

GENERAL ANTHROPOGENY

THIRD PART – SUBSEQUENT ACHIEVEMENTS

Chapter 18 – WRITINGS

TABLE OF CONTENTS

Chapter 18 – WRITINGS	3
18A. Neolithic accounting writings. The prerequisite of detailed language, framing and arithmetic.....	3
18B. The insistent plasticianic language writings of WORLD 1B.....	4
18B1. An insistent autarkic writing: Chinese writing	5
18B2. Insistent transcriptive writings	7
18B2a. Hieroglyphics and hieratic. The orientation of writings	7
18B2b. Cuneiform writing	9
18B2c. The Mayan and Aztec writings. Inca quipus and Chinese knots.....	10
18C. The alphabetic, contractual and non- plasticianic writings of WORLD 1B: Aramaic, Phoenician, Archaic Hebrew. The linear A and B tablets.....	11
18D. WORLD 2 language writings transparent to what is being. Greek and Roman. From Byblos to Codex	13
18E. The remanences and returns of the plasticianic insistence	15
18E1. The sacred Indian writing system (the nâgarî)	16
18E2. The square Hebrew script.....	16
18E3. Arabic writing.....	17
18E4. Greco-Roman-Christian scripts. Cyrillic. Gothic script	18
18F. Printing and punctuation. Graphology	19
18G. The granular (magnetic) windowed-windowing writings of the WORLD 3.....	20
18H. Mathematical writing: Generative shifts and reversals	22
18I. Music writing	23
18I1. The controlled improvisation of WORLD 1A (ascriptural).....	24
18I2. The chironomy of the WORLD 1B (scriptural insistent)	24
18I3. The ancillary scores of WORLD 2 (scriptural transparent)	24
18I4. The autarkic scores of WORLD 3 (windowing scriptural).....	26
18I5. The phonergetic writing of dialects vs. the International Phonetic Alphabet (IPA)	26
18I6. The stenography of dance.....	27
18J. Absolute signs.....	27

18K. Bodily writings	29
18K1. Scarification and the painting of bodies. Headstones.....	29
18K2. Torment and torture	30
18L. Graphic instruments as an exemplary case of the cultural influence of the forces of production.....	31

GENERAL ANTHROPOGENY

THIRD PART – SUBSEQUENT ACCOMPLISHMENTS

Chapter 18 – WRITINGS

From the Upper Paleolithic <14A>, paintings and engravings introduced, among transversalizing Homo, an initial two-dimensionality of the medium and a lightness of execution that enabled the permutation of pictorial segments, strokes and blots, almost in the instant. In this way, painting made a certain shift from analogy to macrodigitality <2A2e>, thus presaging the schema <14A6>. In particular, we find abstract figures alongside the concrete figures consisting of a few strokes arranged in a spatial and temporal order. These were already aspects of writing, without being writing itself. Black Africa and Oceania have had these features of the detailed painted image without having developed a writing.

18A. Neolithic accounting writings. The prerequisite of detailed language, framing and arithmetic

Indeed, writing presupposes a genuine **framing**, i.e. (a) determined elements, (b) a spatial referential, (c) rules establishing a stable relationship between these elements and this spatial referential. This is not the case with the figures produced by non-scriptural Black Africa and Oceania. These regular figures are surrounding, but they are not referential, neither spatially nor temporally. In contrast, the Neolithic tectures <13E> and Neolithic images <14D> in Çatalhöyük on the Anatolian plateau have revealed a genuine referential framing.

On the other hand, writing also presupposes a significant reduction of imagery to **schematism**, hence from the analogical to the macrodigital, with the consequence that the resulting schemas are set to interlock and generate one another. This is what Neolithic potteries have shown us, with their generation schemas or generative schemas <14D> all the more suggestive of a virtual writing since the figures are often arranged in rows, columns or even paragraphs.

Given this framing and schematism, a neutral exchange became conceivable. And indeed, alongside abstract cosmological motifs, a considerable number of clay (counting) tokens of the early Neolithic – circa 11 thY BP – have been collected and analyzed by Denise Schmandt-Besserat <*The Earliest precursor of Writing, 1978, in The Emergence of Language*>. These tokens answer the questions of the breeder: how many animals, and of what

species? And of the farmer: how many cereals, and of what genus? These tokens were particularly abundant in the region of the Fertile Crescent, but spread far to the east and west.

In these tokens, the **nature** of objects counted was designated by their schematized images, and therefore without any innovation since the Upper Paleolithic. However, the **number** of things (causes) inventoried was indicated by stable shapes (rectangles, circles), and by the size of these shapes (from 1 to 4 cm). This confirms the new spirit of framing in the strict sense. And so, an accounting system combining designation (indicializing) and numeration (indexing) was set in motion.

An ultimate step was taken when these tokens were copied, which is another aspect of the written word, namely its reproducibility. Indeed, packages of goods in the strict sense <6G3>, thus tradable (merx) compared to a neutral exchanger, were beginning to circulate together with tokens enabling the identification of their contents. These tokens were tied or packed in clay bubbles, which were broken on arrival. So why not attach a copy of the contents to the bubble? Packages began displaying numbers and figures that made it unnecessary to open them. Using the generative schematism of the Neolithic image, this was a way of creating a reversible sequential grasping of schematic elements: “digits” of counting numbers, “digits” of counted things. It was practically an accounting writing with all of its advantages.

We already asked ourselves which Neolithic framing preceded the other. Was it the vertical framing that surrounds the woman in labor at Çatalhöyük? Or the horizontal framing that appears on the floor of certain houses? Or the one which is concurrently vertical and horizontal, of certain scale models of houses that were used as funerary urns (Azor, in Palestine) <13E>? We now see that we must broaden the enquiry to another type of framing, that of the counting tokens. Looking at the very early dates of the latter, 11thY, one might think that they played a role as inducers as much as induced. The influences between the tectures, the images and the tokens were undoubtedly circular, as they almost always are.

The first writings were thus arithmetizing, angularizing, framing, like Homo’s body from the origin <1A>. They were therefore abstractive, pure (discharged), purifying. But they were also surreptitiously magical, as they established both discharged and charged indexes <5C>, and triggered proliferating indicia into a fascinating fixity and permanence <4D>. From the counting tokens, then, writing meandered between semiotics and technique, between distancing and effectuation. This initial polarity between discharge (purity) and charge (magic, sorcery, shamanism) will affect the future and the production of all writings.

18B. The insistent plastician language writings of WORLD 1B

The primary empires (China, Sumer, Egypt, Maya, etc.) had other needs. They could no longer be satisfied with simple frames bearing the generative schematism of the Neolithic, and required a spatially and temporally multiplying sub-frame. After all, the body and mind of the despot is the sub-articulation of its buildings and images, it is also the omnipresent reverberation of its name and titles, of its decrees, the repeated chronicling of its victories, the

tireless counting of its enslaved enemies, the surveyed inventory of its lands and possessions, of its chariots, of its sacrifices of propitiation and adoration. It is in particular the litany of his titles that introduce registration and decree. So many framings and cadastres.

All this required *language writings*, i.e. graphic tracings performing more or less the same functions as the phonemes, glossemes, sequencemes, and phrasings of the detailed dialect, i.e. of the language charged with specifying (not representing) things-performances-in-situation-in-the-circumstance-over-a-horizon <16A> according to a dozen functions <17F>. There were then two main kinds of imperial writings illustrated by the Chinese writing, on the one hand, and by the hieroglyphic and the cuneiform writings, on the other.

18B1. An insistent autarkic writing: Chinese writing

Reading and writing Chinese script does not suppose the knowledge of the Chinese dialect, as the millions of people in the vast country who have read Chinese publications without speaking Chinese have proved over two millennia. It is self-contained as a script. It can be said to be autarkic, self-sufficient, as opposed to transcriptive writings, which are the representations of spoken languages.

Since Chinese writing has to fulfil every function of the dialect by itself, it is not really surprising that it has a fourfold articulation. (A) It is based on a certain number of *strokes* – always the same ones – traced with a brush dipped in ink, in principle on paper. The range of strokes remains limited, and consists of the simple oppositions of vertical, horizontal, oblique, intersection and exterior/interior. Their protocol of use is also limited: the Chinese ductus (graphic layout) places the strokes in an immutable order, just as the strokes of the world and its tao are meant to follow an immutable hierarchy. (B) These strokes come together to form a Chinese character that holds a *glosseme* <16B>, or combines several of them. At first, the characters were pictographic, i.e. ostensibly analogical; for instance, two relatively vertical strokes leaning on each other designated the upright man with his unstable equilibrium that always needs to be restored. But soon, these images were schematized for the sake of graphic ease, and also because there is a latent schema under every detailed image, since the detailed images of the Paleolithic. (C) Written Chinese words are held in one character or in several grouped characters (two, three, four), which then refer to a glosseme or to several juxtaposed glossemes, some of which combine superimposed glossemes. Their juxtaposition constitutes a *sequenceme*. (D) In the great eras – such as the Song Dynasty – handwriting, and particularly its use of the white space, provided the function of a genuine *phrasing*.

So resourced, the Chinese script could rise to all language abstractions (vs. mathematical abstractions). For example, in order to render one of the most abstract formulas that exists, i.e., the French “en tant que”, the English “as”, the Greek “hè(i)”, the Latin “quatalis”, and that aims at a “thing-performance” in its essential nature, the Chinese script adds the character YE – a sign of the female sex – to the character(s) of the thing targeted. In this way, we find in ancient texts equivalents of: $AB\ YE = A\ \text{is}\ B\ \text{itself}$.

In addition to what it reveals about the reciprocal implications of image, schema and concept, Chinese writing shows the anthropogeny the intimate concordance that exists between

a writing and the choice of existence <8H> of the group that conceives and practices it. (a) Indeed, the very act of writing with a brush and an inalterable, fluid and dosable ink gliding over porous papers summarizes - through the hand, the wrist, the elbow, the shoulder of the Chinese scribe - the aquatic cybernetics of the hydraulic machine that the whole of China is. (b) The use of a restricted panoply of strokes and an immutable protocol of their production in the character confirms the extent to which the degrees of freedom (dimensions) here result from a transcendental naturalism – or naturalist transcendentalism – found in the interplay between yin and yang, and which typifies Chinese cosmogony. (c) Scattered remnants of evasive analogy corroborate the Taoist naturalness of the characters. (d) The complex glossemes of the Chinese language appear as derived from simple glossemes, in a new naturalness. (e) Made up of the same strokes, the most diverse words establish indicial graphic relations between them, suggesting a universal resonance of everything in everything, both spatially and temporally. (f) The reading after the writing is, like that of the *I Ching* and the Tangram game (a panoply of triangular, square and diamond-shaped pieces), more combinatory than sequential. (g) The permanency of the characters (ideograms) gives each utterance the weight of history, and a “critical archaism” (Jaspers) that is thoroughly Confucian; even in the days of Maoist anti-Confucianism, “woman” was still noted as “pig-shelter-guard”. (h) Besides, in the characters, there are only strokes, no dots; and the strokes are simultaneously discharged, abstract, and yet charged <5C3>, triggering often excited field effects <7DE>: sometimes logico-semiotic field effects – since, on the page, different characters with different meanings appear nonetheless as having common features; sometimes perceptive-motor field effects, depending on the (cosmic) energy of the scribe.

