

GENERAL ANTHROPOGENY

FIRST PART – BASIS

Chapter 10 – MASSIVE MUSIC AND LANGUAGE

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FIRST PART – BASIS

Chapter 10 – Massive music and language

As the hands of Homo became workers' hands, its jaw freed itself from its tasks of attack and defence, butchering, crushing and heavy chewing. It could then be selected according to a biological choice where the muscle mass decreased, in the same way as its overall volume, defensive and tearing canines diminished to the profit of a progressive chewing concordant with a savouring and substantializing taste <1C5>. At the same time, Homo became globally more omnivorous despite his/her adaptations to geographical and climatic fluctuations. Then, a denture disposed in a relatively regular and equal surfaced semi circle was selected. This was concordant with a spherical head with ventilated bones, already independently selected by the standing position, which called for a median occipital hole and the repartition of an orchestral brain.

At the same time, the hominid neck became higher and in any case more mobile because of visual organs that, in the standing position, had an advantage to cover 360° on their pivot, as much as possible <1C1>. Thus, in Homo, the larynx was able to go down and the pharynx go up, creating a rich and precise resonator because of the fact that, thanks to the vertical tube of the pharynx, the sound waves created by the larynx gave out to the mouth cavity almost at a right angle <Recherche, oct86, 1164, *The Emergence of Language*, SA, 104>.

The lips, progressively constituted of the overflow of the subtle oral mucosa, became differentiated and capable of increasingly nuanced declosions and occlusions, which had already been prepared by the sucking of a nipple with areola. In the new, more flavourful chewing, the striated muscles of the tongue were selected according to their capacity of offering movements and swellings in all directions, which allowed the lingual body to make determined and relatively punctual contacts from its tip and its back with the teeth, palate and cheeks. The extension of cerebral motor areas corresponding to the hominid tongue shows the importance of its precise distal commands. The cheeks, pulled by the increasingly differentiated muscles of the face, completed making the entire mouth cavity an endlessly variable sounding board that would produce better controllable **formants**. We will recall that formants already played a key role in the communication of Birds; these are the characters of resonance that a sound takes in a resonator; they take place in the spectrum of the sound emitted like amplified peaks; the two or three first formants, A, B, C, are usually sufficient to differentiate a sound emitted and received, and to make it an efficient communicational instrument.

Finally, as the standing position released the thorax of the pacing and walking primate, the movements of the diaphragm ensured the emission of a relatively slow, continuous and modular

breath that could be interrupted, and the pneumatic qualities of which we have already encountered on the occasion of the smell <1C4>.

10A. The musical voice and hand

This is how a wind instrument was put in place, combining metaphorically some virtues of the organ blower at the level of the lungs; of the beak of the clarinet at the level of the larynx; of the volumetric resonator of the slide trombone at the level of the mouth cavity. The grunting of Mammals and cries of Primates became the *voice*, a sonorous emission capable of being indefinitely and possibly distinguished and modulated in certain pitches, intensities, timbres and durations. It was also capable of being insisting or conversely quickly pitched and interrupted, with a precise control of continuity/discontinuity. In other words, the voice was going to produce a sound material suitable to particularly clear, quick, economic, open differentiations and oppositions.

But voice alone would have been nothing, it would perhaps not even have been evolutionarily selected if the vocal sounds, as they appeared, had not been received by the already highly discriminating hearing of Primates which, for reasons of collaboration, community and education, became the transversalizing and proportioning hearing of Homo <1C2>. In this way, a regulating circulation between the emitting mouth and ear was created, allowing to put in place increasingly differentiated and controllable sounds (the articulation between audition and sonorous emission is already very developed in Birds). This circular adjustment was encouraged by the structure of the primate face that Homo progressively transformed into a visage, putting in an intimate relation the mouth, ear, nose in a closed, complete, almost autarchic field, associated with the endotropy of the hominid brain <2B>.

