author, "this combination of signs represents the incipient phase of early writing" (*ibid.*). An earlier phase lasted from about 6000 to 5300 BC, and was followed by the Climactic Phase, from 5300 to about 4000 BC, in which the symbol system is said to have advanced beyond a "pre-writing" to become "a script of its own kind" (*ibid.*). By about 4000 BC, however, the script had disappeared from Danubian sites, although it survived in the Aegean area, along with survivals of the Old European culture, for 2,000 years longer, according to Gimbutas (*ibid.*).

The Old European "script" remains as undeciphered as does the "Linear A," to which Gimbutas speculates it may be related (pp. 319-320). According to Stroud (in Senner, 1989: 103-119), Linear A, which appeared by about 1650 BC, and is found in Crete and many sites on the Greek mainland and islands (p. 107), is known to have been a syllabary, like Linear B, which may have been derived from it. Linear B has been deciphered and is recognized as Greek (pp. 108-109), but Linear A apparently is not Greek (p. 106).

III. More on Tokens and Cuneiform

Denise Schmandt-Besserat. "Two Precursors of Writing: Plain and Complex Tokens." In Senner. pp. 27-41. 1989.

M. W. Green. "Early Cuneiform." In Senner. pp. 43-57. 1989.

C. B. F. Walker. "Cuneiform." In, *Reading the Past: Ancient Writing from Cuneiform to the Alphabet*. Berkeley/Los Angeles/London: University of California Press/British Museum. 15-73. 1990.

Bruce Bower. "The Write Stuff: Researchers Debate the Origins and Effects of Literacy." *Science News*. Vol. 143, No. 10 (March 6 1993), pp. 152-154.

Hans J. Nissen, Peter Damerow, and Robert K. Englund. *Archaic Bookkeeping: Writing and Techniques of Economic Administration in the Ancient Near East*. Chicago: University of Chicago Press. 1994.

Harriet Crawford. Review of Nissen, et al. *Antiquity*. Vol. 68, No. 260 (Sept. 1994), pp. 671-672.

Piotr Michalowski. Review of Nissen, et al. *Science*. Vol. 264, No. 5161, pp. 1019-1020. 1994.

The work of Schmandt-Besserat (1992) [which Walter Ong discussed in his section of this issue of *Trends*], emphasized the use of tokens for a form of digital communication in the late Mesopotamian Neolithic. She went on to describe the evolution of graphic communication from that phase through a combination of tokens in token-impressed clay "envelopes" or of tokens strung on strings attached to clay plaques or "bullae," then to clay tablets impressed by tokens and/or seals, and finally to the stylus inscriptions on tablets that constituted early cuneiform writing.

Schmandt-Besserat covered the same ground in summary form in her contribution to Senner's book (1989: 27-41), where it serves as a prelude to the discussion of early cuneiform, by Green (1989), and of the development of the alphabet, by Cross (1989).

As the symbolization process became increasingly more complex, in the late fourth millennium BC, Schmandt-Besserat describes how token-impressed clay envelopes were replaced by solid tablets impressed, like the envelopes, with the forms of simple tokens, but with the information previously supplied by complex tokens now "perpetuated on the tablets by signs written with a stylus" (Schmandt-Besserat 1989: 37). The message on the tablet therefore was communicated with the only involvement of tokens being as instruments and models for the impressions and incisions.

Schmandt-Besserat's research is seminal and generally highly regarded, but Crawford (1994) calls her theory "somewhat controversial," and Bower (1993) cites Michalowski (source not given) as questioning Schmandt-Besserat's implication that cuneiform evolved gradually from counting devices, on the grounds that tokens of similar shape were used in different ways in different Near Eastern cultures, that the uses of most tokens are uncertain because their provenance

(house sites, administrative buildings, etc.) is unknown, and that the marks on the clay envelopes do not closely resemble early cuneiform symbols. In addition "X-ray studies of Sumerian clay balls have shown that the number and type of tokens inside do not always correspond to markings on the outside..." (Bower 1993).

Green takes up the description of how the process of cuneiform development continued:

At first the signs were drawn smoothly in the barely moist clay surface with a pointed tool, but soon the technique of impressing the sign's outline into the clay with a narrow reed stylus was adopted. This latter method gave cuneiform its characteristic wedge-shaped appearance and began the process of reducing the original pictorial signs to conventionalized line combinations. (Green 1989: 44).

As development continued, curves became straightened, while angles and fine details were eliminated. "Thus originally circular shapes gradually evolved into squares, and triangular shapes into rectangles, and the facial details of signs representing animals or men disappeared" (*ibid.*).

Walker notes that earlier views of the origin of writing held that it took place in the Mesopotamian city of Uruk, slightly before 3000 BC, but that now, widespread discoveries of contemporaneous evidence in Iraq, Iran and Syria suggest that a single geographical source cannot be pinpointed (Walker 1990: 17-19).

Uruk nevertheless remains a rich mine of information about late fourth millennium BC cuneiform writing and the civilization that developed it, as is evident from the studies of the Berlin team led by Hans Nissen (Nissen, et al., 1994; as reviewed by Crawford, 1994, and Michalowski, 1994). This is true despite the less-than-ideal state of the evidence. Factors

that have made the work of the present research team more difficult, as related by Powell, are:

... most of the tablets themselves were used as fill ... the [1920s] excavation records were inadequate to begin with ... irrational disposition of tablets between museums, overworked (and underpaid) museum staff, conflicting interests, human error, the turbulent political conditions of the twentieth century, and the usual disparity between good intentions and reality ... (Powell 1997).

The earliest Uruk tablets, dating from about 3100 BC, may not be "strictly linguistic" (Michalowski 1994). Instead, meaning could have been expressed by "a variety of different vehicles," such as the shape of the tablet, "the arrangement of inscribed symbols," or signs for numbers. The oldest texts from Uruk used "five major notational systems as well as

several derived ones," each for a different purpose (records about cattle, beer, grain, etc.). Earlier tablets used "about 1200 separate signs," but by the first millennium BC the number was reduced to around 300, total, and "just over 100" in letters and administrative documents. The Berlin research is especially important for the light it sheds on the early development of mathematics (*ibid.*).

In spite of the changes from a pictorial to a cuneiform script, the signs "are still largely logographic, that is to say that they use one sign or sign-group for each term or concept without adding grammatical elements" (Green 1989: 21). This fact imposed serious limitations on the amount of information that could be conveyed through the script. One might know that the message is about a certain number of cows, but there would be no way of knowing whether they were alive or dead, going or coming, etc. (*ibid.*).

IV. Predynastic Egypt

David Dalby. "An Inspired Invention: Hieroglyphic Writing in Africa." *UNESCO Courier* (April), pp. 22-23. 1995.

William S. Arnett. *The Predynastic Origin of Egyptian Hieroglyphs*. Washington, DC: University Press of America. 1982.

Henry George Fischer. "The Origin of Egyptian Hieroglyphs." In Senner. pp. 59-76. 1989.

W. V. Davies. "Egyptian Hieroglyphs." In *Reading the Past: Ancient Writing from Cuneiform to the Alphabet*. pp. 75-135. 1990.

Nicholas Postgate, Tao Wang, and Toby Wilkinson. "The Evidence for Early Writing: Utilitarian or Ceremonial?" *Antiquity*, Vol. 69, No. 264: 459-480. 1995.

Evidence is ambiguous, and interpretations conflict, concerning the origins of writing in pre-dynastic Egypt. David Dalby reports speculation among some Africanists that "certain traditional African symbols ... were inspired by Ancient Egyptian hieroglyphs," but he adds, "It is more probable, however that the hieroglyphs themselves drew an important part of their inspiration, 5,000 years ago, from even older traditions of graphic symbolism in Africa itself." As likely sources of this influence, he singles out symbol systems in the Cross River

area of southeast Nigeria, where the Nsibidi (or Nisibiri) symbol system was used among speakers of Ekoi, Igbo and Ibibio languages to record narratives. Especially intriguing is the tradition that "the secrets of Nsibidi were long ago revealed to men by a species of large baboon called idiok. This legend is above all reminiscent of the divine baboon associated with Thoth, the patron of scribes in ancient Egypt" (Dalby, 1995). Movement across what is the now almost impassible intervening desert was much easier prior to 3000 BC, when the

transition to the present arid period took place (Schiffers, 1978).

William S. Arnett (1982) developed an argument for the origin of hieroglyphs in incised pot markings in Upper Egypt (p. 1). These marks seem to indicate ownership, not art, and Arnett feels they "represent a need of the late Predynastic and early Dynastic Egyptians to develop a system of writing" (p. 5). The earliest example he cites was a shard from Deir Tasa, in Middle Egypt, dating from about 4000 BC. The "red crown" sign appeared by 3600 BC (Arnett 1982: 19).

Fischer, however, says that the evidence that potters' marks were an early form of writing "strains credulity" (1989: 65). In a footnote, he adds that Arnett's argument has been "well-evaluated" by Ray (1986).

Postgate, Wang, and Wilkinson (1995) addressing on a broader geographic scale the question of the relationship between isolated signs and the beginnings of true writing, make the following observations:

The complex iconography of the Olmec, although perhaps evidence for the beginning of permanent record-keeping, cannot be considered true writing. The same difficulties surround some of the symbols on early Chinese pottery, and similar marks found in many cultures including the earlier phases of Mesopotamian and Egyptian civilization. ... Symbols may well perform a similar function to writing, such as making a statement of ownership; the difference is that writing needs always to correspond to a segment of language ... While it is reasonable to deny that a single sign on a potsherd proves the existence of writing, it may be difficult to decide whether a combination of such symbols represents a writing system if their meaning is unknown. (1995: 459).

Fischer recognizes that Sumerian influence on early Egyptian writing "was profound and catalytic ... The contact from Mesopotamia was direct, almost certainly by ship, around the Arabian coast to the Red Sea and thence

probably overland, through the Wadi Hammamat." Early imports included the cylinder seal (Fischer, 1989: 61).

The apparently general consensus about the influence of Sumer on the origins of Egyptian phonetic writing stems partly from lack of evidence of any "period of incubation" for writing in Egypt at a time when Sumerian writing shows ample evidence of gradual evolution, at least according to some interpretations. Nevertheless, when Egyptian writing did appear, it was very different from that of Sumer:

If it seems apparent that the idea of writing was borrowed from the Sumerians, by whom the Egyptians were so profoundly influenced in other ways, it is equally clear that the Egyptian system was very different both in form and in the use to which it was put. (Fischer 1989: 62).

Cross (1989: 77) is even more doubtful about the degree of Mesopotamian influence on early Egyptian writing. He says that, granting there was any connection at all, "the only element of influence was the idea of writing in pictographs" (Cross 1989: 77).

Bower (1993) discusses two opposed theories about the emergence of literacy in ancient cultures: a generally accepted one that writing systems evolved gradually out of mostly pictographic antecedents, and a more recently developing view that a few innovators in the several ancient cultures where writing originated "took no more than a century to introduce a script where none had previously existed" (*ibid.*).