The Chinese poetry, the power of the Mandarins and everyday life were nurtured by all this. The plastician strength of the writing (the graphic phrasing) of an eleventh-century Song Dynasty Emperor did help to show and achieve his empire. Also, any child who learns to write also learns to follow the Tao. And, by the same token, one never ceases to learn to write, since one never ceases to learn about the world and the Tao (yin-yang) from which it proceeds.

It is worth noting that, although Chinese writing does not transcribe a dialect – and is in itself a dialect – it has however relied on the structure of the Chinese dialect – especially the monosyllabic nature – if not of the words, at least of the elementary designative glossemes (monemes). This kind of autarky could not have been achieved in the Indo-European dialects, which have compound designative glossemes, often even when they are elementary. It is the small monosyllabic block of thought of the elementary Chinese spoken glossemes, quite ready to enter into a cosmic combinatorial system, and perfectly expressing a naturalist transcendentalism, which prompted the drawing of these other small semiotic and cosmological blocks that are the written Chinese characters. In a confirmation of the modular nature of detailed language <17B2>.

Because it is spontaneously plasticianic, this kind of writing allows us to see and handle the extent to which any language essentially consists of a few floating indexations, whose only function is to specify (vs. represent) a thing-performance-in-situation-in-a-circumstance-over-a-horizon. For example, here is the panoply-protocol of themes that Kyril Ryjik <*L'idiote chinois*, Payot> grants to the Chinese character BAI (or BO), indexer of white clarity, clear and pure while lacking in strength: (1) White (one of the five Chinese colors), white of mourning (color of absence of vitality), whiteness. (2) Pure, unblemished, blameless. (3) Empty, bare,

left white. (4) Clear, bright, shining. (5) Clear, easy to understand. (6) To declare, expose, say. (7) Spoken or sung dialogue in the theatre. (8) Frank, open. (9) Without reason, without foundation. (10) Freely. (11) In vain, to no purpose. (12) Finally, in the end.

18B2. Insistent transcriptive writings

Apart from Chinese writing, most language scripts were more or less exhaustive transcriptions of spoken language. By 3000 BC – almost midway between the first Neolithic counting tokens and our era – Homo inaugurated two great transcriptive writings that dominated the Old World: (a) Egyptian writing, which has remained without descent, and (b) Sumerian-Akkadian writing, from which all subsequent alphabetic scripts have emerged until today. This inexhaustible fecundity and the slight anteriority of the latter justify the sensational title of the Assyriologist S.N. Kramer: *L'Histoire commence à Sumer* (History begins in Sumer), if by history we understand the written accounts of hominid events. But anthropogeny will gain by starting with Egypt, because hieroglyphic and hieratic writing clearly illustrate the transition between image and writing. And also, because the cuneiform of Sumer and Akkad will serve as a transition to subsequent transcriptive writing.

18B2a. Hieroglyphics and hieratic. The orientation of writings

Egyptian **demotic** script, a popular writing that takes its inspiration from the principles of Greek writing since 600 BC, is of little interest to anthropogeny. On the other hand, anthropogeny is very interested in **hieroglyphic** writing, a monumental engraved script (*glupteîn*, to engrave, *hieros*, sacred), and in **hieratic** writing, a cursive script that follows the same principles as hieroglyphic writing, but that uses many ligatures suited to its cursive nature; It was suitable for administrative purposes, for inventories and contracts, and for literature. These two scripts are both equally ancient and begin with the predynastic era, around 3000 BC.

From their origin, they comprise **ideograms** (= logograms), which were initially very pictographic, then more schematic <14A6>, as well as **phonograms**, in this case ideograms from which we only retain the sound to designate free phonemes. Moreover, they perform **semantic positions**, i.e. significant *orientations* (right-left, left-right) and *metatheses* (inversions) of signs, both ideographic and phonographic, sometimes adding new meanings to their primary sense, sometimes delving into this primary sense, making it explicit, by recalling traditional interpretations or by adding new explanations. A crucial anthropogenic question arises: why did this apparently impractical script remain unchanged for three millennia, when it would have been more practical – one would think – to generalize phonograms, all the more so as the neighboring Sumerian script sets an example and demonstrates its effectiveness?

It has been rightly argued that there was some resistance from a caste of scribes who wanted to preserve their privileges as decipherers. It has also been said that this system gained in legibility what it lost in simplicity, given that in a Hamito-Semitic language such as Egyptian, only the consonants are written (since they alone are fixed), and that it is hence

difficult to mark the end of words in a purely phonographic system, while ideograms were used as word-end signs. On the other hand, ideograms played the role of class or situational determinants for phonograms, too often giving rise to homonyms. But these arguments are tenuous, since other Semitic languages cope with phonograms, and because phonograms – even Semitic ones such as Akkadian – cope with word-end signs.

Therefore, the actual reasons are probably more directly anthropogenic. (a) To preserve the mystery of the indiciality of the image in writing, along with its magic <4D>, boosted here by the dazzling (charged) indexations proper to all writing. (b) To avoid the galloping abstraction to which the almost pure macrodigitality of the phonogram leads. (c) To maintain the visual intuition of certain cosmological and political postulates; because politically and religiously, writing the Sun as an /r/ + /a-è/, or as a luminous disc is not at all the same process. (d) Most importantly, to allow the writing of designators which not only point to their designated, to *designate* them in the usual sense, but also *interpret* them in a kind of metalanguage supporting the language (or metatext supporting the text), through the double phonetic and pictorial formulation, and even more so through semantic positions, i.e. the significant orientations and metatheses of signs which allow for all kinds of physical and metaphysical *rebuses*. By combining these four reasons, we can better understand the “logicality” (Gardiner), i.e. the semantic-syntax of Egyptian images and writings. In both cases, it is not a case of image and writing, but in truth of imaging-script and scripting-image <14E>.

Hieroglyphic and hieratic writings provide the best opportunity to consider the orientation of scriptures more broadly. The generally accepted theory seems plausible. Man has been right-handed since *Homo erectus*, and even since *Homo habilis*, as evidenced by the angle at which fossil tools are cut. This has two implications. (A) Initially, in China, Sumer, and Egypt, the human writer first brought his right hand to the right of his support and wrote from right to left either isolated signs or columns of signs. (B) But also, it is easier for a right-handed person to *pull* a line from left to right than to *push* it from right to left. Thus, according to varying protocols, but undoubtedly still under the influence of their cursive, essentially *pulled* forms, Chinese, Sumerian, and later Greco-Roman scripts began, after a time, to be written from left to right.

Egyptian writing retained the right-left orientation as its basic orientation, and reserved inversions for plastician reasons (on a statue, a text on both the right and the left is oriented towards the spectator), and above all for semantic-syntactic purposes, for example to oppose the state to the action; canonically, the orientation of the reading goes to the encounter of the actants (whose basic orientation is therefore left-right), except when they face each other to mark the symmetry of a state. Other Semitic alphabets – such as Hebrew and Arabic – continued the right-left writing for similar reasons. It goes without saying that scriptural orientations encouraged different destinies-choices of existence <8H>, thus also different phenomenologies, ontologies, and epistemologies.

18B2b. Cuneiform writing

In Mesopotamia, which was as fertile as the Nile in those days, and since 3000 BC, or even 3200 BC, Sumerian writing – which was initially intended to transcribe an agglutinative language, Sumerian – began to transcribe a Semitic language, Akkadian – a term that usually covers Old Akkadian, Babylonian and Assyrian – a few centuries later, with a few adaptations. With additional adaptations, it was used to transcribe some fifteen other languages for almost three millennia.

There, the initial ideogram (logogram) soon became exclusively **phonogram**, i.e. where the writing retains the sound of the word, often a monosyllable, because Akkadian – like Chinese – was made up of elementary monosyllabic glossemes. The support was not papyrus but clay, which, when wet, could be easily worked with an awl to form corners (cunei) extended by strokes. For these two combined reasons, the proposed graphic element was the **stroke-dot** [*trait-point*], which, together with the blot, is the foundation of the image, but which, as soon as it gets rid of the blot, becomes the foundation of all macro-digitalization in the figure, in the cipher, in the letter, and thus forms the foundation of mathematics <19A>, which presupposes writing, but topically the phonographic rather than the ideographic writing. Everything was therefore in place to hasten the passage from pictogram to ideogram, then to phonograms grouped in clusters, then in lines. And the line, which was initially *pushed* from right to left, was soon *pulled* from left to right.

Hence reduced to corner-strokes, the phonogram proved sufficiently salient that, around 2000 BC, in reaction to a desire for cursivity, the cuneiform characters were rotated 90° counter-clockwise without ceasing to be identified. Thus, “woman” was initially a vulva represented by an isosceles triangle pointing downwards with a vertical slit; but, following the flow of writing, and also of reading, the triangle rotated 90° pointing to the right, and the slit became horizontal. This rotation confirmed the ability of Homo’s embracing sight, at least when it comes to “good shapes”, to pass from the pictogram (detailed image) to the logogram (already macro-digitalizing schema) and the phonogram (strictly macro-digitalizing). Our capital A is an inverted bull’s head. The abstract privilege of two-dimensionality, as painting has taught us, is that it lends itself to the effects of symmetry <14B3>.