At the same time, the working plane hands under the globalizing eye of Homo <1C1> were probably led to trigger, during their technical manipulations, certain sounds of objects whose height, intensities, pitches, durations corresponded on the one hand with the demands of the hear, and on the other hand with those of the emerging voice. The differences of sound came from the nature and form of sound emitters, but also from the manner in which they were placed in vibration and retardation, here by a strike (on stones or wood), there by a tension and a friction (of the string on a bow), or there still by the strangling of a slit (of a reed, a pipe). The choice and size of Neolithic blades were not solely visual but also sonorous: the coherence of the sound under the strike was a promise of the textural coherence and solidity of the stone. We shall not forget these rustling fibres and ringing of all sorts that the movements of walking-dancing Homo probably animated very early on.

These were so many musical *instruments*. We will note that the French, English or German languages do not say: musical *tools*. We could think that this signals that, considering the intrusive nature of sounds and their continuation with the musician's body, the material devices producing differentiated sounds do not have the somewhat exterior operating character of tools. They are both in semiotic distancing through the possibilization of their use, and almost natural by the

intimacy of the manipulation-audition-manipulation cycle; in some African sculptures, the drum continues the belly and the belly the drum.

We do not know which, between the voice and the musical instrument, came before the other. But their products have so much the same physical dimensions (pitch, intensity, timbre, duration), and their production has so much the same physical resources (striking, tension, friction, strangling), that, received by the same ear, they could only provoke each other, and even, as it is a matter of breath and wind, to literally inspire (sirare, in) each other.

Anthropogenically, we will also consider everything that natural resonators - interior walls of caves (in Lascaux), exterior walls of mountains (in Foz Côa) - favoured as structures and textures of *echo* in the potentially musician Homo <1C2>. Today, in the comprehension of Palaeolithic caves, the multi directional and very unpredictable echoes provoked by voices or instruments are often considered as one of the primary factors of their supposedly shamanistic destination, i.e. as the privileged meeting places between parallel worlds: terrestrial-subterranean, solid-aquatic-aerial, close-distant, visible-invisible, low-high pitch, etc. For hunters, we can evoke the continuity of the howling of the cave and the cries of the beast. And, up to a certain point, cave art massive music would have induced the detailed painting of cave art <14C6>.

10B. Sonorous panoply and protocol

To determine what had to take place at the origin of vocal and instrumental music, or language, we have to see the extent to which hominid sonorous production, i.e. vocal and instrumental, had to be for a possibilizing technician a privileged area, parallel to that of its globalizing vision. Indeed, the sound, fatally sounding and resounding (sonare, re), once it is a bit domesticated, is a phenomenon that lends itself eminently to panoply and protocol, which are the essence of technique <1B1>. There, experiments soon became experimentations, insofar as the parameters engaged are distinct, at least in a first approximation, and offer variables that are relatively easy to manipulate continuously, systemically, systematically. The vocal and instrumental sound, produced or grasped by the body and brain of Homo, is so evidently physical that Homo becomes physicist.

Sound categories apt at forming distinctive couples are so basal that they were encountered by Jakobson and Halle when they asked themselves a much more limited question: what is the smallest number of sonorous "traits" that would suffice to produce the phonemes of every language of the world? Hereafter are, presented in a simplified manner in the left column, the twelve traits they retained for the sounds of language, and in the right column, for sound in general, a regrouping of those language sounds under the fundamental categories of Mechanic, Thermodynamic and the Theory of information. This is the occasion to verify once again that Homo's sensorial systems, like that of all animals, derive of the general principles of physics and are state-moments of Universe <1C>.

ENERGY	
(1) Strong/Weak	Quantity of energy
(2) Compact/Diffuse	Concentration of energy in the spectrum
INFORMATION vs. NOISE	
Noise/Information	
(3) Formed/No	Prevalence of form
(4) Strident/No	Accompaniment of noise
Direct information	
(5) Acute/Grave	Frequency
(6) Sharped/No	Frequency pushed high
(7) Flattened/No	Frequency pushed low
Indirect information	
(8) Nasal/No (Buccal)	Joined resonator
(9) Voiced/No (Deaf)	Accompaniment of low frequencies
(10) Tense/No (Loose)	Definition of resonance
SEQUENTIALITY	
(11) Discontinuous/Continuous	Transition
(12) Blocked/No	Release time

In the presence of this elementary panoply that we can extend, reduce, accentuate in different manners and of the protocols capable of putting to profit its compatibilities and incompatibilities, the vocal and instrumental system of Homo then had two main regimen.