The latter view, which Bower credits to Piotr Michalowski, among others, would be the one more consistent with the rather sudden appearance of both Sumerian cuneiform and Egyptian hieroglyphs in the archaeological record. Bower attributes to that camp the claim that while writing provided a new means of communication, it "did not revolutionize the way people think; rather, it provided a powerful new way to transmit previously existing ideas and removed the necessity of

memorizing huge chunks of knowledge" (*ibid.*).

The opposing position, represented, according to Bower, by psychologist David R. Olson of the University of Toronto "in a series of papers published during the 1980s" (not further sourced by Bower), that "widespread reading altered human thought enough to make modern science possible." According to Bower, Olson says that "literacy encouraged people to write with the express purpose of formulating new knowledge, fostered the separation of data from interpretation, and sparked the development of concepts necessary for scientific inquiry" (Bower 1993).

Egyptian hieroglyphs showed much greater naturalism than Mesopotamian cuneiform, and

that naturalism endured for 3,000 years. The Egyptian system also developed a more cursive form — the hieratic script — and made greater use of the rebus principle, which assigned phonetic values to pictograms (*ibid.*, p. 62).

Sumerian writing, unlike Egyptian, did not remain frozen in the essentially pictographic reference which even cursive Egyptian retained but moved, slowly but resolutely, to a true phonetic syllabary. The greater flexibility of syllabic cuneiform permitted its adaptation to other languages (Green, 1989: 46-51; cf.: Fischer, 1989:62-63; Walker, 1990: 50-57), while Egyptian hieroglyphs had to remain largely within the Egyptian language area (Fischer 1989: 71).

V. Other Writing Systems

Jonathan Mark Kenover. "Birth of a Civilization." *Archaeology*, Vol 51, No. 1 (Jan.-Feb.), pp. 54-61. 1998.

Wayne M. Senner (ed.). *The Origins of Writing*. Lincoln, Nebraska/London: University of Nebraska Press. 1989.

Reading the Past: Ancient Writing from Cuneiform to the Alphabet. Berkeley/Los Angeles/London: University of California Press/British Museum. 1990.

Indus Valley

The relationship between the Indus Valley civilization and that of Mesopotamia remains uncertain, as is the degree of independence between the two writing systems. Kenover sees some early signs of the use of graphic symbols in the designs painted on sixth millennium BC pottery found at Mehrgarh, Pakistan, which appear to replicate even earlier motifs on woven baskets. He says that the designs "undoubtedly had some ritual significance or were symbols that served to distinguish different family groups or communities" (Kenover 1998: 56).

By 2800 BC many Indus Valley cultures had seals with geometric designs (*ibid.*). By that time, too, potters were marking their wares with symbols, and users or owners scratched graffiti on pots. But Kenover cautions, "many similar symbols are used today by illiterate people in the region, and for that reason scholars do not feel they are related to the

development of writing" (p. 57). Around 2600 BC, at Harappa, however, "there is some evidence that certain patterns of symbols on the pottery are in fact an early form of writing that may identify a vessel's owner, its contents, or perhaps a deity to whom the contents were dedicated" (*ibid.*).

By 2600 BC, too, writing on clay tablets had become widespread and fully developed in the Indus Valley. The sites of Harappa and Mohenjo-daro have yielded 3,700 examples, mostly on small shards less than one inch across. The average length of the Indus inscriptions found is five signs, and the longest is only 26 signs. The script was read from right to left, although some texts reverse the order on alternate lines. Between 400 and 450 graphemes have been distinguished (*ibid.*, p. 58).

Rapid change in the script is one factor that has blocked deciphering of Indus Valley writing. There is no evident link between

Indus and Mesopotamian writing. Some similarities in symbol shape do seem apparent between Indus script and the proto-Elamite script used in Iran around 2900 BC, even though the order in which the symbols were used is quite distinct; so any relationship would have to have been indirect. Speculation about a proto-Dravidian connection would be more likely than any connection with Sanskrit, according to Kenover (1998: 58-59, box).

China

David N. Keightley. "The Origins of Writing in China: Scripts and Cultural Contexts." In Senner. pp. 171-202. 1989.

Keightley emphasizes the close association of the first writing in China with "the great shift from Neolithic culture to Bronze Age civilization," during the second millennium BC (In Senner, 1989). The birth of the Bronze Age in China was spectacular, marked especially by the bronze vessels of the Shang Dynasty. The earliest writing was more subtly, but no less intriguingly, expressed in the form of divination inscriptions on the so-called "oracle bones," dating from the Shang Dynasty, which was dominant in much of China's central plain from about the middle sixteenth century BC (*ibid.* 1989: 179), and their use may have continued into the early Chou Dynasty, which replaced the Shang in the middle eleventh century, BC (*ibid.*, and footnote 6, p. 199).

The bones, mainly turtle shells and bovine shoulder-blades, were marked with characters then heated until they cracked — the direction of the cracks indicating the "correct" prophecy among the several possible answers suggested by the inscriptions. Although this practice, "pyromancy," is widespread in archaeological sites in Asia and North America from as far back as the late Pleistocene, only in China has it been accompanied by inscriptions and, in some cases, by painted characters (*ibid.*, 182).

Many of the characters used are recognizably ancestral forms of Chinese characters in use today (*ibid.*, p. 184).

Keightley, citing Gelb (1963) and Ho (1975), contends that the invention of writing in China was purely indigenous, owing nothing to "any genetic connection to Sumerian, Egyptian, or Hittite written forms" (Keightley 1989: 187, and footnote 11 on p. 200). He denies, however, that "certain scratches" on pottery of the Yang-shao neolithic culture of the fifth millennium BC represented the world's oldest writing system, as claimed by some scholars (*ibid.*, pp. 187-188).

Maya

Floyd G. Lounsbury. "The Ancient Writing of Middle America." In Senner. pp. 203-237. 1989.

No one claims world chronological precedence for Mayan or pre-Mayan writing, whose earliest definite surviving examples date from early in the first millennium, AD, but it is important as an apparently wholly independent invention, perhaps among the Olmec (1200-400 BC), although, as noted earlier, Postgate, Wang, and Wilkinson (1995) do not consider the Olmecs' "complex iconography," out of which the Mayan system most likely developed, to be true writing.

The Middle American calendrical system, however, dates from at least 500 BC, and is more accurate and sophisticated than the European calendars invented later. A Middle American chronology was projected back to 3113 BC (In Senner, pp. 204-205), although that does not imply that an actual calendar existed from that date, any more than the Julian calendar of Western Europe existed in 4713 BC, although it could account for dates that ancient (*ibid.*). It seems hard to believe that the calculations necessary to create such a calendar could be done without an advanced notation or numbering system of some sort.

VI. Alphabets

Frank Moore Cross. "The Invention and Development of the Alphabet." In Senner. pp. 77-90. 1989.

John F. Healey. 1990. "The Early Alphabet." In *Reading the Past: Ancient Writing from Cuneiform to the Alphabet*. 197-257. 1990.

Healey notes that Near Eastern civilizations were using a large number of syllabic symbols by 1700 BC. Since syllables contain two or more sounds — a vowel and one or more consonants — the number of characters required to fully represent all the syllables of any language is necessarily large. The cuneiform syllabary in use in Mesopotamia by the middle second millennium, BC contained almost 600 signs. The invention of an alphabet, which could represent the same language in as few as 25 to 35 characters, was obviously a major breakthrough permitting both more efficient communication and easy learning, with consequently greater possibilities for the spread of literacy among more people (Healey, 1990: 201).

Between about 1500 and 1250 BC, early alphabetic inscriptions started to appear in two clusters: "Old Canaanite inscriptions, trans-

parently pictographic in origin, found in Syria-Palestine," and "Linear Phoenician inscriptions, easily read, an alphabetic script which is ancestral to the Old Hebrew, Aramaic, and Greek scripts," according to Cross (1989: 80).

Recent studies of a group of arrowheads inscribed with both scripts, and dating from about 1100 BC, now strongly suggest that Linear Phoenician was derived from Old Canaanite (*ibid.*, p. 81). Ugaritic script, a 29 grapheme cuneiform alphabet for "an early Canaanite dialect of the fourteenth century BC," is one of several similarly-dated examples of what "should be called the Canaanite cuneiform alphabet" (p. 84). The order of the signs in the Ugaritic system is identical to that of Hebrew, Aramaic, and Greek (*alp, bêt, gaml, etc., α, β, γ, etc.*) (pp. 84-85).

Perspective

When all the arguments have been reviewed, a "big picture" of the origin of writing and its context seems to emerge that says something interesting about human beings. Some Middle Eastern archaeologists have leaned towards a "sudden burst" theory of the development of writing. The evidence in favor of that view appears strong, in the light of what we have seen, above.

Writing appeared only when proto-civilizations had developed to the stage where they needed it, whether for record keeping, for stabilization of religious practices and ensuring continuity of religious traditions, or for governing widespread empires. Notations by lines scratched on wood or bone were sufficient for the postulated calendar makers of the Pleistocene. Simple tokens seem to have

been adequate for exchanges of animals, grain and land in horticultural and early agricultural societies. But when urban centers expanded and diversified, something more was needed to keep order in social and economic transactions among growing populations. The need was urgent, and human resourcefulness was equal to the challenge: inventing new modes of communication in a relatively brief time.

Nothing is invented without reference to its antecedents with similar functions, but the evidence suggests that writing systems emerged with relative suddenness, in forms complex enough to be fully adequate to the needs of their day. This appears to have happened in Sumer, Uruk, and related cities within a period of 200 years or less in the late fourth millennium BC.

It took slightly longer in Egypt, where, perhaps, the need for complex communication may not have been quite so urgent. But when it arrived it was adequate to the task at hand. And that task was somewhat different. In Mesopotamia, the focus was administrative; in Egypt, it was religious. In both places the art of writing was quickly applied to other tasks as well: especially that of making hard-copy recordings of the orally-transmitted lore that had long been used to make sense out of life — the "extended metaphors" that later traditions, viewing them from different perspectives, have disparaged as "mythology."

The same thing happened independently, in China and Meso-America. Neolithic cultures had little need of writing. But as civilizations in those places developed, together with the advanced agricultural technology that produced the food surpluses needed to make city life possible, the ensuing complexities of life created a need. Human resourcefulness — operating, it should be remembered, with the same mental equipment as had been available to Upper Paleolithic people — was equal to the challenge, and the various writing systems were soon available to meet local needs.

Those writing systems, in their initial forms, were adequate, but not always very efficient means of communication. Once established in a society and with thousands of people having invested years in learning its proper use, it became difficult to replace an entrenched, but awkward system such as pictographs, hieroglyphs or cuneiform, with one that was new and more efficient, such as an alphabet. The idea of alphabetical writing spread only slowly, aided in the Mediterranean by the wanderings of the Phoenicians.

China, on the other hand, after thousands of years of contact with other peoples' alphabetic systems, has begun only recently to move towards the adoption of an alphabet. In China's case, the more efficient system, the alphabet, has encountered a culture deeply conditioned to a non-alphabetic system, reinforced by a wealth of aesthetic and emotional associations of immeasurable depth.