Like Chinese and Egyptian writing, cuneiform writing also demonstrated another anthropogenic characteristic of WORLD 1B: the refusal of immediate and absolute evidence and decisions, in favor of initiatory interpretation. (a) Each cuneiform sentence comprises the words essential to its understanding, but these are often arranged in sequences that meet graphic (aesthetic) requirements. (b) A single sign often has several meanings, and a single meaning has several signs, particularly in Akkadian mathematical writing. We are first impressed by its efficiency: the system with bases of 10 and 60 (from which we derive 60-minute hours, 60-second minutes, 360-degree circles) supposes the notion of coefficients and powers, and already exploits the positions of the digits (the largest on the left). However, its practice was such that the same three digits sequence could be read (a) $60 + 10 + 5 = 75$; (b) $60 \text{ squared} + 10 + 5 = 3615$; (c) $1 + 15/60 = 1.25$, depending on the context. At least when it came to

mathematics or astronomy, because in commercial transactions the numbers were often spelled out, and with good reason.

Given this, anthropogeny is at a loss as to what it will most admire. (a) The confirmation that the linguistic brain operates by boxes (modules), a few semantic elements sufficing to trigger a block (packet) of meaning, which induces a linguistic block, which then more or less exactly and completely constructs an acceptable sequenceme <17B2>? (b) The confirmation that this operation works because every practical statement aims at specifying (not representing) a thing-performance-in-situation-in-the-circumstance-over-a-horizon, and that every philosophical statement holds in a few very general indexations <10D2a>? (c) The confirmation that, far from too much evidence, Homo wants to preserve as much as possible a field of indices with their inferences and a field of indexes with their charge (magic power) and discharge (purity), both of which calling for more or less magical and charismatic interpretations?

To understand this desire for obscureness, we must consider – just like we did in the case of Egyptian hieroglyphics and hieratic – the desire of the cuneiform scribe to guard the exclusivity of his knowledge and the glory of his title: his name, *dubsar*, was so prestigious that it lasted for three millennia. But, as in Egypt, this politico-social motivation would have been ineffective without Homo's cryptic willingness regarding any graphics.

Egyptian and Mesopotamian writings performed two choices of existence. The flowery Egyptian script combines rigor and sensuality insofar as even its phonograms were pictorial. In its writing as in everything else, ancient Egypt is the most exquisite civilization (quaerere, ex) that Homo has produced, i.e., that in which he has most carefully chosen what he wanted to produce, but above all what he wanted to perceive. In contrast, cuneiform writing, as unforgiving as the strokes and corners, the stroke-dots, with which its ideographs (logograms) were composed, reached its peak during the second millennium BC in the “eye for an eye” of the Code of Hammurabi (1750 BC) and in the various versions of the most incisive epic, that of Gilgamesh and Enkidu <22B2>.

18B2c. The Mayan and Aztec writings. Inca quipus and Chinese knots

The New World writings are not well known, but what we can guess is consistent with the anthropogenic lessons of Egyptian and cuneiform writing. Recent interpretations of the Mayan script depict it as confirming Homo's shifts between writing and image. They think they recognize a sequence of images with ideographic and phonographic scope, like Egyptian writing, but syllabic, like cuneiform writing, with semantic complements, like Egyptian writing. Units seem to be aligned from left to right, or from top to bottom, in any case in blocks where multiple signs are grouped together, and it is therefore the package, the box, the module, rather than the sequenceme, that signifies something, as in the early cuneiform texts whose sequencematic freedom we have just reported.

Yet, one characteristic breaks with cuneiform and Egyptian writing, confirming the extent to which a script complies with the destiny-choice of existence of the language it transcribes and the people who read and speak it. Indeed, the phonetic (syllabic) images in this

case resemble animalcules, animal concretions, in a swarming that underlies their factual meaning. Now, this is precisely the cosmology revealed by Amerindian tectures <13F> and images <14E>, and which will be confirmed by a reading of the *Popol Vuh* <22B2>.

In any event, the Western-style tables that play the role of royal titular texts produced by the Aztecs in the sixteenth century immediately after the Spanish conquest confirm this destiny-choice of existence – thus this topology, this cybernetic, this logico-semiotic, this Amerindian presentivity <8H>. Each figure in the table corresponds to a word; the first syllable of the words thus represented by each one is kept; if we put them in a proper order, all these first syllables allow producing a text containing the name of the king and his qualities. Perhaps Homo has never taken so far the practice of boxes (blocks, packages, modules) that signify - are signifying - by means of scattered, analogical and macro-digital elements, only available to form a sequenceme <“Communications”, 29,1978>.

The Inca quipus were bundles of strings punctuated by knots, the arrangement of which recorded major events; a form of transcription readable only by appointed decipherers who risked their glory and their lives dependent on whether their reading suited the despot's desired order of things. Before their writing, the Chinese also used knots to mark the events of a year; big or small knots determined by the importance of the events commemorated; and later, the *Tao Te Ching* advises the wise people to return to this modest custom: "Let them restore the honor of knotted cords". Anthropogeny will note the correlations between the topology of the knot and the coincidence (cadere, in, cum) that is the event, but also between the knot and the writing character. And all these cases confirm cosmogonic and mantic wills.

This is an opportunity to recall how the primary empires did not always presuppose formal writing, but only plastician phenomena – such as tectures, images, (knotted) weavings, dances, – that had such oppositional (macro-digital) characteristics that they were pre-scriptural. And so we have illustrated the wavering between the ascriptural WORLD 1A and the scriptural WORLD 1B <12C> by the example of the Naskas of southern Peru, who were the predecessors of the Incas, and who ignored writing, although they bore witness to a primary empire organization in their highly regulated urbanistic conceptions and their gigantic images on the ground (visible by helicopter) conjoining earth and sky, perhaps on the occasion of seasonal processions that traversed them (dancing and thus re-writing them?)

18C. The alphabetic, contractual and non-plastician writings of WORLD 1B: Aramaic, Phoenician, Archaic Hebrew. The linear A and B tablets

All of the writings described above are made up of signs that convey relatively broad ideas or sounds, and even syllables. None of these writings is based on an alphabet, i.e., a panoply of letters: alpha, beta, etc., graphic units that are fairly close to the phonetic and/or phonematic units of languages. However, around 1000 BC, three alphabetic scripts were introduced in the Middle East: Aramaic, Phoenician and archaic Hebrew.

An anthropogeny will observe that they have assumed a profound transformation of the mentalities of the primary empires, which have now become less plastician, less insistent, more accounting and even contractual. It is true that the original writings (except for the Chinese, which was not transcriptive) often expressed abstract quantities of cereals, animals, textiles, pottery, slaves, slaughter, victories and defeats. But in the fervor of the original Order, these commodities and their exchanges (merxes), secured by highly sacralized despots, were themselves more or less sacred, hence intense. So they were written appropriately in writings based on ideas or syllables with a semantic charge. Only numbers were written in truly abstract, pre-alphabetic form.

But, around 1000 BC, something definitely changed in Middle Eastern Homo's perception of exchanges. As a result of the new commercial trading, both by land and by sea, these transactions became increasingly contractual, seeking verifiable, quantifiable interchangeability. And this invited then to conceive the languages to be transcribed as abstract elementary sounds, to which letters would correspond, rather than as packets of ideas or syllables. On the other hand, the cuneiform scribes were being pushed in the same direction by their practices. Firstly, the monumental forms of their writing were erased in favor of cursive forms for administrative purposes; and cursive forms privilege the abstract transponibility of the strokes used. Later, distant conquests and coalitions led to the adoption of cuneiform writing for dialects it had not been designed for. On one occasion, it was adapted to an Indo-European dialect, which distinguished radicals and endings, the Hittite. There were also numerous adaptations to very different Semitic dialects. In both these cases, the focus was on the sound units of the writing as much as on its semantic units. This is how the Aramaic, Phoenician and archaic Hebrew alphabets came into being. As soon as they appeared, they spread very quickly. And their descendants are still with us.

By nature, alphabets were much less plastician and insistent than earlier scripts. In the Carthage Tophet, on the steles of the children sacrificed to Baal, the Phoenician inscriptions are so cursive that they often neglect the arrangement in lines, as if in these ritual accounts and contracts, only the numbers mattered and could be content with a careless marking. However, we should not overstate this since these alphabetical writings retained something of the ritual exchange of the original empires for a long time. Among the Hebrews most notably, the contract around the Ark of the Covenant is constantly pathetic. It consists of incessant negotiations between impassioned tribes and a passionate god, each with its own violent and changing moods. And when the archaic Hebrew writing was replaced by the Aramaic script, which became dominant throughout most of the Middle East around 700 BC, it would convey the shattering admonitions and vituperations of the prophets <21C>. Furthermore, the absence of written vowels that characterizes Semitic scripts, which are adapted to consonant languages and force an oral vocalization of the written text, preserves some of the mysterious interpretation that Homo had so vigorously cultivated in the earlier plastician and insistent scripts.

Which of the three writings – Aramaic, ancient Hebrew and Phoenician – gave the idea for the alphabet? Phoenician script is often pointed out by the authors of *La Naissance des écritures* (Seuil, 1994). This is quite possible if it is true that, after the disappearance of Ugarit around the year 1000 BC, the Phoenicians were the main navigators in the Mediterranean, and that it was probably in maritime trade that the notion of contract most quickly gained in

abstraction. In any case, it is the Phoenician consonantal alphabet that, by adapting to Greek - an Indo-European language that requires an alphabet of consonants and vowels - gave the Greek writing, which will definitively open WORLD 2 <18D>.

This emergence of contractual scripts around 1000 BC raises the question of whether certain aspects of these scripts are not already foreshadowed in the A and B linear tablets. Linear A – which is found mainly at Hagia Triada – is a rather crude writing from the end of Crete’s Minoan society between the eighteenth and fifteenth centuries, whose dialect we do not know, but of which we can still understand something since it is fairly ideographic and conveys very basic contents, i.e. simple accounts devoid of literature, history or any real legislation. The more accurate Linear B, found in Greece and Crete, derives from Linear A and transcribes an archaic Greek language spoken between 1500 and 1200 BC according to a syllabic system, which made it possible to decipher it adequately. It was the writing of the Mycenaeans, and paleographers wonder with emotion whether a certain tablet found at Pylos, the city of Nestor sung by Homer, was not being written at the very moment when the city was destroyed by the Dorians around 1200 BC. It is unfinished; it mentions human sacrifices, which only took place in very special circumstances, in this case the fall of a city. It is baked, probably by a fire (the one from the battle?), because Mycenaean tablets were not baked and rarely lasted more than one accounting year.