(A) One, which we can call the **insistent regimen**, was going to exploit the aptitude of hominid sounds to be tense for a long time and progressively turned onto themselves by stirring their resonance and echo according to the twelve traits that we have just outlined. This was the **musical practice**, vocal or instrumental.

(B) The other, that we call the **urgent regimen**, exploited the aptitude of the same hominid sounds to produce relatively short and sliced sound segments, and thereby rapidly distinct or discreet, here again according to the same opposite twelve traits. This was the **language practice**, usually vocal but that can also be instrumental (message via a tom-tom) in the case of tonal dialects.

An intriguing question for the anthropogeny is to know which, out of the language regimen or the musical regimen, preceded the other in Palaeoanthropology. We can think that the selective pressure mostly came from language, which is more profitable for the conservation of the group and the species in the hunt, the attack, the coital approach, collaboration, community, education. But the insistent sound of resonance and echo, that of music, is more vast and more naive, native, than the urgent sound of language, which seems always to be a local and transitory specialisation of it. In early Mammals, the pre-musical sound plays a considerable role alongside the distinct calling sounds with a defined function. The hominid infant gurgles, babbles, peeps, and even acquires a phrasing before emitting its first syllables. And we shall not forget that, very early on, Homo, capable of walking in a cadenced, possibilized, rhythmical manner and to swing his indexing hands and pointing arms, started, through the use of his neutralizing and generalizing brain, to be capable of consideration, contemplation, meditation, desire <6A>, all dispositions favouring the insistent regimen of sound: music.

Besides, we are here in front of a striking case of circular causality. By its carnal and mental practise, language had to give a significant contribution to the developments of music. Conversely, by its physicist implications, vocal and instrumental music had to play the role of trigger and support for certain developments of the language; and the development of technique; or even the measured grasp of things by mathematics. And it is because of this primary role that the anthropogeny will consider massive music before massive language in this chapter.

10C. Massive music

When we say "music", we instinctively think of detailed music, i.e. a music working with tones <15>, like we immediately think of detailed images <14> when we say "image". But the anthropogeny must attentively focus on massive music, where vocal and instrumental *sounds*, which are not yet tones, have corresponded, during 1 or 2 million years, to the massive visual

images. And that as to their structure, texture, growth <7F>, and probably also in terms of their properties of apparition, blossoming, disappearing.

When it is a matter of vocal and instrumental sounds, the qualification "massive" aims at this state where they are already sufficiently differentiated to be opposite according to the physical dimensions detailed above (energy/information, information/noise, sequentiality) <10B>, but where neither for the producing organism nor for the receiving organism they appear to be sufficiently distinct to be measured and modulated (modus) spatially and temporally in detail. Indeed, this will suppose that they will accede to the tone, that is a state where they are sufficiently distinct to be held-tense (tonus, teïnein, tendere) as events that can be isolated and apt of becoming the "bricks" of an edifice, which requires a certain purity of the timbre. It is the tone, i.e. the sound with a timbre that is sufficiently pure and controlled, which will mark the entry into detailed music <15> and in detailed language <16-17>.

This is why massive music, which does not yet has the vocal tone or instrumental tone, could be called pre-tonal if "tonal" had not taken on a limited historical signification. Thankfully, the adjective "massive" does the job well enough and has the advantage of marking the relation between massive music and massive language, and even with massive image. We could also speak of *proto-music*, which would oppose to *pre-music*, which perhaps already emerges with animals.

Massive or proto-music then deserves, like the massive image, all the attention of the anthropogeny, because of its duration as a *stage* in the evolution of the genus-species Homo, 1MY or 2MY, and then because of the influence that it still exerts today as a *stratus* in most performances of the hominid insisting sound, i.e. the musical sound. To understand the revolution of massive music, we must look at animal pre-music for a moment, from which it descends.

10C1. Insisting sonorous emissions in animality

Although Birds are the masters of the song, an anthropogeny must start from the insisting sound of Primates and generally of Mammals to situate the insisting sound in Homo.

(a) *Support of circular reactions.* - Already before Homo, the insisting buccal sound, always available and economically produced, corresponded because of its Baldwin's rules (perception >> emission >> re-perception >> re-emission...) with mammal activities that, like hunting, gathering, coupling, involved themselves Baldwin's rules. The insisting buccal sound supported then these activities by adding themselves on, and also by indirectly or directly activating the neurotransmitters of exaltation or moderation associated with them: aggressive, copulatory, assembling.