In the electronic age, the process of change

and replacement continues. The digital codes of the computer now supplement alphabetical writing: The message is put in as an alphabet, flung up and down between earth and satellites as a digital system, then reconverted into alphabetic output. But the digital system is not exclusively a supplement to the alphabetic. It can also transmit sound and pictures — forms of communication that do not replace writing but do things it cannot do.

This new kind of communication, like its predecessors, arose in response to new needs. In its case, the needs were generated by technological advances in transportation, and consequently in trade and other human interactions, across long distances that put demands on existing communications systems which they could not satisfy.

The abundant new technologies have become available so rapidly and have become so familiar that we often cannot understand how we could have done without them, even ten years ago. ("Carbon paper! What's that?!")

Such an abrupt change in many of the ways we communicate is bound to bring about changes in the ways we think and see the world. Will those changes be as great as the changes that accompanied the invention of writing? Assuredly, they will be different, but they may have even greater impact than earlier changes. One reason is that in most countries with a high level of literacy they affect a much larger percentage of the population than had the invention of writing, which initially impacted only a very small segment of any country's population. Most not only did not know how to use writing, but in many cases did not even know of its existence. Today, only the most remote places are unaffected by computers. They are becoming part of schooling, from kindergarten on in many countries. And, once involved with computers one can hardly avoid being "upgraded" along with the machines, as technological change makes new applications possible.

The effects of this radical "upgrading" on our thought processes and worldviews will inevitably be great, but at this early stage its nature can only be guessed.

References

- Arnett, William S. 1982. *The Predynastic Origin of Egyptian Hieroglyphs*. Washington, DC: University Press of America.
- Bower, Bruce. 1993. "The Write Stuff: Researchers Debate the Origins and Effects of Literacy." *Science News*, Vol. 143, No. 10 (March 6), pp. 152-154.
- Crawford, Harriet. 1994. Review of Nissen, et al. (1994). *Antiquity*, Vol. 68, No. 260 (Sept.), pp. 671-672.
- Cross, Frank Moore. 1989. "The Invention and Development of the Alphabet." In Senner 1989: 43-57.
- Dalby, David. 1995. "An Inspired Invention: Hieroglyphic Writing in Africa." *UNESCO Courier*, April, pp. 22-23.
- Davies, W. V. 1990. "Egyptian Hieroglyphs." In *Reading the Past: Ancient Writing from Cuneiform to the Alphabet*. Berkeley/Los Angeles/London: University of California Press/British Museum. pp. 75-135.
- Elkins, James. 1996. "On the Impossibility of Close Reading: The Case of Alexander Marshack." *Current Anthropology*, Vol. 37, No. 2 (April), pp. 185-226 (with comments from invited experts).
- Englund, Robert K. and Rainer M. Boehmer. 1994. *Archaic Administrative Tests from Uruk: The Early Campaigns*. Berlin: Berliner Beiträge zum Vorderen Orient.
- Fischer, Henry George. 1989. "The Origin of Egyptian Hieroglyphs." In Senner 1989: 59-76.
- Gelb, I. J. 1963. *A Study of Writing*, revised edition. Chicago: University of Chicago Press.
- Gimbutas, Marija. 1991. *The Civilization of the Goddess*. San Francisco: HarperSanFrancisco.
- Gimbutas, Marija. 1982. *The Goddesses and Gods of Old Europe: 6500-3500 BC*. Berkeley: University of California Press.
- Green, M. W. 1989. "Early Cuneiform." In Senner 1989: 43-57.
- Healy, John F. 1990. "The Early Alphabet." In *Reading the Past: Ancient Writing from Cuneiform to the Alphabet*. 197-257.
- Ho, Ping-ti. 1975. *Cradle of the East: An Inquiry into the Indigenous Origins of Techniques and Ideas of Neolithic and Early Historic China, 5000-1000 BC*. Hong Kong/Chicago: Chinese University of Hong Kong/University of Chicago Press.
- Keightley, David N. 1989. "The Origins of Writing in China: Scripts and Cultural Contexts." In Senner, 1989: 171-202.
- Kenover, Jonathan Mark. 1998. "Birth of a Civilization." *Archaeology*, Vol 51, No. 1 (Jan.-Feb.), pp. 54-61.
- Lounsbury, Floyd G. 1989. "The Ancient Writing of Middle America." In Senner, 1989: 203-237.
- Marshack, Alexander. 1996. "A Middle Paleolithic Symbolic Composition from the Golan Heights: The Earliest Known Depictive Image." *Current Anthropology*, Vol. 37, No. 2 (April), pp. 357-365.
- Marshack, Alexander. 1995. "Images of the Ice Age." *Archaeology*, Vol. 48, No. 4 (July-August), pp. 28-36, 38-39.
- Marshack, Alexander. 1991. *The Roots of Civilization—Revised and Expanded*. Mount Kisco, NY: Moyer Bell Ltd.
- Marshack, Alexander. 1972. *The Roots of Civilization: The Cognitive Beginnings of Man's First Art, Symbol, and Notation*. New York: McGraw-Hill.
- Michalowski, Piotr. 1994. Review of Nissen, et al. (1994). *Science*, Vol. 264, No. 5161, pp. 1019-1020.
- Michalowski, Piotr. 1993. Review of Schmandt-Besserat (1992). *American Anthropologist*, Vol. 95, No. 4 (Dec.), pp. 996-999.
- Neumann, E. 1953. *The Great Mother: An Analysis of the Archetype*. Princeton: Princeton University Press.
- Nissen, Hans J., Peter Damerow, and Robert K. Englund. 1994. *Archaic Bookkeeping: Writing and Techniques of Economic Administration in the Ancient Near East*. Chicago: University of Chicago Press.
- Postgate, Nicholas, Tao Wang, and Toby Wilkinson. 1995. "The Evidence for Early Writing: Utilitarian or Ceremonial?" *Antiquity*, Vol. 69, No. 264, pp. 459-480.
- Powell, Martin A. 1997. Review of Englund and Boehmer. *The Journal of the American Oriental Society*.

Vol. 117, No. 3 (July-Sept.), pp. 608-609.

Ray, John D. 1986. "The Emergence of Writing in Egypt." *World Archaeology*, Vol. 17, No. 3, pp. 307-316.

Reading the Past: Ancient Writing from Cuneiform to the Alphabet. 1990. Berkeley/Los Angeles/London: University of California Press/British Museum.

Schiffers, Heinrich. 1978. "Sahara (Desert): Landscape and Environment." In *Encyclopaedia Britannica: Macropaedia, Vol. 16*. Fifteenth Edition. Chicago/London/etc.: Encyclopaedia Britannica, Inc., pp. 148-149.

Schmandt-Besserat, Denise. 1989. "Two Precursors of Writing: Plain and Complex Tokens." In Senner 1989: 27-41.

Schmandt-Besserat, Denise. 1992. *Before Writing. Vol. I: From Counting to Cuneiform*. Austin: University of

Texas Press.

Senner, Wayne M. (ed.). 1989. *The Origins of Writing*. Lincoln, Nebraska/London: University of Nebraska Press.

Stone, M. 1976. *When God Was a Woman*. New York: Dorset Press.

Stroud, Ronald S. 1989. "The Art of Writing in Ancient Greece." In Senner. 1989: 103-119.

Walker, C. B. F. 1990. "Cuneiform." In *Reading the Past: Ancient Writing from Cuneiform to the Alphabet*. Berkeley/Los Angeles/London: University of California Press/British Museum. 15-73.

Winn, Shan M. M. 1981. *Pre-Writing in Southeast Europe: The Sign System of the Vinča Culture, ca. 4000 BC*. Calgary: Western Publishers.

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Book Reviews

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Brants, Kees, Joke Hermes, and Liesbet van Zoonen (eds.). *The Media in Question: Popular Cultures and Public Interests*. London/Thousand Oaks, CA/New Delhi: Sage, 1998. Pp. viii, 184. ISBN 0 7619 5722 7 (hb.) \$79.95; 0 7619 5723 5 (pb.) \$32.95.

The contributors to this volume — from Dutch, Belgian, Danish, British, Finnish, Swedish, Australian, and American universities — focus on ethical questions affecting the mass media in a postmodern age, when the relationship between popular culture, profit, and the public interest has become obscured, and traditional norms of journalistic responsibility have been unable to cope with the new media genres that have appeared.

The book's fourteen main chapters are grouped under four headings corresponding to what the editors see as "four interrelated normative debates

on the responsibility of public and popular media" (p. 2). These are: "the classic debate on media regulation," "in search of the public interest," "the ethics of popular journalism," and "the politics of popular culture." These are preceded by an introductory chapter by the editors and followed by a concluding chapter by Kees Brants.

Peter Golding, in his chapter for the section on regulation, says that since "mass communication matters" (p. 7) in providing "the vehicles by which the symbols and values that people deploy in making sense of their lives are delivered and disseminated," it follows that "the search for criteria of media performance presupposes some sense of the public interest" (p. 16). But media cannot be treated in a vacuum, so "media regulation can only go hand in hand with other forms of intervention in public life" (p. 16).

Karen Siune asks whether, in view of recent changes in the media and their audiences, broadcasting policy has become redundant in Western Europe. Multiplication of channels and

ambiguities about the nature of the "public interest" and "public service" are factors making policy and regulation difficult, or even at times impossible. But Siune argues that "an ongoing discussion of what is needed in the sort of societies we want" is necessary to arrive at a realistic agenda on which to base media policies (p. 25).

Els de Bens addresses the tension between forces of convergence and the need for diversity in European television (pp. 27-37). Jan van Cuilenberg delves further into diversity and ways to achieve it, noting that "perfectly equal access" to the media, for persons and ideas, is the best "precaution against our own fallibility" (p. 48).

The "search for the public interest" is discussed by Jay Blumler with reference to "organized communications" (pp. 51-63), by Cees J. Hamelink for world communications (pp. 64-76), and by Ien Ang for communication theory in the postmodern world (pp. 77-88).

In the section on the ethics of popular journalism, Peter Dahlgren looks at the need to enhance the "civic ideal" in television journalism (pp. 89-100), Jan Wieten discusses "reality television and social responsibility theory" (pp. 101-112), Liesbet van Zoonen looks at "the ethics of making private life public" (pp. 113-123), and Kaarle Nordenstreng views professional ethics in journalism as in tension between excess "conformity with media organizations" on the one hand, and "a chaotic playground void of any rules," on the other (p. 131).

Stories of violence and the public interest are the concern of George Gerbner as he initiates the section on the politics of popular culture. In order to maintain the quality of our cultural environment the story-telling process must be diversified, pacified, democratized, and humanized, according to Gerbner (p. 145). Andrew Tudor is concerned with distortions in sports reporting, especially with regard to race (pp. 147-156). Joke Hermes discusses popular fiction (pp. 157-167).

In the concluding chapter, Kees Brants sums up the themes of the book as: "do we have to worry about the role of mass media in democracy, do we need regulation of media content and practice and if so, how much, and what is the media's role vis-a-vis the public?" (pp. 169-170).