What defies anthropogeny is that, apart from their disregard for conservation (no cooking), these two so-called “linear” writings also reveal an absence of plastician emphasis that could foreshadow that of the contractual writings of 1000 BC (Phoenician, Aramaic, archaic Hebrew). Moreover, they both concern the same Mediterranean peoples. However, the two-century hiatus excludes a definite influence, if it is true that the last known witnesses of Linear B are from 1200 BC. Thus, we cannot build a thesis, but only ask a more general question concerning the relationship between non-insistent writings and the peoples of the sea, who were fast traders.

In any case, both Linear A and Linear B reveal that large populations can be aware of the principle of writing, know that neighboring peoples possess explicit and careful writings (such as the Babylonian of the 2nd millennium), and yet only give an altogether secondary and transitory role to writing, without producing any literature, historiography or stable legislation. Let us repeat that the tablets of Linear B that were designed for simple administrative records were not baked (except by accidental fire), and – or so it would seem – were discarded every year (Chadwick).

18D. WORLD 2 language writings transparent to the being. Greek and Roman. From Byblos to Codex

The transition from Phoenician to Greek writing took place amidst an even stronger upheaval than that which shifted the intensive plastician writings to the non-plastician and non-

intensive contractual writings, and it involved nothing less than the leap from the close-continuous of WORLD 1 to the distant-continuous of WORLD 2 <12B>.

Here are the singularities of Greek writing. (a) By writing an Indo-European dialect (vowel as well as consonant), that was no longer Semitic (consonant), Greek characters make a distinction between vowels and consonants, and no longer require the reader to use supplementary vocalization. This means that the text is accessible to anyone, without any particular initiation or mastery, democratically. This is the first reason why it is so transparent to the eye. (b) These characters are plastically equal in height, and fairly equal in mass, thus free of the distracting accidents of Carthaginian writing and linear B. Again, a way to be transparent. (c) While Phoenician characters ran, semitically, from right to left, Greek characters have been running from left to right since 500 BC - after a short moment of *boustrophedon* (where like the ox <bous> turns <strepHeîn> at the end of the furrow, the scribe, having gone right-left, starts the following line left-right, etc.). The closing [backward-looking] right-left *thrust* became a proversive [forward-looking] left-right *pull* <18B2a>. A new way of not reading in insistent blocks but of following the sequenceme in its straight line. (d) By means of all this, the text – whether it be monumental or written on a scroll (the word *byblos* <roll> comes from Babylon, thus reflecting the great prestige of Babylonian writing) – is captured in an embracing view, in the right distance from the “skènè” and the “tHeatron” <13G1>, by a theoretical gaze (tHeôreîn, to contemplate), where each sentence, each line is an integral part, thus referring every time first to the whole that the entire text is.

Then the Greek text was able to become equal to the discourse it conveyed and even, through its transparent equality, to vanish before it, giving the impression that the spoken and written discourse reached the Real itself. The Real designated itself as being (to on), as what is being (to eīnai), as essence (ousia, to ti èn eīnai), and thereby became Reality, i.e. the Real tamed by human signs, mostly language <8E1>. The Universe was supposedly intelligible, and became not only a *woruld <1B>, but a Cosmos (cosmic order), since it was orderable and accessible in a speech and in a writing where the written logos adequately duplicated the spoken logos. Parmenides’ formidable statement: “The being is, the non-being is not” would have been unimaginable in a plastician and insistent writing, such as Egyptian hieratic and Akkadian cuneiform, and equally inconceivable in consonant Semitic contractual writings. A fortiori the metaphysics of Plato and Aristotle, or the Stoic and Epicurean morals.

Roman writing, which came from Greek through the Etruscans, did not contradict this transparency of discourse and things. It even reinforced it to the extent that it was soon able to carry the Christian creationist and personalist metaphysics, which wanted matter itself to be intelligible, having been created by a supposedly infinite divine intelligence and will.

Totalization through writing was completed in the first century of our era with the revolution of its support, which shifted from the Greek *byblos* (scroll, volumen) to the Latin codex (notebook). The thin, solid pages of the Latin codex (notebook) assumed parchment (from Pergamon, where it was thought to have originated). As long as a text was laid out on a papyrus scroll (or paper scroll, in China), its contents could only be seized by unrolling it, not without slowness and difficulty, both hands being engaged; its various sections remained distant from one other and not easy to compare. In contrast, the pages of the Roman *codex* – or *volume* – were instantly flippable and allowed for the immediate comparison of the different

portions of a text, regardless of how far apart they were. During the second and third centuries of our era, the *codex* completed conquering the New and Old Testaments' jurists and readers who were very fond of comparisons and references; *codexes* and *codes* refer to one another. It was found economical to offer classics by Homer and Cicero in this format to the growing number of students. Even in Egypt, the land of papyrus, only a few literary texts, where the overall logic was less important, remained faithful to the byblos (scroll), not without some snobbery.

The Codex, which could be leafed through in all directions, then fulfilled the idea of system. Around 250 AD, Plotinus' *Enneads* display a coherence, a flow of reasoning unknown to Plato and Aristotle, and which inaugurates the sustained dissertation as we understand it today. The demonstration thus understood reinforced the demand for univocity of the terms used and initiated a long process of distrust of the verbal equivocality and analogy that had reigned until that time. Medieval philosophy and theology became obsessed with the definition of words, which there generally became terms, hence delimited words (*termini*) <20C3>.

At the same time, this systemic coherence induced to a more intimate, existential coherence. The reader of a codex is caught, protected in the folds of its pages. As he reads, he can thus enjoyably cultivate the autarkic interiority of his Roman-Christian-Stoic-Neoplatonic mind. Few things have reinforced the pleats, folds and centeredness of the Latin-Christian-Neoplatonist-Stoic *persona* more than the folds of the book, and particularly the central fold of the double page, or the two facing pages of the open codex <13H, 14G, 30D>. Through their centered gathering and bilateral symmetry, this fraternity of the wall corner and the codex corner - that proves so sensitive to a bilaterally upright primate with bilaterally symmetrical plane-hands - has been pinpointed by the Latin phrase: *in angulo cum libello*. Or better still in the double diminutive of its Dutch form: *in een hoekske met een boekske*.

18E. The remanences and returns of the plastician insistence

The evolutions described above would suggest that writing has experienced increasing alphabetical transparency. The histories that consider literacy as an ideal – and there are still some – can only confirm this opinion. However, several scripts have showed reticence in this respect, which are by no means forms of decadence. Some of them distanced themselves from the contractual Aramaic script from which they derived: Indian, square Hebrew and Arabic. Others distanced themselves from the transparent Greco-Roman script: for example, Cyrillic and Gothic. In all these cases, there has been a comeback to a more insistent conception of writing; sometimes also more plasticianic, but not always, as shown by square Hebrew. According to the topologies, cybernetics, logico-semiotics, presentivities, and thus the choices of existence <8H> of the populations concerned.

18E1. The sacred Indian writing system (the *nâgarî*)

Aramaic, which was dominant in the Middle East at the time, was the writing that reached India in the first millennium BC, and which we have termed contractual. But there, it regained majesty by conveying the Vedas, and its derivative *nâgarî*, by its very structure, which manifests the universal subarticulation that is the India's choice-of-existence. This writing is drawn in innumerable curves that originate from rectilinear elements, themselves descending from a high horizontal line, continuous at the beginning (only discontinuous in modern editions, when a word or a sequence of words ends in a vowel). Indeed, the Indian cosmic order, Dharma, descends from a square sky, not a round heaven as in China.

Like Greek, Sanskrit – which is Indo-European and therefore declining and conjugating – had to be written proversively from left to right and add vowels to the only consonants of Aramaic, a Semitic language. However, the vowels of the *nâgarî* are not autonomous characters like they are in the Greek script. Very Indian and copulative always, each syllable is realized in the form of a ligature, i.e. one or more consonants altered by the following vowel (with the exception of /a/, which has a distinct character when it is initial). As with the sexual positions of Khajuraho, the ligatures abound vertiginously.

Ramifying on the page, the text of the *Bhagavad Gita* allows the *bhakta* – the adherent of *bhakti* (divine sharing) – to understand that the *bhakti* is simultaneously order (dharma), emotion (bhâva), transport of joy (hlâda), and poetic flavor (rasa), in a decoding process that is all the more radiant because it is at once supple, fixed, and uneasy. The theory of *Mîmāṃsā* has taught Indian Homo that the cosmically exact pronunciation of ligatures according to *Samdhi* – the subtle reciprocal alteration of vowels and consonants, of which Louis Renou's *Grammaire sanskrite élémentaire* gives two hundred cases – achieves the salvation of the world and individual salvation simultaneously. The Vedas texts are thereby a virtual musical score, whose commentators are certainly induced to sing. This was reflected in mathematics, to which Indian scriptures gave clearly transposable numbers with definite positions – not just indicative ones, as in cuneiform. Indian numbering is said to be Arabic, because it is the Arabs who brought it to us.

18E2. The square Hebrew script

The **archaic** Hebrew script, which had been used to record the Pentateuch, was soon replaced in Israel by the Aramaic script, which inscribed the vivid (cursive) admonitions of the Prophets. However, in the early years of our era, a properly Hebrew script was restored. It is sometimes called **Assyrian** because of its origin, and is commonly referred to as **square** for its appearance. Like its contemporaries – the Greek and Roman scripts – it is relatively uniform. However, it is written from right to left and only retains consonants, as befits a Semitic dialect, with vowels only occurring as diacritical marks in ancient, often sacred, texts. Finally – and this is remarkable – many characters are very similar, sometimes to the verge of confusion, e.g. rech, vav, zain (yod), final khaf, final nun, which is why it was said that the rabbis were tiring there their eyes.

This is thus an insistent writing, like Sanskrit, but very otherwise. Because here what prevails are combinatorics and saltation according to a certain fertile disorder that recalls the initial invincible Tohu-Bohu, in an awareness of the inner fluctuation of the word, whose intrigue lies up to the number of its letters (massoretism), and in which we can see the constant soil of all forms of fertility in Hebrew philosophy up to the present day, at the same time as its reinforcement of the paranoia inherent to Homo <4F>: an eminently watching as well as watched writing. Are there no field effects? Perceptual-motor, yes, or almost. But not logical-semiotic. Insistence has been replaced by difference. The scriptural attention is all the more vivid.