(b) *Individuation.* - Wolves emit buccal sounds with insisting resonance that allow the members of the pack to know where they are but also how many they are and who they are.

(c) *Group coherence.* - Many mammals use sonorous emissions to coordinate their action with that of hunting fellows. The insisting buccal sound is an important factor of the pack. For gathering and keeping the group together. For its vigilance towards its predators. For its coordination in hunting.

(d) *The mammalian envelopment.* - In many mammals, the insisting sound seems to fulfil the desire of an envelopment that is both auditory and tactile, of which we can think that it continues the uterine envelopment to some extent. Since, contrary to sight, which is relatively frontal for mammals, sound, which is resonant and in echo, has the remarkable property of surrounding in all sorts of directions their organism, of caressing it simultaneously from everywhere. In this way, sound emissions of very low frequencies allow whales, marine mammals, to stay in communication, in contact and around, at very long distances.

(e) *Seduction and defence.* - We think that, from animality, we can recognise cases where the insisting sound realizes, for its prey and for its partner, envelopments (volvere in), seductions (se, ducere), elicitation (allure), in a conjunction of the coapted systems of the catcher and the caught. Sound emissions, like the alarm cries of the birds, could also discourage the predator while inviting, or even comforting several of its virtual preys to defend themselves.

What interests the origins of hominid proto-music is assuredly the directly communicational aspect <8G1> of all these insisting animal sounds. And their communal <8G2> and participative <8G3> aspect. But it is also the moments when these sounds seem to slide towards enjoyment, complaisance, pleasure or conversely a latent suffering, because of Baldwin's rules and the neurotransmitters put in place. This is perhaps the case of the nightly howling of wolves and some "singing" dogs.

10C2. The turning point from pre-music to proto-music (massive music)

We then find the same performances and the same functions of insisting sound in Homo. In the moaning of effort or physical pleasure; in the evasive grunting of technical collaboration; in warrior cries; in caressing caterwaulings; in some inductions of the hunter trying to seduce his prey; in the gathering cries of goat herders and hunters.

In all cases, when we lean on today's experiences to infer archaic states, we must substract from the sounds produced what, in today's Homo, corresponds to the tones, i.e. to the held-tense sounds using a purity of tone. We are then left with what our languages designate - in a rich panoply (and even more in English than in French) - as groan, clucking, grunting, murmur, plaint, call, cry, caterwaul, yelp, cooing, etc.

To isolate proto-music, we must assuredly put in between parenthesis the functional and particularly communicational aspect of these performances, and keep what overflows the strict rendering and that steers to sonorous complacency. This complacency could only reinforce itself as were put in place in Homo the eight characteristics of the rhythm engendered through the bipedalism <1A5>, the distanciation of the sign, the possibilization, the presentivity, the massive image of the tool, all dispositions that invited to exploit the capacities that the insisting sound has of maintaining itself, of reproducing itself, of self-generating itself very economically and self-sufficiently in its resonances, fluctuations, echoes, - in a word, of being musical.

10C3. The production of an independent proto-music

Therefore, we could think that, increasingly often, the proto-musical virtualities of the massive insistent sound were no longer only excrescences of its somatic and communicational functions, and in Homo were cultivated for themselves in a proto-music, or massive autonomous music.

The rapid and easy fluctuations of the vocal or instrumental massive sound, very malleable to the eight aspects of the rhythm, must have induced hominid specimens to cultivate perceptive-motor, even logico-semiotic field effects that activated-passivated their destinies-choices of existence <8H>, i.e. their singular options, so inchoative they may be, of topology, cybernetic, logico-semiotic, presentivity, in a word, their fundamental fantasy <8G3>. At the same time, proto-music offered the benefit of an experience shareable by several members of the group, thus comforting the group because of the motor and mental sonorous convections, and of the accord and discord of resonance. Any music, even elementary, is concert, i.e. competition (certare, cum, streben-mit, to strive-with). Finally, when we consider the state of existential instability in which Homo is placed by his standing position, by his possibilization, by his semiotic distanciation, it seems rather improbable that most hominid specimens and groups were long deprived of an experience that is as consoling and empathic as massive music.