The references follow each chapter. — WEB

Canary, Daniel J., and Kathryn Dindia (eds.)
Sex Differences and Similarities in Communication.

Mahwah, NJ/London: Lawrence Erlbaum Associates, 1998. Pp. xii, 468. ISBN 0 8058 2333 6 (hb.) \$99.95; 0 8058 2334 4 (pb.) \$45.00.

Although differences between men and women in the ways they communicate are so complex and changeable that full comprehension of them probably will be forever impossible, they are such a central factor in human society at all levels that an ongoing intensive effort to understand at least some of them is clearly a social-psychological priority. The 19 papers assembled by Canary and Dindia are mostly grounded in empirical research. The authors all are based at United States universities.

In their prologue, the editors list five "issues" they find recurring in the papers: 1) whether to focus on differences or on similarities; 2) how to define "slippery terms," such as "sex," "gender," and "communication"; 3) how to control for moderating contextual factors; 4) how communication theories can be employed to study the link between sex/gender and communication; and 5) whether sex and gender differences are being looked for in the area of instrumentality, as some of the papers in the volume do, or in that of communality, as other papers do (pp. 2-9).

Julia T. Wood and Kathryn Dindia set the stage for the other papers in chapter one, where they dialog about, and to some degree resolve some of their past disagreements about differences between men and women. Wood holds that gender differences are more significant than sex differences; while Dindia argues that gender differences are relatively minor, but also that "sex differences have little effect on personality and social behavior," and that differences are so minimal that men and women should not be labeled as different in regard to "personality traits and social behavior" (p. 23). They agree that "differences between women and men exist not because of essential, innate differences between women and men, but rather because of social structures and practices that create and normalize disparate power and correspondingly disparate opportunities, experiences, and socially approved identities and activities for the sexes" (pp. 34-35).

Other papers address such topics as differences in friendships, interaction, evolutionary consequences of reproductive differences, social support and emotional lives, gender-linked language effects, nonverbal communication, Japanese and United States communication styles,

intimacy, communicating attraction, being influential or influenced, conflict behavior, everyday conversations, expression of emotion, presenting and detecting deceptive messages, conversational maintenance between husbands and wives, departures from sex role stereotypes during initial interactions, first date initiation and enactment, and, finally, methodological considerations in research on "a gendered world."

References follow each chapter. — WEB

Devereux, Eoin. *Devils and Angels: Television, Ideology and the Coverage of Poverty.* Luton, UK: John Libbey Media/University of Luton Press, 1998. Pp. vii, 174. ISBN 1 86020 545 3 (pb.) £14.95.

Devereux, a lecturer in sociology at the University of Limerick, was formerly a researcher for Radio Telefís Eireann (RTÉ), the Irish public service network, which broadcasts on two stations, RTÉ One and Network Two. He also had been a researcher for RTÉ Radio One and had earlier experience in local radio.

In the course of his broadcasting work, Devereux had become interested in factors that influence production. At the same time, he experienced frustration in having ideas for programs on poverty issues rejected by program makers (pp. 1-2). Later, he began to notice that the Irish mass media in general — and implicitly world media — were failing to give a true picture of the depth of poverty and the high level of unemployment in Ireland (p. 2). Therefore, he resolved to study how "television news, current affairs, drama and telethon programmes" embodied dominant messages about Irish poverty, "differentiated between categories of deserving and undeserving poor," and shaped the content of poverty stories because of the organizational environment in which the stories were produced (p. 3).

He notes that although Marxist usages of "ideology" and "hegemony" may now not be in favor, they still retain value in critical sociology (pp. 3-4).

Chapter two looks at the concept of ideology in greater depth, following its history from Marx, through the Frankfurt School, to Gramsci (pp. 9-12). The author opts to follow the more contemporary definition of J. B. Thompson, who saw ideology as "the ways in which meaning serves, in particular circumstances, to establish and

sustain relations of power which are systematically asymmetrical ... Ideology, broadly speaking, is *meaning in the service of power*" (p. 13, quoting Thompson).

Chapters three, four, five, and six analyze, respectively, how poverty is presented in Telethon TV, current affairs television, news, and fictional drama on RTÉ.

Ideological issues documented in the Telethons include declaring that television can help solve social problems while omitting mention of the causes of such problems, implying that voluntarism and charity can solve social problems, ignoring the role of commercial enterprises in causing the problems while suggesting that they are helping solve the problems by voluntary donations, and the "angels" are portrayed as helping the vast majority of the poor who are "deserving" — omitting mention of "the Devil's poor," the undeserving, according to Devereux (p. 46).

The documentary, *Are You Sitting Comfortably*, focussed on the work for the poor and strong social views of Father Peter McVerry, a "turbulent priest" in Dublin, "was the only program within the 1992-1993 series [of RTÉ's *Tuesday File*] which had Irish poverty and inequality as its sole focus" (p. 49). The author notes that while his interviews with the program's production people showed them to be "clearly aware of, and committed to, a wide range of political and social issues ... this did not translate into more coverage of poverty-related issues" (p. 54). For many reasons — some clearly ideological — the "potentially controversial" theme of the program was watered down, partly with the excuse that "we've already shown enough about ..." poverty, unemployment, etc. (pp. 54-61).

Are You Sitting Comfortably was made and aired, and it did succeed in challenging the status quo, but Devereux finds it lacking on at least two grounds. First, it did not let the poor speak for themselves, but only through their spokesman, Father McVerry. Second, "while the rich and powerful are clearly blamed for mass poverty in Ireland, these same rich and powerful, safe in their anonymity, remain protected by the symbolic use of imagery of wealth and power" (p. 75).

For news, the author analyzed RTÉ's *Six-One News* for 1 September to 31 December 1992. Among other outstanding points, he noted that "homelessness as an example of extreme subsistence poverty is not deemed to be a newsworthy story *per se*" (p. 79). Although a dinner for 850 Dublin poor was shown on a

Christmas-day program, the coverage was selective and "sanitized," in the author's view, failing to say much about the causes of poverty and giving an impression "that everything is okay 'out there'" (p. 83).

The 1992-1993 series *Glenroe* pays more attention to its melodramatic events than to serious social issues on which it only touches, according to the author (p. 101). The program's potential for social commentary is restricted by its being

... tied into a formula which offers little by way of space for the consideration of a wider scope of individual and social problems ... the programme's makers will have to entertain the idea of getting beyond the humour/characterisation formula in order to make the programme more relevant to the rapidly changing society in which it is being made. (p. 124).

In the closing chapter, Devereux says that "the main argument of this study is that, given the true extent of Irish poverty, RTÉ's television coverage is of a reductive kind." The poor are "invisible," not allowed to speak for themselves, but only through spokespersons and other "angel figures" who speak for them. This is ideological in facilitating "the continual domination of the powerful over the powerless." Television has an "ability to decontextualize poverty and inequality through abstracting it from its structural causes" (p. 126). He also notes that there are strong parallels "between how RTÉ treats Irish poverty and the way in which television in general has dealt with the poverty of the Third World" (p. 144).

Returning to the theme of ideology, he remarks that "the invisibility of poverty and the poor on RTÉ television is symptomatic of a greater invisibility, namely the lack of transparency of the social structure" (p. 146).

Appendix A describes the study's methodology (pp. 149-158). Appendix B is a list of *Glenroe* characters referred to in Chapter 6.

There is a bibliography (pp. 161-168). — WEB

Hachten, William A. *The Troubles of Journalism: A Critical Look at What's Right and Wrong With the Press.* Mahwah, NJ/London: Lawrence Erlbaum Associates, 1998. Pp. xii, 188. ISBN 0 8058 2649 1 (hb.) \$45.00; ISBN 0 8058 2650 5 (pb.) \$21.50.

Hachten, a professor at the University of Wisconsin, Madison, speculates in his preface that many changes in American journalism over the past 50 years "seem mostly related to what television has done *for* and *to* journalism and to society" (p. xi). Whatever the causes, many changes have occurred in an institution the author sees as "an important resource of American life that should be nurtured and shielded from the various influences that diminish and trivialize the news" (p. xi).

Journalism is a mirror of society, but it seems increasingly to be a distorted mirror. Among other changes, the "fire wall" that used to rigidly separate serious reporting from mere sensationalism, at least in responsible news organizations, "has almost disappeared," in the view of some observers (pp. 6-7). Media conglomerates, interested chiefly in profit, have swallowed up many of the best networks and newspapers, threatening their ability to continue observing high standards of journalism. Public dissatisfaction with news media is growing. But the public, too, deserves criticism, since Hatcher sees some truth in the statement that the media are only giving the public what the public wants (p. 8). So serious journalism in the United States, with which the book is concerned, is in trouble, even though it "is still arguably the most informative and most free anywhere ..." (p. 9).

Chapter one continues that theme, asking whether the United States, indeed, has the "best news media in the world." The author answers that "a lot of good reporting still gets done by newspapers" (p. 16), and the instant communication of major news events through modern technology is, when we stop to think about it, "dazzling" (p. 13). Nevertheless, time and space restraints cause some major stories to be under-reported, while the temptation to sensationalism causes the coverage of other stories to balloon out of proportion to their real significance. The review of the full range of U.S. media in chapter one outlines these and other pluses and minuses.

The global impact of American media is discussed in chapter two. The sheer volume of media production for the U.S. domestic market has inevitably spilled over into, and often has dominated many foreign markets as well. The close partnership of British and American news media has promoted English as the dominant world news language (p. 24). The instantaneous transmission of news globally has changed our

perceptions of our world, and has changed the world, itself, by its political impact (pp. 26-27). However, the mass-audience appeal of global news is limited, since most audiences prefer a more regional emphasis (p. 35).

The positive and negative aspects of freedom of the press — as embodied in the First Amendment to the U.S. Constitution — are discussed in chapter three. Lack of understanding among the U.S. population of the role of the guarantee of press freedom is seen as a danger to that freedom (p. 49).

Chapter four reviews the recent history of the U.S. press, marked by rising criticism and self-criticism.

Chapter five deals with the problem of media monopolies and consolidation of ownership of media outlets in the hands of a few large companies. The serious question of the conglomerates' vulnerability to political pressures from undemocratic countries is mentioned (p. 71).

Chapter six describes the "sense of decline" in the quality of news coverage which many Americans seem to feel; and chapter seven poses the same questions about newspapers, in particular. Chapter eight asks why the public hates (some) journalists.

Chapter nine deals with changes in foreign news coverage, and chapter ten presents the special problem of sub-Saharan Africa, a "virtual terra incognita," with many challenges for full and accurate reporting. Controversies about the interaction between the press and the military, especially in the Gulf War, are analyzed in chapter eleven. The education of journalists is the topic of chapter twelve; and chapter thirteen discusses the new problems arising from the Internet as a purveyor of news and rumor.

Chapter fourteen sums up the problems and proposes some remedies. The clear distinction between news and entertainment or opinion must be restored, and the professionalism of the journalist must be re-emphasized, according to the author. Diversity of news sources must be guaranteed and encouraged. The public needs to show more interest in the news, reversing the decline of interest in recent years. There is a need to adopt a critical stance towards Internet "news" and rumor. Foreign news coverage needs to be restored and expanded, in Hachten's view.