A question arises that brings to light the nature and force of writings as a choice of existence: could the Pentateuch (Torah) have been conceived and written primitively in square Hebrew? Or did its divine contracts imply the very contractual impulsiveness that archaic Hebrew writing shared with contemporary Phoenician and Aramaic? One might think so, and not find pointless the long rejection of the square script by the “Samaritan” Jews attached to archaic Hebrew that can still be seen in a thirteenth-century *Genesis* in the Chester Beatty Library in Dublin. In this case, the insistence of the Mishna (a second-century collection of the Law) that the sacred text must be read in the “new” writing would indicate a renewal coinciding with the commencement of the Christian era. This renewal would then have been of interest to the emergence of Christianity, provided that Jesus of Nazareth – who initiated a religion that was initially oral and gestural, and not written by him – was not illiterate. More generally, it would also confirm that in the first century of our era an “apocalyptic Mediterranean” civilization emerged, that was simultaneously Christian, Neo-Roman, Stoic, Neo-Platonic, Neo-Hebrew, and soon Arabic. Today, some believe they can see at the same moment a surge of influence of the “individualist” articulation in the Middle East, where Jesus-on-a-Judaic-background would match the earlier Buddha-on-a-Hindu-background. An influence of *nâgarî*-type scripts on square Hebrew would fit with this hypothesis.

18E3. Arabic writing

The first elements of Arabic writing date back to the same period as the beginning of the square Hebrew script, in the Nabataean Arab kingdom around Petra (100,+100). This correlation of dates would confirm the impression of a general Semitic aggiornamento. In the Aramaic writing, which served as a starting point through Syriac writing (square Hebrew is sometimes called “Assyrian”), the nascent Arabic script developed ligatures, which were first sought in a rounded cursive known as **estranguelo** (straggulos, rounded). In the form of a low ligature (as opposed to the high Sanskrit ligature), this new choice of existence reached its maturity in the 7th century AD, that of Muhammad. Thus, Arabic is written from right to left, like Hebrew, but in a persevering line on the ground, which knows only three kinds of accidents in the dot-stroke [*trait-point*], which is the foundation of all writing: the overlapping of certain strokes turning back on themselves (faithful to estranguelo); the /a/ which is the only vowel marked of all three (a, i, ou); the dots that are sometimes below the line and sometimes above it that specify the consonants, and that are so fundamental that they are not only diacritical. Indeed, the Arabic music <15F4> had already shown us this: a tireless (resigned) horizontal perseverance on which strident bursts of vertical transcendence occasionally dazzle.

The fact that the Koran thus produces the most abrupt conception of transcendence produced by Homo is certainly not unconnected to this writing, this language and this music, at least as much as it is not unconnected to the economic and social “circumstances” of the 7th century. In this particular case, the consonantism of the Semitic languages creates a concomitant enclosure and explosion, while Hebrew, with its combinatory mobility, is almost the opposite. With its abrupt veiling and unveiling effects, in which the initially hidden meaning suddenly appears, the calligraphic Arabic alphabet – in all its different versions, mainly kufic, linear and angular – will then become so salient and pregnant that it will replace the images that are always suspect of immanence, and which will vanish after the fall of Baghdad around 1250 AD. It is noteworthy that the Muslim relic per excellence is a fragment of writing attributed to the hand of the Prophet.

18E4. Greco-Roman-Christian scripts. Cyrillic. Gothic script

In its ontological and epistemological transparency, the Greco-Roman alphabet could not be used as it was by the apocalyptic Christianity and Neo-Platonism of the first millennium, which both have altered it in the magical environment of mosaics and goldsmith's shops, where the spirit appeared to prowl among things <14H2>. The calligraphic initial letters of medieval manuscripts is nothing more than a paroxysm of the interlacing that affects all letters under the hand of scribes in the scriptoria where, amidst the deafening noise of invasions, some human specimens still hope to find an ultimate meaning of their lives in the written word as veiled Parousia. The Irish miniature, which belongs to the same field of action as John Scotus Erigena, and which is one of Homo's most astonishing productions, is veiling-revealing, like the Arabic kufic script, except that it retains something of the progressiveness and dialectic cherished by the West, whereas the Muslim version practices instantaneous fulgurations.

Whether or not the so-called Cyrillic script was first introduced by Saints Cyril and Methodius is of little importance to Anthropogeny. The point is that an alphabet was created at the end of the first millennium – probably as a result of a translation of the Bible from Greek into Old Slavic – and is still being used in Russia. Not only did it efficiently record Slavic phonemes, but its enlarged letters realized the choice of existence of the somewhat stagnant transversality of the whole of the Russian language, with its lack of a verb ‘to have’ and its ‘aspects’ instead of tenses, as well as its profusion of cases where the syntagma lateralizes <Complement 6, *Russian and the izba*>. This alphabet contributed to the fact that Eastern Europe has extended the Byzantine first millennium and its eschatological thinking until very recently.

In the same way, in Western Europe, the Gothic script elaborated in the twelfth century (completely unrelated to the Goths), and that only became extinct with the Second World War, reflected the affricate phonemic nature of the German language in its medieval twists and turns, and more generally expressed a choice of existence based on the conflicting primal elements (water, air, fire, earth) that epitomize Germany. Hegel's encyclopedia, Nietzsche's apophthegms, Husserl's phenomenology and Freud's psychoanalysis presupposed this language, but also this writing, where every text appears as composed of apparent layers and

shifting secret layers. The Freudian *Unbewusste* (unconscious), which itself is consonant with the German proverb *Der Wunsch ist Vater des Gedankens*, has several aspects of this script.

We should note that today's Latin America, which uses Roman characters, is also reluctant to their excessive transparency and obviousness, and arranges for – at least in public displays – cluttering them up with details to make them more or less compact and even constrictive, just like the entire surrounding culture, and also undoubtedly the Mayan and Aztec scripts that haunt the imaginations <18B2c>.

18F. Printing and punctuation. Graphology

Typography – or movable type composition – emerged around 1440. It was born out of a desire for efficiency and business, which had started with the co-creative Christianity of the 1050s, and whose crowning achievement was the discovery of the Americas and the Globe in around 1500. In addition, it was consistent with the transparency of Roman writing and the folio codex. The rigorous regularity and reproducibility of the printed word, with its carefully 'justified' margins, was no doubt an important factor in Descartes' "*very evidently and certainly*" and the subsequent rationalism.

Punctuation, or the distribution of dots (punctuare, to dot), was gradually required and established by the printed book. Greek manuscripts did not separate words; neither did the writings of Bossuet the orator. It was the highly visible printed word that prompted the institutionalization of a panoply and protocol of strokes and dots that would enable the written word to reproduce the cuts and subordinations achieved by the spoken word through its intra-propositional and inter-propositional phrasing <16D>. One day, Mallarmé would argue that the most important thing in a poem is its punctuation, including the blanks.

Printed and duly punctuated, the Roman script of the Romance languages and of English eventually gave the impression that it was the ideal language, and that spoken language was merely its reading out loud. This tendency was so strong that, in about 1900, while reflecting on the nature of language as such, Ferdinand de Saussure thought it necessary to begin his course by reminding his audience that native language is not written language, particularly printed language, but spoken language. Were there not civilizations without writing? And did children not learn their own language by hearing it?

On the other hand, the predominance of print contributed to transform dialects into languages (fixed dialects), so much so that in twentieth-century French, a secret desire to speak as one writes prevailed, even to the extent of linking words in a way that only happens in writing. Print led even to the belief that language was fundamentally oppositional, even arbitrary, disregarding its handling [possibilizing] phonosemia <16B2b>. Around 1950, some believed that literature was only meant to be read – not heard – despite the most vivid statements of its extreme producers, Valéry, Claudel, Genet, etc.

However, are our texts printed in Latin characters devoid of all visual plasticity? No, and it is definitely different to read a page in Garamond, Didot, Boldoni, etc. A philosophical or narrative statement can become incomprehensible in a typeface, a character, a body that does not correspond to its phrasing. At times, the sheer amount of white space indicates the spirit of a language: the emptiness that any Danish text creates on the page already suggests the imponderable bubble rotation that its speakers' choice of existence seeks <Complement 9, *Danish and the In-between Worlds*>. Mallarmé's ultimate poem, "A throw of the dice will never abolish chance", delivered the essence of its ontology through its immense blanks.

The graphology that developed in the twentieth century, and whose name Littré did not yet know, was largely connected to the printed word, which is the standard against which the *ductus* of handwriting betrays calculable singularities, "graphometric", which can be used for purposes of police identification or characterology studies in companies, now that graphologists have become part of human resources hiring teams. Autographs give stunning views of their authors. Going over a handwriting – ideally with the rubber-tipped stylus recommended by Crépieu-Jamin – helps grasp its strengths, weaknesses, convections, indexations and indicialities, and confirms the extent to which the gesture betrays the word, and conversely how the word is a specialization of the gesture, particularly when transversalizing Homo works on a medium as transversal as the white sheet.

18G. The granular (magnetic) windowed-windowing writings of the WORLD 3

The paths of writing and images have often been linked. Granular images were socially introduced by the medium of photography around 1850, cinema around 1900, and video recording in the 1950s. The same magnetic recording technology allowed granular writing, word processing and "windows" systems, which combine text and images at will, and maximize the effects of windowing and framing that are inherent to the generalized engineering of WORLD 3 <12B>.

We must measure the anthropogenic revolution thus introduced by insisting on the situation of the writer until recently. When Balzac wrote *La Comédie humaine*, his manuscript was a voluminous body – a volume, it was rightly said – in front of his bulky body. This manuscript also reflected the dense body of his world and that of the surrounding society. His erasures were like scars, and his corrections were adding to the physiology and anatomy of a text-organism that could be leafed through immediately, and whose transformations were growth crisis, illnesses and cures. Literary generation and paternity, represented by the genitivity of Rodin's *Balzac nu* (nude Balzac), could be applied to all aspects of the work, which were thus integral parts of it. In the famous grimoire of Balzac's placards – which were a printer's nightmare – everything was memory, and even memoration <2A5>: memoration of the book being made, memoration of the books preceding it, those of others and his own. Presence-absence <8A> kept vigil on all sides. The silence of the closed book was an increased

presence. A presence and an absence enclosed, and hence as if tangible. We have already pointed out how the folds of the folio codex contributed to making the X-same an “I”, a “me”.

The electronic word processor has changed the very notion of text. It is read by scrolling or by windows, and is modified by moving and replacing. Moreover, it is only visible at times, and in the form of images in emitted light. The author of the manuscript – if this word still has any meaning – only ever sees what he is writing on a screen. He can only reach the rest through fragmentary, relatively slow, or at least diverted accesses. The printout, if any, does not include the confrontation of old and new corrections which, for authors such as Balzac or Proust, was the concrete duration of their manuscripts. On the screen, the correction erases instead of accumulating. The pieces of text transferred in one block do not inevitably call for rewriting and reconsideration, given that the context is absent or fragmentary.