10C4. The semiotic status of proto-music

Under these two forms, vocal and instrumental, proto-music belongs to the area of the sign, since it deploys as a pure thematization, a thematization that self-exhausts, simultaneously imagistic, indicial (*indicium*), and indexing. (1) **Image** that mimes by the sound the *falling* rock, the *flowing* river, the *blowing* wind, the plant that *grows* or *resists* the wind and water, the *swimming* fish, the *slithering* snake in the bushes, the cuckoo that *calls in an echo*, the *roaring* lion or storm. Every time insisting in the thing-performance on the performance (the verb) not on the thing (substantive). (2) **Indicium** of the physical (anatomical, physiological) and mental (techno-semiotic) energy of the person who produces the sound, with its characteristics of allure: gathering/extending, progressivity/eruption, detour/ease, etc. (3) **Index** triggering, privileging, maintaining structural orientations: top/bottom, exterior/interior, compact/diffuse, sharp/vaporous, etc.

These three dimensions don't have the same importance at all. The only essential dimension is the third, indexations; *indicia* (of energy) are only there to charge or discharge indexes <5C3>; the image is absolutely facultative and subject to indexes with their adjoining *indicia*. Therefore music, from this massive stage, is eminently apt at rendering and maintaining the presence, absence, presence-absence, and destiny-choices of existence <8H>. First by the static, kinetic, dynamic, excited perceptive-motor field effects <7A-C> that support the indexes of orientation of existence. And secondarily by the logico-semiotic field effects that these indexes provoke between themselves and the *indicium* (of energy), even the fleeting images that accompany them.

Massive music then strikes, in contrast with massive image, by its proximity with its producer and by its autarky from all the rest. (a) The *extreme proximity* results from the absence

of distance between the vibrating air of the breath and the body, to the extent that hearing and tactility penetrate each other; to which adds on the intimate circulation of the voice, the ear, the breadth on the face in the vocal production, and also adds on, in the instrumental production, the minimal distance between the emitter and receptor through the contact of the hand, of the instrument, and of the resonance of the instrument. (b) The *extreme autarky* results from the combination of this producing intimacy with the capacity of maintaining independent destinies-choices of existence of specific designated.

After all, in massive music, the sign remains paradoxically very close to the signal <4H>. Whence the sort of very direct nervous and cerebral massage that it operates and from which it results. Whence also its predispositions to the endotropizing regimen of the brain and the intense memoration and re-memorisations <2A5, 2B2>.

10C5. (Shamanistic) massive music and dance

The above presentation did not take dancing into consideration. Here too, between ape-like quadrupedism, with transitory bipedalism, and detailed hominid dance, we must certainly distinguish a stage and a deep stratum of *massive dance*, related to the development of an increasingly possibilizing bipedalism and therefore marking *cadence* (cadere, falling, marking the step), with its *thesis* (landing of the foot) and its *arsis* (lifting the foot) that will progressively open up in the eight aspects of the rhythm <1A5>. Massive dance that could only prove extremely beneficial to massive music particularly if, as we are starting to suspect, there are more links than we thought between the sense of hearing and the vestibular sense <1C2>.

Massive dance and music then had to bring each other their two perseverances in the being: dance its *proversive perseverance* where each step leads to the following step; music its *rememorizing perseverance* where each sound recalls that preceding it, sometimes from far away. In Homo, the duration of dance-music will complete the duration of technical means and ends, precluding the present, past, future triad <16F3d, 29B>.

If it is true that the shaman is the one whose trance circulates between two worlds, this one and another (the Other), from which he brings back powers, or to which he gives access, then we can believe that he used (massive) music and dance very early on. Some say that he initiated them. Indeed, music and dance are the two hominid practices that, using rhythm, can most easily move between two worlds, or make them permute almost instantly.

Massive music undoubtedly owed much, for their practise of similitude and analogy, to the use of the massive images around them. Reciprocally, we will not forget, that massive images themselves probably owe something of their origin to fragments of massive music that Homo had at that time put in place, particularly in the motion (dynamic field effects <7C>) of his technical gestures.