References provide a bibliography (pp. 180-183).

— WEB

Hart, Andrew (ed.). *Teaching the Media: International Perspectives*. Mahwah, NJ/London: Lawrence Erlbaum Associates, 1998. Pp. xiii, 208. ISBN 0 8058 2476 6 (hb) \$49.95; 0 8058 2477 4 (pb.) \$29.95.

Andrew Hart, senior lecturer at the University of Southampton, has assembled eight papers by some of the leading experts in media education — often called "media literacy education," to distinguish it from training of media professionals. The authors are from England, Northern Ireland, South Africa, Australia, Canada, and the United States.

Len Masterman, of the University of Liverpool, contributed the Foreword. In it, he describes the shift that has occurred in concepts of media education, away from an "inoculative paradigm" that saw it as protecting children against the "disease" of a mass media that produces "a counterfeit culture, which is a direct threat to genuine culture and to authentic cultural values" (p. vii). The shift then moved through a generation of teachers who saw good in popular culture, but recognized that students had to learn to discriminate between good and bad media (p. viii). Finally, according to Masterman, media education has moved to a "representational paradigm," holding that an effective democratic education for all citizens requires that they be able to understand "the ways in which the media represent reality, the techniques they employ, and the ideologies embedded within their representations" (p. x).

Hart's introductory chapter discusses the role and need for media education "in the global village." He notes that "although media ownership, production, and distribution have become increasingly internationalized and even globalized, educational responses have not kept pace with these developments" (p. 1). Especially lacking is "research on classroom strategies for media teaching" that will ground discussion of theoretical programs "in actual classroom teaching approaches" (p. 2). He goes on to discuss research to develop the *Models of Media Education* project, which has succeeded in England, and a collaborative project "to develop the research internationally" (p. 18).

In chapter two, Hart describes in greater detail the application of "models of media education in England and the secondary curriculum for English" (pp. 23-56). He also touches on studies that have been done in Scotland, "where Media Education has established itself firmly" (p. 27).

In chapter three, Jude Collins of the University of Ulster, describes how media education has developed in Northern Ireland, where, as in England, it is embodied in the curriculum for English (pp. 57-77).

Sue Court and Costas Criticos, of the University of Natal, report on a study "based on the *Models of Media Education* project in England," but with special aspects for South Africa "at the dawn of a new democratic order" (p. 79).

Robyn Quin illustrates her description of media education in Western Australia with case studies of how teachers in that state have approached "the actual teaching of a visual text" (p. 119).

Renee Hobbs, of Babson College, alludes to a common perception of media education in the United States as "video production classes at the secondary level, usually designed as nonacademic vocational-style coursework for students who are about to drop out of school, or at the very least, are not 'college-bound'" (p. 127). That perception, fortunately, is being changed to one in which "Media Literacy" is defined as "the ability to access, analyze, evaluate, and communicate messages in a wide variety of forms" (p. 127, quoting Firestone 1992). Diversity of approaches to media education in the United States is inevitable because of the decentralized character of its school systems. Hobbs writes from her special acquaintance with the situation in Massachusetts (pp. 127-144).

In chapter seven, Robert Morgan, of the University of Toronto, describes media education in Ontario, where "Media Literacy has been a required part of the curriculum ... for over a decade" (p. 145).

In his concluding chapter, Hart remarks that "this international research shows that both the general cultural contexts of media power and access, on the one hand and, on the other, the perceptions of educators, administrators and social commentators of the media's importance in shaping values and social competencies are crucial to decisions about curriculum direction" (p. 193).

— WEB

Keeble, Richard. *Secret State, Silent Press: New Militarism, the Gulf and the Modern Image of Warfare.* Luton, UK: John Libbey Media/University of Luton Press, 1997. Pp. v, 222. ISBN 1 86020 539 (pb.) £14.95.

Keeble, a senior lecturer at City University, London, reviews the media coverage of the Gulf War, in an effort to "problematise adequately the nature of warfare ... [and] place the media within a wider, historically contextualised, social, economic and political setting" (p. 1). His focus is on the United States and United Kingdom's roles in the war, their "state systems," and the role of the press in those states and in their societies and wars.

The media coverage of the war was, in his view, the constructing of a "myth," based on widely held assumptions, beliefs and ideologies" (p. 1). An assumption pervading the book is that the war "was not a war at all. It was nothing less than a series of massacres ... [against] no credible enemy" (p. 5).

Another assumption that the author considers to be axiomatic is that there is, in the West, a "new militarist consensus," aided and abetted by a compliant media, which he introduces in chapter one, then describes for the UK in chapter two, and for the US in chapter three. Chapter four is a review of the press' "demonisation" of Saddam Hussein. Following chapters describe various "myths" related to the war and its political and historical context. The concluding chapter presents a broader view of "the press and the contradictions of new militarism" (pp. 189-200).

The bibliography is extensive (pp. 201-218).

— WEB

Kelly, Kathleen S. *Effective Fund-Raising Management.* London and Mahwah, NJ: Lawrence Erlbaum Associates, Publishers, 1998. Pp. xvi, 663. ISBN 0-8058-1321-7. (hb.) \$135.00, ISBN 0-8058-2010-8. (pb.) \$49.95.

This comprehensive book presents both the history and practice of fund-raising. As the first textbook in effective fund-raising management (now being taught in some 60 U.S. colleges and universities according to the Foreword), it also provides students with a solid theoretical base.

Organized fund-raising began in the early 1900s and has grown to be a major industry raising over \$150 billion a year. With that growth has come a need to understand the historical roots of fund-raising, the practice of it — including both ethical and legal issues. Equally important is the comprehension of the theory and research that underlie the field and define its professionalism and effectiveness. To cover all the aspects of

effective fund-raising, author Kelly, divides the book into three sections: The Practice; The Principles; and The Process, Programs, and Publics.

The first chapter, "The Function of Fund-Raising: Introduction and Overview of the Book," provides just that, an overview — along with integrating the practice and theory, listing definitions and presuppositions, and what is missing in all that — women, minorities and an international perspective. Its not that women, minorities or non-Americans don't do fund-raising or contribute, its just that at present there is a dearth of information and research that includes them, a lack which the author at least wishes to acknowledge.

Part I — The Practice: Parameters, Practitioners, and Professionalism (Chapters 2 through 4) provides a historical and present day look at the practice of fund-raising. This section covers American philanthropic tradition, donor motivations, non-profit and charitable sectors, and the number and scope of practitioners (including job titles, types of organizational employers and characteristics). Additionally it looks at the feminization of fund-raising — that is, how "during the late 1980s, women moved from minority representation to the majority of fund-raising practitioners" (p. 89). The author then devotes the remainder of the chapter (Ch. 3) to various issues and implications of women as fund-raisers. The next chapter explores the professionalism of fund-raising, the criteria of a profession and public relations.

Part II — The Principles: Historical, Organizational, Legal, Ethical, and Theoretical (Chapters 5 through 9) discusses the context of each element in the section title in relation to fund-raising. The history and evolution of fund-raising, four models of fund-raising, the practice of older models, including empirical and explanatory study of the models and the various organizational roles of fund raisers begin this segment. The author next provides a rather comprehensive exploration (for a book of this magnitude) of the legal, ethical and theoretical contexts of fund-raising — devoting over 50 pages each to legal and ethical issues and 63 pages to theory.

Part III — The Process, Programs, and Publics (Chapters 10 through 15) looks at the fund-raising process and programs including annual giving, major gifts, planned giving, capital campaigns, and donor publics such as individuals, major

corporations, and foundations.

It begins by describing what the author calls ROPES — Research, Objective, Programming, Evaluation and Stewardship as a strategic approach to raising gifts and managing donors (pp. 391-412). ROPES offers practitioners a theoretical yet practical model that the author finds particularly useful in conducting research about fund-raising. Then the role of volunteers, the principle of proportionate giving, different forms of gifts, annual giving, major gifts (including the largest gifts given, and largest returned gift - \$20 million returned by Yale University to the donor because it hadn't used the gift as specified), endowments, charitable bequests, foundation donors, corporate donors and individual donors, effectiveness of campaigns are discussed along with related issues including negotiations, underlying motivations, and negatives such as sexual harassment and the danger of exploiting donors.

In addition to the reference section (pp. 622-648), each chapter concludes with a suggested reading list. There is also an author index (pp. 649-656) and subject index (pp. 657-663).

— MWD

Komter, Martha L. *Dilemmas in the Courtroom: A Study of Trials of Violent Crime in the Netherlands.* Mahwah, NJ/London: Lawrence Erlbaum Associates, 1998. Pp. xxix, 186. ISBN 0 8058 2022 1 (hb.) \$49.95; 0 8058 2023 x (pb.) \$27.50.

Courtroom communication is analyzed by the author using data from "fieldnotes of 48 trials and audiotapes of 31 trials, all related to violent crime, and occurring in courtrooms in Amsterdam, Utrecht, and Haarlem" in the Netherlands (p. vii).

Dutch trials are not "adversarial" as are those in Britain and the United States. Having studied the evidence before the trial begins, judges "already have formed an opinion on whether the suspects are guilty or not and they have some idea of the amount and kind of punishment they will give" (p. ix). Nevertheless, Komter says that Dutch trials produce more complete stories of the crime, since deeper inquiry is made into the "motives, moral awareness, and plans for the future" of the accused, who are not preoccupied with proving their innocence and are freer to "provide a first-hand account of what happened and an inside view of their motives, feelings, and ambitions" (p. ix).

This procedure is true of some other legal systems in Europe, and similar conversational strategies can be found "even in nonlegal settings, because the concerns with credibility, blame, responsibility, and morality transcend the boundaries between legal systems and between institutional and everyday affairs" (p. ix).

"The book is organized around the four topics ...: fact finding, accusations and defenses, explanations and understanding, and the restoration of moral balance" (p. xxv).

In chapter one, on "fact finding," the dilemma of suspects "is to protect their interest without appearing to do so: the judges' dilemma is to attend to the suspects' interests without explicitly undermining the suspects' testimony as interested" (p. 29). Although the suspects have firsthand knowledge of the events, "their assumed interests weaken their credibility" (p. 29).

In the interplay of accusations and defenses, described in chapter two, "the judges' and the suspects' problems revolve around the simultaneous requirements of cooperation and defensiveness ..., and of objectivity and investigativeness" (p. 31).

Explanations for the suspects' offenses include both their immediate motives for the crime and "their biographical backgrounds and life circumstances ... [and] there is a saying, 'to understand is to forgive.' Although suspects know that it is not the business of judges to forgive, they may believe that plausible explanations have a mitigating effect on their punishment" (p. 60). Reasonable, everyday explanations are brought into play which may be incompatible with the "legal requirements of holding suspects responsible for their actions" (p. 94). Judges must take the suspects' stated motives into account without condoning their offenses.