In this way, in the writer - who no longer really writes - the second Bergsonian memory (of duration and situation-circumstance) has been replaced by the first (of storage and recombination). When Victor Hugo wrote for a whole morning in Guernsey, standing at his writing desk because of hemorrhoids, he was truly living a morning, just as Balzac was truly living an evening and living a night writing until the early hours. Three hours of word processing does not produce a story and a temporality of three hours, but a lesser duration, sometimes almost zero, unless very significant external events have occurred. The glowing screen of the word processor is like a poor relative of the television screen, creating an “anywhere out of the world“ that Baudelaire did not envisage. It introduces a framework that is no longer a sampling of the environment, nor an organization of the environment, but a cancellation of the environment. By contrast, by simply turning on a switch, a word processor will come on and capture the writer Homo, awakening him, exciting him, and prompting him to pursue almost indefinitely a task he has begun or is about to begin.

Such performances are well suited to the generalized engineering of WORLD 3, where tectures are local and transient encounters of multidimensional <13M> processes. Where the speed and accuracy of indexations matter more than the weight of semantics. Where logico-semiotic field effects erase – even in images when they are conceptual – perceptual-motor field effects <14J1b>. This has favored heterogeneous, fragmented texts in journalism, which are more interesting for their puns, or at least for their free and even bizarre associations, than for their coherence. The windowing of the word processor thus joins the choice of existence presaged as early as 1905 by the speech bubbles of comics, by pictorial and poetic cubism, by surrealism, and lastly by the new novel (*Le nouveau roman français*) around 1960.

More than anything else, word processing has changed the autobiography. Being a form of writing that is much closer to cerebral work, it dispels the illusion of consciousness (scire, cum) nurtured by the patience and duration of traditional writing in Augustine’s and Rousseau’s *Confessions*, and even in Montaigne’s *Essays*. It shows presence-absence for what it is: an accompaniment of functionings that cannot be totalized, neither according to space nor according to time. And at the same time it robs the counter-presential <8B8> (which Freud refers to as the unconscious) of its charm of believing itself to be structured like a language, in order to show the extent to which it is also rather structured like a writing, heterogenous.

The computer scientists who develop word processors have been forced to make explicit all the actions involved in the act of creating texts. Hence, to make an exhaustive enumeration of their editorial elements and to anticipate their productive seriations. For Homo Logician, this proved an opportunity to appreciate the extent to which what he believed to be the reflexive transparencies of his consciousness to his consciousness are, to a large extent, simple panoplies and protocols of bifurcations. Or of windowings. And also appreciate how much the same conceptual and linguistic event can be achieved by many different paths that show its contingency (*tangere, cum*). If we want to understand that amino formations, which have been so clearly identified by chemists since 1960, could be echoed in music <15H1d>, in painting <14J1a>, in poetry <22B9>, and make them also “amino” formations, we will accept that the generalization of word processing has something to do with it.

18H. Mathematical writing: Generative shifts and reversals

There are many anthropogenic observations to be made about the relationship between mathematics and writing. (a) The reasons why writing was induced – except perhaps in China – for terrestrial or celestial accounting purposes. (b) How there is a close relationship between the schematism of the image and that of writing, by means of this particular schema consisting of a geometrical figure made up of strokes-dots [*traits-points*], and which tends to punctuate with letters. (c) How the magic inherent in all writing and that inherent in mathematics have often been linked in what have been called “ciphers”, with their decipherments, models of all hermeneutics, up to the great Cipher. (d) Just how, for a long time, Homo did not seek out the most efficient mathematical writings, sometimes out of worship of magical numeration, sometimes, conversely, out of scorn for numeration; we have already signaled the strengths and weaknesses of the Sumerian numeration <18B2b>. Greek (*a', b', etc.*) and Roman (MCXVIII, etc.) numbers were ill-suited to the development of an algebra, probably because of the extreme rationalism that privileged intuitive geometry alone, and disdained pure calculation (for Pascal, mathematics is still geometry). On the other hand, India, keen on sub-articulation, invented the so-called “Arabic” numbers, whose algebraic possibilities captivated the Algebraic Arabs, who transmitted these numbers to the Westerners when the demise of Archimedean science imposed developed calculations upon them.

But the main contribution of writing to mathematics lies in the **comparative shift**. For instance, it is easy to write the ball of dimension 3 (the globe) as B_3 , and to write its edge, which is the sphere (that surface of dimension 2) like S_2 . At first, this appears as nothing more than a matter of saving time. But, once B_3 and S_2 are written, why not write B_2 and S_1 , B_1 and S_0 by shifting? This invites us to conceive the disc as a ball of dimension 2, and its edge – the circumference – as a curve of dimension 1; then the segment B_1 as a ball of dimension 1, whose edges (the extremities) are points of dimension 0. This way, we have just established integrating relationships between globes, discs, lines and points. But there is more, because why should we not also write B_4-S_3 , i.e. conceive a ball of dimension 4 whose edge is S_3 ? And even balls of dimension n , whose edge would be $n-1$, in a very general couple: B_n-S_{n-1} ? By shifting, the notation – the writing – has taken us from the usual and intuitive extent to the

generality of space, in which our three-dimensional space becomes a specific case. We find the same scriptural fertility in the theory of numbers, for example when Cantor defines the countable as a class of sets that can be put in bijection (one one) with the set of integers.

For the rest, the **comparative inversion** of writing is not mathematically less powerful than the comparative shift. Hence, the theory of categories, which relates to the most radical generalizations of mathematics <19G>, is fond of the writing artifice represented by the arrow to express *morphisms* (functions) between “objects” of a category, *functors* between categories, *natural transformations* between functors. And we then see that, in relation to a vertical axis distinguishing “on the left” and “on the right” (cone on the left, cone on the right), not only are symmetries between initially distant mathematical facts ascertained, but new concepts also appear by the simple inversion of the direction of the arrows by a “mirror effect”, like a sum converting into a product, and vice versa <Complement 11, *La mathématisation de la flèche*, by René Lavendhomme>.

As we can see, mathematical writing not only sheds light on mathematics, but on writing in general. On its fixity. On some of its movements that, like the comparative shift and the comparative inversion, are quasi-fixities, with their attendant enjoyments, notably in poetry – particularly Chinese poetry. These resources have been exploited by virtually all mystical and political figures. The proximity between writing and mathematics has nothing extraordinary. A phonetic writing is made up of almost pure indexes and indexations; and mathematics will be defined by the anthropogeny as the general theory of pure indexations and the absolute practice of pure indexes <19A>. From such definitions, we should expect that the advances of mathematical concepts were often in tandem with those of their writing <19C>.

Here again, combined with computer technology, the WORLD 3 videotape brought about a revolution. Henceforth, the CD-ROM offers mathematicians the possibility of visualizing chaos in non-invertible discrete dynamical systems (*Chaos in Discrete Dynamical Systems*, Telos, 1997), and also to go through their forward-backward and backward-forward bifurcations at leisure. This opens up new avenues of calculation. It also partially bridges the traditional gap between mathematical fixity (platonist) and physical concreteness.

18I. Music writing

The strokes-dots [*traits-points*] of traced writing also excel at marking the sonic gaps (intervals) and convections (motions) that constitute detailed music <15A,15B5>. This is at least true for pitches and intensities, since the too elusive timbre remains out of reach, except when it is electronically constructed, as we find in some of the granular music composed during the second half of the 20th century <15H2a>. However, musical writing has known very different fortunes depending on whether the music stood in the close-continuous of WORLD 1A and 1B, in the distant-continuous of WORLD 2, in the discontinuous or windowed of WORLD 3.

18I1. The regulated improvisation of WORLD 1A (ascriptural)

WORLD 1A did not have musical notations, and continues to challenge them whenever they are imposed on it from the outside. First of all, because the WORLD 1A is ascriptural - i.e., it does not use any language writing. Then because, in an extreme practice of close continuous, its music, without ignoring the structures which are inscribable, privileges textures and growths <7F> whose subtle and endless imbalances and rebalances of timbre and measure demand a regulated improvisation, which is not inscribable, and generally consists of a gestural induction of the musicians as a whole, or from one of the musicians taking on the role of a leader.

On the other hand, the regulated aspects of this music are all the more reliably and intimately conserved by the collective memory that the group constantly reactivates them in a creative, offbeat way, in an explicit exercise of memoration <2A5>. Even today, jazz – insofar as it never breaks the link with the WORLD 1A – remains largely unwritten. It is a music of sessions and rallies during which the essential takes place in the inductions and interactions between the audience, the musical ensemble, and the leader in a trance.

18I2. The chironomy of the WORLD 1B (scriptural insistent)

While still belonging to the close-continuous, the 1B WORLD of the primary empires has become so accustomed to sub-articulating music (under the influence of its language writings) that, in its music, it invented a compromise between the immediate induction by the leader and the regulated structure: this is chironomy. The etymology clearly states that chironomy crosses the hand (kheir) and the law (nomos). The chironomist leader uses his fingers and hands at arm's length to point to intervals or melodic motions, while the support of his elbows on his knees marks specific rhythmic features. Attested in Egypt as far back as 4.5 thousand years ago, this practice was found everywhere, in India, China, Japan, Israel and Byzantium, and throughout the Greek, Roman and medieval West, with some resurgence in the nineteenth century by the teacher John Curwen (1841), who used it to heighten the singer's auditory sensitivity. Today, this practice is still most prevalent among the Copts.

There is no better proof of the relationship between music, writing, and the universe in Homo than chironomy. Or between the concrete body, the represented body, analogical writing and macro-digital writing. The celestial patron of the Egyptian chironomids was said to have created the world of the living with a swing of his arm.

18I3. The ancillary scores of WORLD 2 (scriptural transparent)

There were Greek musical scores, especially adapted to the Doristi mode, and some have survived. This is because, in a choice of existence aiming at producing wholes made up of integral parts – i.e. elements seeking to refer directly to integrated wholes <12B,13G,14F>

– Greek music, without relinquishing the prevalence of texture that is inherent in all music, had to make an important contribution to structures. The precisely inscribable differences in pitch and meter were to become its salient element.