10D. Massive spoken language

By the same mutations of the lowered larynx and risen pharynx, of the semi-circular conformation of the mouth, of the differentiable breathing, of the proximity of hearing, of the protean tongue that led him to produce insisting, proto-musical vocal emissions, Homo progressively became capable of using vocal sounds in an urgent regimen, meaning like a succession of short, oppositive and sequentially sliced sonorous emissions. Without yet achieving the tone, thus the phoneme properly speaking of the detailed language. This was the sufficient material for a language that we will call massive.

In etymological rigour, there is only one language; it is that which uses the protean organ, the tongue (lingua). In this sense, only spoken language is a language. But probably because we often only kept its structured communicational aspect, the use spread out a bit everywhere to call "languages" other means of expression presenting a structured communicational aspect; thus "languages" of photography, painting, music, the unconscious. Here, we shall understand language in a narrow sense, by only recognising, alongside *spoken language*, the *written language*, whether it inscribes a dialect (as in French), or inscribes the equivalent of a dialect (Chinese). And we shall only add *gestural language*, seeing that recent studies demonstrate that it develops in the child following the same stages-stratum and same ages as the spoken language, of which it manages to render the glossemes and sequencems <16B-C> without going through the phonemes<16A>. In any event, massive language that we are here speaking about is a language in the same sense as the detailed language, of which it was a stage and remains a strata.

10D1. The material of massive language

In past animality, particularly in Birds and Mammals, we already find urgent buccal emissions, meaning that they are short and very oppositive, and that they are linked to some operations of hunting, nesting, courting, coupling, vigilance, etc. Amongst Primates, squirrel monkeys are capable of twenty or so stimuli-signals of this sort, of which we know the table as they respond to environmental urgencies that are easily findable by the ethologist. Yet there is no language there, no more than in the said "language" of bees, because the *stimuli-signals* <4H> in question do not access semiotic distanciation and are strictly limited to ritualization in the ethological sense of the term <4A>.

Then, just like in massive music, Homo continued in massive language a phenomena of former animality, while displacing it considerably. The revolution resulted from a convergence, or at least a sufficient coincidence of factors. Initially and basally, it was the general habit installed by the technician manipulation, indiciality, indexation, of treating everything in distanciation, segmentarization, substitution <1A>. Then, the anatomic-physiological fact that, progressively, the larynx-pharynx, the rounded denture, the protean tongue, controllable breathing, in a word, the voice, allowed producing, alongside the insisting sounds of music, other increasingly short, cut,

sliced, easily transversalizing sounds in closed panopies and protocols; while the sounds produced by squirrel monkeys only constitute a panopy and a protocol for the experimenter, who makes it a table. Finally, the environment of technician Homo, which was segmentarized according to things-performances-in-situation-in-the-circumstance-over a horizon <1B3> was waiting for segmentarized and segmenting sonorous productions.

This last point is capital. To some exotropic or endotropic technical segments started to correspond some vocal segments by simple application (mapping) as in the case of images <9>, according to similitude or analogy. First almost physically, when a determined "blow" of voice accompanied a determined gesture, then induced this gesture by convection in a collaborator and a companion, almost in the narrow and coercive manner of a stimulus-signal. Here, we are still rather close to mechanisms of animal ritualization <4A>. But for Homo, such a correspondence intervened in a *world peopled with *indicium* and indexes, where there were first massive images; where the first notes of massive music were perhaps also being heard too. To such an extent that the segment-to-segment link, almost physical at the start, could possibilize <7A> to the extent of also working in distanciation, semiotically, i.e. in thematizations that exhausted themselves in the act of thematizing <4A>.

So, in the Universe, one of the most violent and fecund events after hominid transversalization happened. The massive vocable was the first urgent (non insisting) production of Homo's voice.

10D2. The achievements of massive language

From massive language or *proto-language* (in the same way as massive music is *proto-music*) the anthropogeny will retain these major realisations: empty vocables, full vocables, syntaxes, and existential dimensions. We could not envisage them in their order of appearance, since they were certainly in circular causality, but only according to an anthropogenically suggestive order.