"The restoration of the moral balance" involves ambiguities because "the criminal justice system can only confirm the existing moral order" and is limited in its power to manipulate morality (p. 96). Komter says that inspection of her data "has revealed that judges find it important to uncover the extent and quality of the suspects' moral awareness" (p. 96). But, "when questions of morality are raised, the suspects tend to defend themselves, rather than show regret" (p. 97):

... the suspects' dilemma is to display their moral consciousness without appearing to submit to the coercion of the court and to obey the

court's injunctions without losing their moral credibility; the judges' dilemma is to mobilize authentic expressions of morality without generating obedience and to control the fate of the suspects without depriving them of the opportunity to show moral awareness. (p. 126)

In her overview in the concluding chapter, Komter remarks on an essential incompatibility of the perspectives of suspects and judges, and notes that "efforts to reduce the distance between judges and suspects may retrospectively confirm the gap rather than bridge it" (p. 136). Such dilemmas might be mitigated structurally by splitting trials into two parts: one to establish guilt, and one to determine the punishment. Although some dilemmas cannot be resolved, they might be managed more imaginatively by participants in trials (pp. 137-138).

An appendix gives the Dutch language text of examples that had been used in English in the body of the book. A substantial list of references serves as a bibliography (pp. 172-177). — WEB

McGuigan, Jim (ed.). *Cultural Methodologies*. London/Thousand Oaks, CA/New Delhi: Sage, 1997. Pp. viii, 215. ISBN 0 8039 7485 X (pb.) \$26.95.

Jim McGuigan, Reader in Cultural Studies at Coventry University, has collected essays from ten other cultural studies scholars, eight based at British, and one each at Australian and American universities, that aim to strengthen cultural studies methodologically, and thereby to increase its legitimation as a valid field of academic endeavor capable of attracting research funding in its own name rather than "under the cover of something else, say, art history, literary criticism or sociology" (p. 1). As he describes it:

The book is divided into three parts: Methodologies, Researches and Reflections. The first part outlines a set of methodological issues concerning critique and practicality in social studies. It also considers ethics and the feminist relationship to cultural studies. The second part concretizes matters with reference to actual research ... The final part reflects upon where cultural studies has reached as an intellectual project and the institutional conditions in which it is conducted. In general, the book aims to

equip new researchers with a broad understanding of what they are letting themselves in for. (p. 2)

Douglas Kellner feels that the beginnings of what is now known as cultural studies can be seen as a confluence of early British cultural studies — represented by figures such as Richard Hoggart, Raymond Williams, and E. P. Thompson — with the cultural orientation of the Frankfurt School and other neo-Marxist tendencies of the 1950s and 1960s. But the articulation between the two was never perfect, and some practitioners of each might vehemently reject any comparison with the other (cf., p. 21).

The methodology of contemporary cultural studies was shaped most importantly by the Birmingham Centre for Contemporary Cultural Studies, founded in 1963-1964, where the focus was on "the interplay of representations and ideologies of class, gender, race, ethnicity and nationality in cultural texts, including media culture" (p. 16). Kellner sees a recent turn "to a postmodern cultural studies" as "a response to a new era of global capitalism" (p. 20). In this "new revisionism" there is a resolute severing of cultural studies from political economy and critical social theory, with increased stress on "local pleasures, consumption, and the construction of hybrid identities from the material of the popular" (p. 20).

In its concentration on media culture, cultural studies faces the challenge of dealing with a rapidly-changing subject — typified by convergence and globalization in media structures (p. 24), and by productions that change to match the subtle nuances of a changing society (pp. 31-32).

In subsequent chapters of part one, Tony Bennett moves "towards a pragmatics for cultural studies," Nick Stevenson addresses issues of "media, ethics and morality," and Ann Gray describes "learning from experience" about cultural studies and feminism.

"Researches" reported on in part two include the contemporary tendency to "write the self," that is, to live and write "under the autobiographical injunction" (pp. 106-125). Others deal with cultural geography (pp. 126-141), dancing (pp. 142-154), and the "politics of Irish studies" (pp. 155-177).

The last part of the book consists of two chapters. One is by Graham Murdock, on "Thin description: questions of method in cultural analysis," in which he calls for resolution of "the century-long contest between empiricist and

interpretive visions of social and cultural inquiry." with a goal of thick descriptions achieved through a commitment to extended ethnography (p. 191). The other is Michael Green's paper on "working practices," presenting some of the "nuts and bolts" by which practical research work may be accomplished under "rapidly changing academic and social circumstances" (p. 193).

References follow each chapter. — WEB

Montgomery, Barbara M., and Leslie A. Baxter (eds.). *Dialectical Approaches to Studying Personal Relationships*. Mahwah, NJ/London: Lawrence Erlbaum Associates, 1998. Pp. x, 193. ISBN 0 8058 2112 0 (hb.) \$45.00; 0 8058 2113 9 (pb.) \$24.50.

Many "scholarly adventurers" have used dialectical approaches in their studies of interpersonal relations and interpersonal communication. Very often these disagree with each other. The editors summarized many of these divergent views in a 1996 book (*Relating: Dialogues and Dialectics*), but, recognizing the "irony" of trying to speak for the others, they decided to develop this book, in which the others speak for themselves, respecting "Mikhail Bakhtin's notion of multivocality," which they embraced (p. ix).

Describing dialectical scholarship, Baxter and Montgomery say that it "tends to cohere around four core concepts: *contradiction*, *change*, *praxis*, and *totality*." *Contradiction* refers to the dynamic interplay between unified opposites," which, despite active incompatibility and mutual negation, are nevertheless interdependent with one another (p. 4). *Change* is the fluidity that results from the interplay of the opposites in any relationship (p. 7). *Praxis* focuses on the fact that "individuals both act and are acted on, their actions in the present are constrained and enabled by prior actions and function to create the conditions to which they will respond in the future" (p. 9). *Totality* refers to "the inseparability of phenomena," recognizing that "one contradiction cannot be considered in isolation of other contradictions with which it is integrally linked," and that "contradiction cannot be separated from its temporal, spatial, and sociocultural settings" (pp. 10-11).

After the editors' introductory chapter, seven contributors and groups of contributors present

their somewhat diverging views, hinted at in their chapter headings:

Richard L. Conville discusses "Telling Stories: Dialectics of Relational Transition":

Arthur P. Bochner, Carolyn Ellis, and Lisa Tillmann-Healy describe themselves (and other social scientists, too) as "Mucking about Looking for Truth" (p. 59);

William K. Rawlins writes about "Writing About [his book] *Friendship Matters: A Case Study in Dialectical and Dialogical Inquiry*";

Kathryn Dindia describes "'Going Into and Coming Out of the Closet': The Dialectics of Stigma Disclosure";

C. Arthur van Lear labels his approach as "Dialectical Empiricism: Science and Relationship Metaphors";

Barbara B. Brown, Carol M. Werner, and Irwin Altman focus on "Choice Points for Dialecticians: A Dialectical-Transactional Perspective on Close Relationships."

Finally, the editors give their own perspective, in an adaptation of a chapter from their earlier book, calling it "Dialogism and Relational Dialectics" (pp. 155-183).

All the authors are based at United States universities.

References follow each chapter. — WEB

Paoletti, Isabella. *Being an Older Woman: A Study in the Social Production of Identity.* Mahwah, NJ/London: Lawrence Erlbaum Associates, 1998. Pp. xiv, 94. ISBN 0 8058 2120 1 (hb.) \$36.00; 0 8058 2121 X (pb.) \$19.95.

"The European Older Women's Action Project" (1991-1994) was intended to link older women's groups across Europe. This research has been part of the project's initiatives since its beginning (p. xi). Paoletti reports on one component of the Action Project research as it was carried out in Perugia, Italy.

A pilot study (1991-1992) and the main study (1992-1994) were conducted by the author through interviews with groups of women in Senior Citizens' Centers in Perugia. The Centers had previously been thought of by the women as "male space" (p. xii), but efforts were being made, at the time of the study, to increase women's use of the facilities (p. 2). The methods of self-identity production employed by the women were studied by analyzing transcripts of the group discussions,

with special attention to how institutional factors influence identity production processes and how "the negotiation of specific members' identities" influences "the production of actual, locally managed features of organizations and institutions" (p. 11).

Chapter two develops the concept of "membership categories" related to old age and how they influence self-identification as "old" (pp. 14-29). Frequently, women were found to distance themselves from the category "old," as designating "others" (pp. 20-24). Denial was another reaction, with only younger members of the groups agreeing to being designated as "old," and the older women rejecting it (pp. 24-26). Another reaction is to deconstruct aspects of aging, accepting the designation "old," but disassociating oneself from its negative aspects (pp. 26-29).

In chapter three, the author points out "how 'elderliness' can assume a character of 'prestige' when it gives access to special ... activities ... benefits or services" (p. 30). The agendas and needs of the institution, rather than those of its members, can create definitions of the situation which influence the self-identities of the members. In contemporary society an "immense institutional machinery" hides behind the category "old" (p. 38).

Chapter four deals with the ways "gender identification is influenced by institutional discourses and practices" (p. 41). Such influences include conflicts among institutions (pp. 42-47), complaints and the ways they are responded to (pp. 47-50), occasions on which institutional authorities might criticize members, etc.

Chapter five explores communication problems, pointing out "how communication skills or other relevant aspects of personal identities influence particular features of the institutions" (p. 60).

Chapter six summarizes the study, in which "the concept of identity appeared in all its kaleidoscopic character." But from the analysis of concrete interactions "we can start to understand the power the constructions of elderliness have in shaping our own aging process, in flesh and blood: Isolation, decrement, and despair are one possibility; integration, health, and well-being are the other" (p. 80).

Appendices give transcript notations and a list of the meetings and workshops that were audio- or video-taped.

Collected references provide a bibliography (pp. 83-87).

— WEB

Piotrow, Phyllis Tilson, D. Lawrence Kincaid, Jose G. Rimón II, and Ward Rinehart. *Health Communication: Lessons from Family Planning and Reproductive Health.* Westport, CT/London: Praeger (Greenwood Publishing Group), 1997. Pp. xx, 307. ISBN 0-275-95577-X (hb.) \$59.95; 0-275-95578-8 (pb.) \$24.95.

Vast sums of money from governments and private foundations have been spent to promote family planning throughout the world during the past two or three decades. Much of this effort has revolved around communication aimed ultimately at persuading people to become "acceptors" of both the idea of family planning and its practice.

Has it worked? This book was not intended to give a definitive answer to that question. It is intended to report on research that has explored "lessons learned about effective family planning communication over the past 15 years," according to Everett M. Rogers, in his Foreword (p. xiii). The research was organized by the Center for Communication Programs, Johns Hopkins School of Public Health, and it focuses on projects in which that school's Population Community Services (PCS) program has been involved in "some 50 developing nations" during that 15-year period (*ibid.*).