Moreover, in this context, musical scores were not merely memory aids but became creative instruments, just like written texts in the intensive practice of the dialect that the Romans came to call “litterae”, whence our “literature” originates. The structuring Greek musical invention consisted of sequences of tones and semitones that were subject to transposition, reversal, recurrence and reversal of recurrence, all of which are reminiscent of the comparative shifts and comparative inversions attributed to mathematical writing that we mentioned before. Under the calamus or the musician’s style, the notation became so creative that the tones of the sound scales came to be called “notes”.

The evolution of musical notation mirrored the history of urgencies [necessities]. As long as modes were within the octave, staves were not necessary, whereas they became essential as soon as Homo co-creator’s music, in the aftermath of the year 1000 <15E>, expanded into an ever increasing number of octaves, up to the seven octaves of today’s pianos. The bar lines varied in weight depending on whether the music was in counterpoint, in accompanied melody, in chromatic shift, etc. Many misunderstandings in interpretations of Renaissance music stem from the fact that they are now printed with bar lines which they did not originally have.

The resistance of musical writing to its printing sheds light on the nature of music. What could seemingly be simpler than casting fixed characters for the whole, half and quarter notes, as for the rests and bar lines, and to compose all this on staves, as has been done since Gutenberg for text characters? Yet, as Rousseau’s *Dictionnaire de la musique* emphasizes, musical notation is averse to this mechanographical process, and even today, scores remain essentially engravings, since only an engraver can properly group musical signs in such a way as to suggest phrasing through the arrangement of solids and voids. This is an eloquent verification of the fact that music is about sound field effects and not just about the mere scattering of sounds deemed consonant or dissonant. The fact that it is now possible to ‘engrave’ by computer does little to change this situation.

It is clear that the autographs of the great composers are among the most marvelous objects that Homo has produced. Just by looking at the handwritten scores of Handel, Bach, Mozart, Beethoven, Wagner, Webern and Reich, one can already understand their overall choice of existence and musicality. Bach’s structure-texture is Leibnizian, Handel’s is breathing, Mozart’s is sharp and acute, Beethoven’s is spurting (his ligatures are reminiscent of those of his contemporary Bonaparte), Wagner’s is teeming, Debussy’s is filled with Mallarme-like blanks, etc. A score by Ligeti declares the passage from the cosmos-world of WORLD 2 to the universe of WORLD 3 better than any discourse.

The merely indicative role of a handwritten or engraved musical score, the bias inherent in any engraving of music, the fatal recomposition that follows for the performer, are all the truer when it comes to Indian, Chinese, Japanese and Arabic music, which, while having experienced the very structural choice of WORLD 2, have nevertheless sought – here like everywhere else – to preserve something of the very textural choice of WORLD 1.

18I4. The autarkic scores of WORLD 3 (windowing scriptural)

Computerized writing has intervened in music in the same way as in literature, but with much more radical effects. This is because it has intrinsically transformed the capture of tone, and not just extrinsically as in the case of dialect. It has allowed noting the timbres, which until then had eluded the scribe, and thus, by inscribing them, to literally compose with timbres, and even compose timbres. This went in parallel with electronic instrumentation that could produce indications that exceeded the performance and memory capacities of the musicians. There is no need to revisit the limits and effectiveness of this choice, which Anthropogeny pointed out on the occasion of the detailed music of WORLD 3 employing granular tones <15H2>. If not to see that the scriptural aspect is decisive here.

18I5. The phonergic writing of dialects vs. the International Phonetic Alphabet (IPA)

Music is an insistent use of tone while detailed language is an urgent use of tone; the dissimilarities are vast, but so are the similarities. Is there not some way, then, of creating a dialect script boasting the simplicity and universality of musical notations? Since 1952, Jean Camion has explored the five lines of classical music staves to write from bottom to top: line 1, nasal consonants; line 2, labials; line 3, dentals; line 4, velars; line 5, liquids; and between the lines, vowels. This is done using thick or thin horizontal lines. For example, thick for r, thin for l. Some of the grace notes (appoggiaturas) are used to specify pitch inflections in tonal languages; others, if desired, would allow the position of the accent (pitch or intensity) to be identified in the many dialects where it is unexpected or mobile, as in English.

Despite its name, this system is not really *phonergic*, since its convention does not match the energy of sounds: a phonically and semically massive word is often written in thin lines, making it evanescent, while a furtive word is written in full, invasive lines. But it is a truly *phonetic*, and even *phonematic*, notation, which has the advantage of revealing dialects for what they are: *phonosemic* manipulations <16B2b>. When applied to the texts of writers, it also signals something of their idiolectal subject <11I3>, just as musical scores indicate the destinies-choices-of-existence of musicians <18I3>. Besides, doesn't current globalization suggest creating a script capable of noting all the languages of the planet in a way that is accessible to all? And which would be more concrete, factual, convective than the International Phonetic Alphabet (IPA), to which our current dictionaries resort.

Yet there is some resistance to this form of writing. This is no doubt due to the haphazard way in which it has been presented over the past forty years. But it is also perhaps because Homo – at least until now – has come to expect something more from a language script than a simple means of recording a dialect, sound by sound, in the same way as he does with the insistent tones of music. Moreover, when it comes to language, Homo may want writing to retain something of the discontinuities and rigidities of the urgent tone. Or perhaps Homo wants it to bear witness to the historical and etymological layers that, in addition to distinguishing homophones (ex: fair, fare), lend a text some pleasurable transcendence; see the English spelling. No doubt the writers of the SAE (Standard Average European) group are frustrated

that the “phonergic” notation does not retain any trace of the Indo-European articulation of words in root, theme, and ending. More fundamentally, all writing – and all language – takes place in a technicalized and socialized environment, where all it requires is a few concrete (imagetic) or abstract (sometimes very abstract) elements to specify the thing-performance-in-situation-in-the-circumstance-over-a-horizon <1B3>. Thus, it has no use for phonetic accuracy.

18I6. The stenography of dance

In view of the cerebral and gestural proximities of both arts, we will link here the writing of dance to that of music <15B12>. Today, it is commonly believed <E.B.> that there must have been choreographic notations since that, in the primary empires, dance became a means of political and cosmic integration along with music. Yet, even if in the earliest known manuscripts dating from the Renaissance, a B was often sufficient to indicate the branle and an R the révérence, it was not until the complexity of the moves and movements of the French royal ballet in 1700 that Feuillet introduced a first more detailed notation, which for the most part survived into the 18th and 19th centuries.

At the 1936 Berlin Olympic Games, Rudolf von Laban, the author of a *Kinetography* (1928), directed thousands of participants, who had only known each other for a few hours, to perform the great figures of a staging in the cinematographic style of Leni Riefenstahl. Referred to a vertical axis, the “labanotation” is read from bottom to top, left for left, right for right; geometric figures designate the part of the body by their distance from the axis (the legs, the trunk, the arms creating distinct columns of signs), they designate the direction by their shape, the intensity by their value (black, white, grey), the duration by their height. This system has proven its ability to record both classical and modern ballets. But, for an anthropogeny, it only better proves the distance between, on the one hand, language and musical **writings** – which can really be written and read – and, on the other hand, the **stenography** of dance, which is inevitably limited to gestural generalities, if it is true that this veritable semaphore of charged and uncharged indexations that is the body of Homo <5B-C> is currently capable of more than two hundred degrees of freedom (dimensions).

18J. Absolute signs

There are signs for which Homo specimens live and die. These include certain images, certain initiatory or patriotic music, pregnant words, gestures, but very often also writings. When they are visual, these signs stand out in a certain isolation, in an autarky. And they try to intersect writing and image, macrodigitality and analogy. We shall call them *absolute signs*, because they have a certain way of untying themselves from the rest (*absolutus, solvere, untie*). And also of invoking absolutes. Or to transform what they express into an absolute. Examples include the shield (star) of David with its two inserted equilateral triangles; the Chinese Tao figure (Taiji); the Chinese stele; the Indian swastika, the sign of solar rotation; the mandala

inserting the circle and the square indefinitely into each other; the circular lingam (penis) and the square yoni (vulva); the Cretan or Turkish crescent of the horns of the bull or of the moon; Saint Andrew's cross; and the Christian cross, with all its variations.

Absolute signs, such as the cross, are virtually inexhaustible. The cross is transversalizing Homo standing with his arms crossed. The four cardinal points. The four so-called cardinal virtues. Macrodigitally, it has right angles, internal alternating angles, the opposite couples of gravitation (up/down) and lateralization (right/left). It is the basis for the columns and rows of the graphs. The Cartesian coordinate axes. Those of the syntagm and the paradigm in speech. More carnally, the cross lends itself to the exact, insistent and patent application of the body to the code and the code to the body that is crucifixion, a very Roman torture <18K2>. It dramatizes the erection of the body and its deposition (Rubens painted both). It is confronting the pilgrim who meets it: Ave, crux, spes unica! The Byzantine cross offers its foot to the amplexus. It can flower, being ligneous, resuscitating. It lends itself to a gesture of the hand, touching head, chest, shoulders, the sign of the cross. It is the most straightforward of banners: In hoc signo vinces! It arches over the breastplate of the crusader. It designates the “+” and the “×” of arithmetic. Or marks the *obit* of the dead. Soaked in oil, it anoints.

The combination of the figure (form reduced to a schema) and the writing is often intimate. The Roman catacombs have multiplied the image of the fish, an analogical sign, whose macro-digital match, I-kH-tH-u-s (fish in Greek), gives the first letters of “*I*esus *C*hristos *T*heou *U*ios *S*ôtêr” (Jesus Christ <of> God Son Saviour). At times, the analogy is reduced to the pattern of the letter in the single “N” of Napoleon, or the double “RR” of Rolls Royce. Or sacred dates: 1789, 1914-1918. In cryptograms, the cipher reinforces the prestige and magic of what is deciphered. The knots and interlaces that often defy calculation, and the algorithms that sometimes defy it, have produced privileged absolute signs. For a few minds, the mathemes <19F1>, those mathematical scripts that inscribe some impossible <19F1>, are functioning with many of the properties of absolute signs <26E2b>.

Absolute signs generally add the protocol to the panoply, like tarot cards, those images-numbers-names-roles-rules, whose Italian phonosemia, *ta-roc-chi*, enables both movement and decision to be manipulated. The flags brandished or raised have condensed these effects. It was in connection with them that, in a message sent to Napoleon by an officer during the retreat from Russia, the strongest theory of the absolute of the sign was stated: “The men are dying, Sire, but the Eagles stand with their escorts”.

Manipulated by the indicializing and symbolizing Homo, absolute signs guarantee the cohesion of societies. They are also the stepping stones to divagations and insanity that feed from the invasion of ordinary signs by the properties of the absolute sign. Or that divert to a private use absolute signs whose more or less sacred charge demands that they be practiced collectively, at the risk of implosion.

18K. Bodily writings

The anthropogeny will be mindful of the fact that writing does not have solely – or even primarily – supports made from clay, stone, paper or magnetic tape. From WORLD 1A onwards, it has been applied to the transversalizing and angularizing hominian body. Writings have been inscribed on it and inside it, sometimes melded to its substance and physiology.

18K1. Scarification and the painting of bodies. Headstones

A scarification is not an adornment (in French *parure*, from the Latin *parare*, to prepare), and much less make-up (in Dutch. *maken*, and in English *make up*, to put in condition). These are inscriptions through wounds, which are painful like any other sort of initiation, and which define the place of the specimen in its clan-tribe, or more widely in its *world. These macrodigitalizing inscriptions are primarily made up of strokes and dots [*traits-points*], and if analogy occurs, it is in the form of the generative schematism <14D>. We should therefore be careful before saying that there is no writing in Black Africa. Scarification is a cosmological and social writing that matches the African speech, which is also organic and vicarious; the scarified person does not make the scarification to himself, and in many cases does not see them. The coded jewels belong to the same clan-tribal circulations. To this we can oppose the body paintings of the Nuba of Kau that Leni Riefenstahl encountered, and where each male specimen is perceived as a living sculpture for as long as he is young and beautiful. In the case of Kau, indeed, the motifs are not clan-tribal and fixed. Reworked every day and individually, these ephemeral paintings cultivate violent asymmetries, in a sharp departure from wild animality, which is symmetrical (Portmann).

The primary empires of the scriptural WORLD 1B did not write on the body, like the ascriptural WORLD 1A, but rather, with the body. The hairstyle of Japanese women combines hair and combs to determine their status in the social panoply and protocol. Japan has also cultivated a semaphore (sign-bearer) body, where every inclination of the body determines not only the status but also the present condition in the interlocutors. The Japanese and Chinese martial arts have clearly demonstrated that, in these societies, the semaphoric body declaration took precedence over the efficiency of warfare. The same is true of the Amerindians encountered by Sahagun, or among the Egyptians and Iranians before they were confronted by Alexander.

The Greek and Roman WORLD 2 did not bother much with body writings that would compromise the outline. Instead of writing on or with bodies, it has clad them in the aim of reinforcing the direct reminder of the whole of the organism by its integral parts <14F3>, in a powerful levy of its total form on the backgrounds. With, in the same WORLD 2, a significantly increased working and warlike efficiency. Only the deceased body was framed-written in a burial ground of the great, which eventually and democratically became the tombstone inscribed with a surname, a first name, a date of birth, a date of death. Where the most solid

drawing – which is writing – and the right angles save that “something which has no name in any language” (Tertullian translated by Bossuet).

The windowing-windowed of WORLD 3 leads to the erasing of all insistent or transparent body writing. Contemporary tattoos are a way of continuing the scarification of belonging to a group, but they are – in the literal sense – epidermal, as is the group they affirm. Incineration tends to replace burial for reasons of hygiene or ecology, but also because of the perception of Homo as a state-moment of the Universe.

18K2. Torment and torture

We must close this chapter on writing with torment [*supplicium*] and torture, which is not only related to writing, but is probably one of its earliest origins. This is a perplexing topic for the specimens of WORLD 3, for whom the writable and writing body has lost much of its meaning; to the extent that torment is often reduced to brutality and satiety, and torture to interrogation techniques. But the ostensibly segmentarized and segmentarizing <1A1> human body offers itself to being cut. Apart from the urgent, quasi-animal, and therefore still rostral, aggressions of alimentary, warlike or sexual combat, transversalizing <1A2> and possibilizing <6> Homo had to make use of the patent and even provocative articulations of its body very early on in order to rewrite them in torment, and decipher them in torture.

There has been a collusion between **torments** and human sacrifices, particularly in the primary empires, where the exaltation of the first insistent scriptures, the disciplinary distribution of bodies, the universal energies channeled into texts, and as texts, urged – in the event of cosmic imbalance – the practice of (re)inscriptive torment. Sahagun has recounted in details how the bodies of sacrificed Aztec children, adolescents and adults were inserted and virtually written (rewritten) by torment into the flows of the world they were reviving. Pain was part of the magic of the operation, and the songs were an attempt to transform the painful intensity into ecstasy, but this achievement was secondary. In the pictorial representations that Sahagun mentions, pain as such is not considered; we only see bodies that are articulated like macro-digitalized writing characters <2A2e>, without any pursuit of perceptual-motor field effects <7AE>.

In WORLD 2, sacrifice quickly ceased to be human and became animal. Iphigenia’s sacrifice belongs to Homeric times. Therefore, the torment, now isolated from sacrifice, could focus on reforming individuals – who had escaped from the group by corrupting the signs - by re-inscribing the Sign into their limbs, even to the point of dismembering them. In other words, the torment that, in the service of sacrifice, had inscribed or re-inscribed the bodies in the divine order was now going to (re-)inscribe them in the human order. The semantic evolution of the Roman *supplicium* attests to this shift. At first, *supplicium* was both supplication (plicare sub, to bend under, to invoke) and sacrifice, and Varroon speaks of oxen “supplicated to the gods” (deorum supplicia). Later on, the idea that torment entailed a form of compensatory suffering turned it into a corrective punishment for a crime.

Among the peoples between WORLD 2 and WORLD 1, the Chinese – who are the most calligraphic of all people – invented the chopping up into a hundred pieces by several

cooperating tormentors. In Carthage – which was in permanent contact with the classical Greek world – the children sacrificed on the Tophet were not so much “written” into their flesh as into the accounting effigies that commemorated their immolation, and thus marked the tribute already given by each family for the maintenance of cosmic flows.

Torture, on the other hand, neither inscribes nor re-inscribes. It decipheres and decrypts the most intriguing text: that of the foreign body, *alius* and *alter*. Like the tormentor, the torturer – who also belongs to the segmentarizing Homo – follows articulations, rummages through limbs and even more so the slopes and cleavages of a brain in order to seize and tear out its secret. This secret can be the confession of guilt. But better still, it is the otherness of the other, its essence. Young Iroquois or Algonquin warriors who torture calligraphically – in the same way as the Chinese are tormenting calligraphically – know and hope that one day too they will be tortured. They patiently decode an indelible meaning in the unruffled courage of the enemy, as an anticipated confirmation of their own indelible meaning, of their own essence, when their time comes.

Sade made intense use of the similarities between writing, torment, torture, writing of torment-torture until the end of WORLD 2, where the ultimate secret was the other’s subjectivity objectified in a body mechanized like a pipe system. And, up to WORLD 3, the influence of the tortures witnessed by the Portuguese painter José de Guimarães in Angola can be perceived through the script-organs of the artist. The relationship between writing, torment and torture is all the worthier of consideration in anthropogeny as Homo probably tormented and tortured long before he wrote. And in many different civilizations.

18L. Graphic instruments as an exemplary case of the cultural influence of the forces of production

Graphic supports and instruments offer an ideal opportunity to highlight an essential anthropogenic law, namely the major influence of technique – hence of the forces of production – on the destinies-choices-of-existence of human specimens and groups.

The wet then dried **clay** of Mesopotamia into which the scribe sank his stylus led to the prevalence of the dot-stroke, and thus of the latent mathematization of cuneiform writing, with its cultural and in particular legal consequences (Hammurabi’s code). Egyptian **papyrus** offered – still in the logic of primary empires – another culture in the same period. Likewise, the passage from the scrollable **byblos** to the folio **codex**, with its vertical central fold and facing pages, partly justified the passage from a discourse without many feedbacks to a discourse of instantaneous coherence, which simultaneously fostered the formation of the unitary Western self <18D>. Similarly, the transition from codex leafing to the **computer screen** foreshadows a new thought along with a crumbling or dissemination of the self <18G>.

And the sequence of **graphic instruments** has been as anthropogenic as that of the **supports**. Just like it is impossible to write Descartes’ *Discourse on the Method* – and

particularly – the *Principles of Philosophy* on an unrollable scroll, and both require a folio codex, it would not have been possible to write these books with a ballpoint pen. The same goes for Chateaubriand's *Memoirs from Beyond the Grave*, or Mozart's *Don Giovanni*. Or *Die Meistersinger von Nürnberg*. We cannot envisage the emergence of the densities and substantialities of Virgil's *Georgics* on a word processor, if only because of the absence of leafing, but also because of the windowing, the imponderability of a text in emitted light, the poor tactility of the keyboard which discourages the Virgilian (Claudelian) touch that is at once immense and substantiating.

There are as many positive invitations of the technique as there are exclusions. The Chinese inks and brushes already encompassed the intention of the *Tao Te Ching*, like the latter in turn guaranteed their permanence in the age of the budding printing press. And the hard stylus marking the Sumerian clay plates implied some of the structures and textures of *Gilgamesh* and its many repetitions. In addition to Gothic writing, the 19th century's nibs and inks and the silence and tepidness of the British Museum Library were essential to create the very corporeal esthetic that underpins Marx's *Das Kapital* and its sustained exaltation of Arbeit as "concrete labor", where body and object are reciprocally elaborated. On this occasion, what applies to the writer also applies to the reader.

The final observation about writing is that they are never mere substitutes for language, nor just another language. Even when they are not understood, they create an event. A text in a language we don't understand, a page of mathematical formulas for a non-mathematician will already have an effect as a text, bringing out meanings, senses, Sense, presence-absence <8F>. And thus metaphysical speculations. Every written page is a prayer rug, which in turn is a written page. One of the initiatives of WORLD 3 consists in thematizing this experience across many of its visual productions, for example works by Kosuth, On Kawara, Opalka.

SITUATION 18

Writing lends itself to anthropogeny almost as well as music, to which it is deeply interconnected. It is highly analyzable, very historically binding, and it sheds light on language, mathematics, logics, pieces of work, religions (from the book and without the book), laws (written or unwritten), etc. It is impossible to explore any literature without an in-depth reflection on its orality and writing rate, its punctuation, its ostensible or veiled legibility, etc.

This chapter forms a duo with the one on detailed images <14>. For indeed the shifts between images, autarkic writings (Chinese), language writings, mathematical equations (whose analogical character Peirce pointed out), static schemas and today dynamic schemas (CD-ROM) play a pivotal role in the anthropogeny.