The book's nine chapters address general issues of "public health, family planning, and communication" (pp. 1-16); "conceptual frameworks for strategic communication" (pp. 17-28); "preliminary analysis for program planning" (pp. 29-56); "strategic design" (pp. 57-88); "development, pretesting and revision, production" (pp. 89-108); "management, implementation, and monitoring" (pp. 109-130); "impact evaluation" (pp. 131-172); "planning for continuity" (pp. 173-186); and "challenges and opportunities for the 21st century" (187-202). An appendix gives an extensive list of "organizations collaborating with the Johns Hopkins Center for Communication Programs, 1982-1996" (pp. 203-250), and a similarly extensive bibliography rounds out the book (pp. 251-291).

Considerable progress is claimed in population stabilization since the initiation of family planning programs. One indicator of this success is that "total fertility rates in the developing world have declined from an average of 6 children per woman in the 1970s to 3.4 in 1997" (p. 187). Family planning communication also has become both more sophisticated and easier, due in part to

increasing willingness of people to discuss sexual matters publicly (*ibid.*). A major change in family planning programs' strategy has been that, "once concentrated on meeting targets for numbers of new acceptors, family planning communication now focuses on enabling informed individual choice" (*ibid.*). The period of declining fertility rates has coincided with a rapid expansion of communication facilities. For example, 2 billion television receivers are expected to be in use in the developing world by the year 2000 (p. 191). But it also has been a period of social change, and in many places of collapsing social and normative structures, with increasing sexual activity, much of it "unprotected," by young people outside marriage (p. 189). The solution advocated by the authors appears to be simply more, and more successful, family planning communication. The index contains no entries for "ethics" or "morality," although some of the cases cited do show at least some consideration for the value of self-control in sexual relationships (e.g., pp. 78-79, Box 4.2).

— WEB

Ralph, Sue, Jo Langham Brown, and Tom Lees (eds.). *What Price Creativity? Current Debates in Broadcasting 7.* Luton, UK: John Libbey Media/University of Luton Press, 1998. Pp. x, 233. ISBN 1 86020 553 4; ISSN 0963-6544 (pb.) £14.95.

The 28th (1997) Manchester Broadcasting Symposium, now renamed the International Broadcasting Symposium, which furnished the raw material for this book, had as its theme the book's title, "What price creativity," or, more specifically, "the convergence of industries such as media, computers and telecommunications and [to] see how this coming together is likely to have an impact on what we watch" (back cover).

Phil Redmond, of Mersey Television, gives an upbeat answer, in his keynote address, to the many questions raised by the convergence of communication technologies: "This is the greatest time to be in the media industries. The future is wider choice — greater diversity, greater access and greater opportunity" (p. 1).

The substance of panel discussions at the main sessions and related research results are given at the outset. Those reports focus on control of scheduling, values, and "the workers" — including training, selection, and employment relationships of media professionals in changing media cultures.

The second section of the book contains 13 papers presented at the symposium on topics ranging from children's views about television drama to TexTV, on Britain's channel 6, and the UK's "Restricted Service Licences" (RSLs).

One of several American contributions is that of Garry Wade, of Drake University, on "Fifty Years of Prime-Time Network Television: Spinoffs + Ripoffs + Recombinants = Creative Exhaustion?" He advocates increasing the industry's attention to imagination and innovation — within its obvious context of making money. He also feels that "the industry has built an insulating wall around itself," thereby excluding badly-needed new talent and new ideas (p. 194).

A final section contains three papers presented in the session, "What About the Worker?"

There is no index or bibliography. — WEB

Roberge, Gaston. *Communication Cinema Development: From Morosity to Hope.* Calcutta/New Delhi: Chitrabani/Manohar, 1998. Pp. 217. ISBN 81 7304 149 0 (pb.) n.p.

Father Gaston Roberge, SJ, formerly was director of Chitrabani Media Production Centre in Calcutta, and is now secretary for communication to the Jesuit Superior General in Rome. His target audience for this book is students in the cinema studies courses of communication departments in Indian universities.

The brief part one discusses the relationship between communication and the highly problematic concept of development. The kind of "development" trumpeted about in recent decades has been, in his view, "a mirage," that does little or nothing for the poor and marginalized (pp. 18-19). Alternative kinds of development are needed that will not, as existing policies do, make the market into "the sole master of human life — a god of sorts, Mammon" (p. 19).

Part Two surveys, in 16 chapters, many aspects of communication, such as the "free flow of information," the effects of TV-watching, rape scenes in Indian films, ideological manipulation of AIDS-awareness campaigns, etc. (pp. 25-93).

Part Three, with 13 chapters (pp. 97-154), focuses on aspects of cinema. The author says that, in these two sections (parts two and three), the chapters "do not offer a complete treatise on the subject, but they cumulatively propound a positive view, even though critical, and suggest avenues for

positive action" (p. 13). Some of the topics of part three are, cinema awareness, India's transition from cinema awareness to television awareness, the centenaries of Indian cinema and of film theory, film criticism, "the documentary as a voice of dissent?", "film scholarship," and the West Bengal film industry.

Part Four concentrates on the relationship between cinema and development in six films, five of them Indian or Bangladeshi, and the sixth, *City of Joy*, a Hollywood film about Calcutta. Concerning that film, Roberge says: "In departing significantly from the book it is supposed to be based on, the film can give the impression to the viewer who has not read the book that the latter is as bad as the film." Despite "the ethnocentrism and the developmentalist ideology of the book," he regards it as "a useful fiction" that can draw attention to the reality of the Calcutta slums, while the film "has hardly anything to do with ... the reality of the Pilkhana slums, still less the reality of Calcutta" (p. 170).

Part Five, consisting of only one chapter, discusses the relationship between cinema and television in India, the two media involving as they do different viewer perceptions of, and involvements with depth and movement (pp. 200-201), attention (p. 202), memory and imagination (pp. 202-203), and emotions (pp. 203-204).

A closing chapter, "38. From Morosity to Hope," stresses the need, today, for "a set of energetic ideas and images along with pragmatic plans to strengthen us and help all to move from morosity to hope" (p. 216). Much of media content is concerned with promoting a "narrow nationalism" which, however, "has no survival value. What has value is one's identity and culture ... characteristics ... which constitute the wealth of the human family ... [and] can be protected only by the individuals concerned" (p. 215).

The book is illustrated with 25 black-and-white photographs, including stills from Indian films.

— WEB

Schwartz, Vanessa R. *Spectacular Realities: Early Mass Culture in Fin-de-Siècle Paris.* Berkeley/Los Angeles/London: University of California Press, 1998. Pp. xiii, 230. ISBN 0 520 20959 1 (hb.) \$35.00.

There can be little doubt among culture historians that Paris, between the seventeenth and

early twentieth centuries, dominated the shaping of what we now know as "popular culture," or "mass culture." Conspicuous consumption practiced in the extreme by the Court of Versailles may have begun the process, since its fashions were imitated throughout the western world by those who could afford to do so. Schwartz focuses on the *fin-de siècle*, the 1880s and 1890s, when Parisian dominance of western culture reached its zenith. She explores the reasons for the vigor of the city's leisure industries.

The introduction and chapter one review some of the factors that combined at that time to create the city's popular culture. The expositions that took place in Paris in 1855, 1867, 1878, 1889, and 1900, brought millions of visitors to the "city of light," and gave it a lasting image as a place of pleasure. "Paris did not merely host exhibitions, it had become one" (p. 1).

At the same time, printed and visual materials achieved an unprecedentedly wide circulation, assuring that popular diversions were widely known and became really popular among a wide audience.

Not least among the reasons for Paris becoming the "quintessentially modern city" was its urban geography, transformed, first by the creation of the *grands boulevards* in the late 18th century, then by "Haussmannization," when Baron Georges Haussmann, prefect of the Seine under Napoleon III, embarked on an urban renewal program which crisscrossed the city with a web of additional wide boulevards that necessitated reconstruction of much of the city and dislocation of much of its population (p. 17).

"Like the new city itself, the institutions it gave birth to were always conceived as *grand ...*" (p. 23). Among the grand institutions, a large number of theaters contributed much to the city's interesting "things to see," while the press, experiencing its "golden age," "framed, represented and sensationalized the 'real thing' as the essence of modern Parisian spectacle" (p. 27).

Some of the entertainments were macabre, such as the city morgue, where "dead bodies displayed behind a large glass window drew as many as a million visitors a year" (p. 44). The author details the history of public visits to the morgue in chapter two (pp. 45-88).

Another popular attraction was the *Musée Grévin*, a "lavish wax museum" that emphasized current events, especially violent crimes,

executions, etc. (pp. 89-148). Always innovative, "in 1892 the *Musée Grévin* became the first institution to offer projected moving images in the form of Emile Reynaud's *pantomimes lumineuses*" (p. 147).

Panoramas and dioramas (pp. 149-176) had been around since the early 19th century, but they gained unprecedented popularity in the 1880s, paving the way for the soon-to-appear motion picture. As cinema "palaces" sprang up all over the city in 1906 and 1907, both the wax museums and the diorama were upstaged by the projected moving image (pp. 177-199).

The book closes with the remark that "film and the cinematic experience together marked both a juncture and a rupture ... cinema combined a technological attempt to transform reality into spectacle ..." before a "new kind of crowd — referred to as the 'audience' or 'the public'" (p. 200).

The bibliography (pp. 205-221) is divided according to archival sources, periodical sources, primary sources, and secondary sources. — WEB

Selnow, Gary W. *Electronic Whistle-Stops: The Impact of the Internet on American Politics*. Westport, CT/London: Praeger (Greenwood Group), 1998. Pp. xxxiii, 221. ISBN 0275 96163 X (hb.) \$59.95; 0 175 96164 8 (pb.) \$19.95 (ISSN 1062-5623).

The standard method used by American politicians of the late 19th and early 20th centuries to get their message to "the grassroots" was the "whistle-stop tour." Typically, the candidate's special train would go from small town to small town, stopping in each for an hour or so to give its inhabitants a chance to see the candidate in person and listen to his prepared speech. In 1948, President Harry Truman travelled 21,928 miles on one such tour, "giving more than 275 prepared speeches and some 200 off-the-cuff speeches, reaching by the end of the tour nearly 15 million people" (p. xx). In this way, local issues could be addressed, as well as national issues. "In Truman's day, the whistle-stop tour both *brought* the messages to the people and *demonstrated* that he was bringing the messages to the people" (pp. xx-xxi).

The whistle-stop tour, by rail, has not entirely disappeared. Bill Clinton did it in 1996, over a much shorter route than Truman's. But now it has

become less a means of communicating the candidate's message — which is done better by television — than a symbol of the candidate's concern for the needs of the "common man" in out-of-the-way places. "Clinton's train ... was less a mode of transportation than a stage prop designed to demonstrate that even the small backwater towns were not too small and their residents not too inconsequential for the candidate" (p. xxi).

Television can bring the candidate and his or her message into everyone's living room, but by itself it cannot replace the immediate contact, interaction, and demonstration of local concern realized by the whistle-stop tour. The mass media can show the candidates to the people, but cannot "enable the candidates to *become* personal with those voters" (p. xxi). In recent years, "personal" communication has been approximated by recourse to polls and databases, which show what different segments of the population appear to want and enable the politicians to focus on those issues in messages which are meant to seem personalized (p. xxi). Those "warm, personal messages... are generated by cold, compassionless computers" (p. xxi). Now, the Internet allows the delivery, through E-mail, "of individual messages and personal appeals to voters," and gives candidates direct access to them in chatrooms. "Through the Web it allows voters to seek out items of personal interest about the candidate and the campaign" (pp. xxi-xxii).

The author feels that "the Internet is shaping up to be a serious international medium that will radically alter politics in the United States and abroad ..." (p. xxii).

The book has three main parts. Part one, "Context: Lessons of the Past — Formats for the Future," consists of two chapters: "Theory: Mass Communication and Its Lessons for the Internet," and "Media History and Evolution: New Formats, New Content." Many theories and models have been developed in recent years to study media influences on their audiences. Selnow reviews some of their conclusions and suggests some of the intricacies in adapting them to the thus far only partly-understood Internet.

Analysis of the ways interest groups try to achieve their political objectives has elicited some startling findings, such as the following case:

The Roman Catholic Church, with 50 million members, was less successful in realizing its goals in TV than say, the Gay and Lesbian Anti-

defamation League, the number of whose card-carrying members was minuscule. Why? Because the Catholics were pushing a broad agenda — everything from "save the safety net" (liberal) to anti-abortion (conservative) ... — so broad that church members were scattered on all sides. The gays, by contrast, ... had a narrow agenda and represented almost everyone in their constituency. The lesson: If a group is too big or broad to represent its members, it loses its power to say "We speak for all our members, so you'd better take our complaints seriously". (p. 17)

Part two directly addresses "political communication on the Internet." in chapters titled, "Mainstream Candidates on the Internet," "The Rank and File: New Voices in Political Campaigns," and "Experiments on the Web: Informative Innovations." The latter chapter looks at some of the innovations tried, with greater or less success, during the 1996 U.S. campaign. For example, a number of nonprofit organizations made candidates' voting records available on their websites. "In the next few years, data from interviews, polls, and research of all kinds will make their way to the Web in searchable form for interactive use" (p. 127). This has both good and bad potential uses — e.g., it will enable people to focus so much on issues that directly interest them that they could become blinded to the larger political picture (p. 128). "The instant tabulation of Website feedback" on political debates, "holds promise as a useful assessment tool for political themes, TV ads, speeches, and other items now tested in focus groups" (p. 139). "These sites displayed the Web's strongest features: its capacity for large quantities of data and its usefulness in allowing people to flag for themselves the things that most interested them" (p. 140).

Part three, "The Press, Politics, and the People," has chapters on "The Use and Impact of the Internet on Journalism: The Reporter's View," and "A Changing Public Agenda and Audience Fragmentation."

An appendix discusses "the public's acceptance of the Internet," noting that "The Internet is being adopted more quickly than its two predecessors [radio and television], but it isn't integrating immediately into the information mainstream" (p. 205). Development of simpler, more efficient equipment, better access, and growing familiarity with the medium are factors in breaking down resistance to its use (pp. 205-209).

"Further Reading" is suggested in a short bibliography (pp. 211-213). — WEB

Shakespeare, Pamela. *Aspects of Confused Speech: A Study of Verbal Interaction Between Confused and Normal Speakers.* Mahwah, NJ/London: Lawrence Erlbaum Associates, 1998. Pp. xiii, 244. ISBN 0 8058 2807 9 (hb.) \$59.95; 0 8058 2808 7 (pb.) \$27.50.

This book examines "the *confused speech* of people who have been diagnosed as having dementing illnesses" (p. ix). Confusion is experienced by everyone, from time to time, but "chronic disabling confusion, such as is found in patients with dementia or Alzheimer's disease, "is highly distressing for victims and caregivers alike" (p. ix). With the proportion of elderly people in the population rising, the care, and if possible the cure of people with "dementing illnesses" becomes increasingly urgent (p. 1).

Chapter one discusses studies that have been done on confusion and how it relates to the "normal." Although the latter is a "social construction," and based on everyday commonsense perceptions, Shakespeare notes that "the construction of the research enterprise is itself predicated on commonsense everyday thinking" (p. 5). To understand "the talk of those who are labelled confused, we need to understand the nature of normal talk" (p. 6). Reference is made to the work of Erving Goffman in describing normal talk (pp. 6-11). The author then brings in the ethnomethodology of Harold Garfinkel to provide the corrective of viewing action from the perspective of the actor, rather than that of the observer (pp. 11-15). Conversation analysis is seen as a product of ethnomethodology (p. 15).

The research was conducted by analyzing audiotaped material "involving people who had been diagnosed as confused, engaging in verbal interaction with normal speakers" (p. 30). Additional data was from relevant interviews by others.

Chapter three discusses "openings" — the ways interviews or conversations are begun.

Chapters four, five and six deal, respectively, with minimally active, moderately active, and very active confused speakers, in an effort to distinguish characters of the communication of each group.

The concluding chapter, "Getting Confused?"

stresses that "the difference between normal and confused talk is defined in the course of social action. There can be confusion in normal conversation and intelligible passages in confused conversation: What is crucial is the participants' recognition of confusion and how they deal with it" (p. 212).

Four appendices list research participants, define transcription conventions, and provide two examples of transcriptions used in the research.

References provide a bibliography (pp. 232-238).

— WEB

Shilling, Lilless McPherson, and Linda K. Fuller (compilers). *Dictionary of Quotations in Communications.* Westport, CT/London: Greenwood Press, 1997. Pp. xvii, 315. ISBN 0 313 30430 0 (hb.) \$65.00.

Linda K. Fuller and Lilless Shilling complement each other's area of expertise — mass communication and health communication, respectively — so that they have been able to collect in this volume a wide range of quotations on a wide range of topics concerning communication, broadly defined.

In addition to quotations on reading, writing, speaking, and listening, the book covers related topics such as advertising, computers, education, film, international communication, journalism, language, photography, public relations, television, and many others (p. xv).

The compilers aimed to be helpful to readers, writers, speakers, and educators. An important criterion of selection was multicultural diversity, but the main criterion is quotability. Sources include the famous, the infamous, and the unknown, including children. Ancient and medieval sources are included as well as those that are contemporary. Some of the more frequently cited names include Winston Churchill, Ralph Waldo Emerson, Samuel Johnson, William Shakespeare, George Bernard Shaw, Jonathan Swift, Mark Twain, Voltaire, and Oscar Wilde. Arabic, Chinese, and Japanese proverbs are well represented among the approximately 3,000 entries.

Subject headings are listed at the beginning as a table of contents, and source and subject indexes provide easy reference.

— WEB

Wekesser, Carol (Ed.) 1995. *Violence in the Media*. Current Controversies Series. (Bruno Leone, Exec. Ed.). San Diego, CA: Greenhaven Press, Inc. Pp. 192. ISBN 1-56510-236-3. (pb.) \$14.96.

The *Current Controversies Series* explores issues of social, political and economic importance on the national and international scene today. The titles and topics covered in the series are specific and highly focused. The format of the books in the series is organized around several key questions that are answered with diverse opinions representing points of view across the political spectrum. The intent is to help the reader recognize the many viable answers to complex questions and to help those readers develop critical thinking skills to evaluate subjects that are controversial. Some of the subjects covered in the Current Controversies series include the Abortion Controversy, the AIDS Crisis, Ethics, Hunger, Gun Control, Free Speech, Sexual Harassment, Illegal Immigration, Violence against Women, Youth Violence, Alcoholism, etc.

This book looks at violence in the media. Chapter one asks, "Does Media Violence Affect Society?" The chapters by Carl Cannon, Susan Lamson and Susan Douglas say media violence harms society. They state that media violence increases violence including increasing the murder rate, and that it promotes violence against women. John Leonard, Brian Siano and Patrick Cooke write that media violence doesn't harm society. They believe the impact of media violence on society is exaggerated, that the connection between media violence and real violence is weak and that media violence does not harm children.

Chapter two inquires "Should media violence be censored?" Chapters by Irving Kristol, *American Medical News* and Lionel Van Deerlin explain why media violence should be censored. Media violence promotes violence in society and censoring is needed to protect society. Censorship is needed to prevent violence and aggressiveness in children. Robert Sheer, Stephen Chapman and Virginia Postrel make the argument that media violence should not be censored. The media can't be blamed for all the violence in society, censorship would be unethical and ineffective. There is no concrete evidence that media violence promotes violence in our daily lives, according to them, and censorship would be very difficult in the age of

cable and satellite transmission. Additionally, they feel that censorship threatens the free speech imperative.

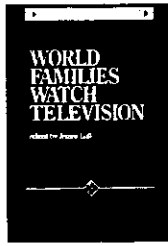
Harrison Rainie, Betsy Streisand and Monika Guttman with Gordon Witkin, all *U.S. News & World Report* staffers, open chapter three, "Can the media effectively regulate violence in their products?" with an overview of media violence. Then Monika Guttman, Barbara Hattemer, Robert Showers and Gregg Keizer write sections stating that the media can effectively regulate violence. Reed Irving, Joseph Goulden, *The Lancet* (a weekly international journal of medical science and practice) and John Pilger respond that the media cannot.

The writers in chapter four address what can be done about media violence with Elizabeth Jensen and Ellen Graham providing the overview of the chapter. William Abbott suggests that increased government regulation is necessary. Daniel Schorr calls for boycotts against advertisers while Amitai Etzioni feels that hi-tech television locks, such as the v-chip offer a solution. Media literacy education will help the public think critically and would effectively combat media violence according to Elizabeth Thoman. But Anthea Disney believes that media violence should be treated as a public health hazard. Philip Berroll writes that a bipartisan approach between liberals and conservatives is the needed approach. Susanne Braun Levine writes that parents have a variety of measures, such as boycotting advertisers, educating their children and protesting that will most effectively deal with media violence.

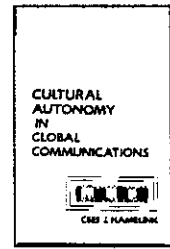
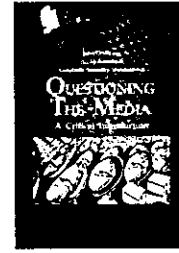
Chapter five asks "Does music promote violence?" Barbara Hattemer and Robert Showers write that heavy metal rock and gangsta rap music promote violence. Nathan McCall finds that gangsta rap promotes violence in the Black community. An article from *Glamour* magazine states that gangsta rap promotes violence against women; while Jonathan Alter writes that rap music should be censored.

Tricia Rose, Barbara Ehrenreich and Maria Armoudian counter that rap music is unfairly blamed for society's violence, that it should not be censored and that rap music makes a positive contribution to society.

A bibliography, list of organizations to contact and index complete the book. — MWD



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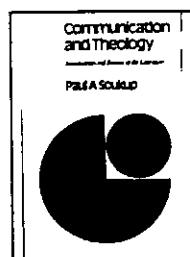
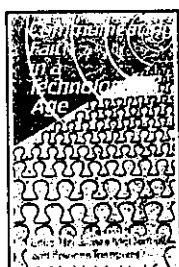
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