10D2a. Empty massive vocables. The analogy of (two) relations or motions-transformations

It is plausible that the most urgent - thus amongst the first - massive vocables were some vocal indexes, **empty vocables**, i.e. with a non-intrinsically determined designated <5D>. We can easily imagine their sounds accompanying first certain simple indexating gestures of orientation, delimitation, collection, espousing them, supporting them, miming them similarly or analogically, specifying them further and further through the voice. And also accompanying double indexating gestures, frequent in the technical activity, like our successive syllables still do: "hôh-hisse!" (bottom-top!), "houp-lâh!" (top-bottom!).

This case of double indexes deserves a pause. Because we can see that what often matters is not the phonic resemblance of an isolated sound, /hoh/ (long, low), with an isolated gesture (taking a heavy object in one's hands), then (again) another isolated sound, /hisse/ (gathered, strident, high), with another isolated gesture (the lifting of the heavy object), but an articulation of the two moments, an analogy of the vocal relation (of the tension, of the field effect) between two

phonic terms /hôm-hisse/, with the manual relation between two technical performance, grasping and lifting. On this subject, we shall speak of an **analogy of (two) relations**, which plays a hidden yet major role in all language semantics, but also in image, musical and choreographic semantics. More specifically, we could speak of **analogy of (two) motions-transformations**, in the sense that musicians say that a melody consists in a motion and a rhythm <15B5>.

It is this analogy of (two) relations or (two) motions that had to, very early on in front of technical panoplies, induce vocal couples in an urgent regimen corresponding on one side to what we express today by "this/that" (playing of i/a), "back/front" ["avant/arrière" (playing of a-ä/a-è)], "top/bottom" ["haut/bas" (playing of ô/a)], "dextre/sinister" (playing of extre/îstre), etc., when it is a question of panoplies; and corresponding on the other side to our current "before/after", "ho/hisse", "houp/là", when speaking of protocols. To which we will probably very quickly add an assertive couple corresponding to our "yes/no". And an interrogative couple "who?/what?". Even a few couples accompanying expressions of modes of existence <6B>, such as "seriously/playfully" that very young children understand. Finally, couples translating the fundamental categories of the possible: "absolutely/more or less", "perhaps/certainly", "necessarily/by chance", etc.

We shall stress that, in these motions, the speaking voice does not only have the sound produced as a recourse, i.e. the *result* that the ears perceive (those of the speaker and those of the interlocutor) but also the *production* of sound, , i.e. the *act* of the phonatory apparel, that of the speaker and that of the interlocutor insofar as he participates to the act of the speaker by convection <1A5f> and intercerebrality <2B9>).

10D2b. Full massive vocables. The vocal sound as a product and as a production

The same analogy between vocal productions and exterior productions (natural or technical) had to induce and settle rather early the introduction of **full vocables**, i.e. with intrinsically determined designated <4H>. For instance, the song of the cuckoo is grosso modo a descending minor third (E flat/C) and some people have seen there a primitive sonorous production of Homo's pharynx-larynx, which corresponds to the idea that melody is primitively descending (Chailley). It was not excluded that the day came when these two relations, the "third" heard and produced by the bird and the "third" heard and produced by Homo, started answering each other, and then correspond to each other in distanciation, and finally that there was there an urgent vocal sound available for the creation of a full massive vocable: the "cuckoo" produced by Homo's voice thematizing nature's cuckoo and depleting in this thematization according to our definition of the sign <4A>.

We can suppose a similar homeomorphism between the downward half-tone (D flat/C) of the sheep's "baaa", and a similar hominid vocal relation. Or still, between the sinusoid of the "moo" of some ruminating animals and a sinusoid producible by Homo's voice. Particularly if these language productions took place in an environment of massive images <9A> and massive music <10A>, constituting a first semiotic exercise of analogy in distanciation <4A>. Many tools and utensils are suitable for the same mode of vocal designation. The Japanese still partially designate scissors by "chwi-chwi".

But such cases, in which it is a matter of designating things-performances that are already sonorous and of a very typified sonority, are exceptional. And the language analogy in question must be understood in a very wide, more fundamental sense. We have just insisted enough on vocal productions as active emissions, and not only as receptive auditions, to understand that similitude could take place between - on the one hand - motions, tensions, orientations, and also sonorous, visual, tactile, olfactory-gustatory field effects of the "things" of the environment and - on the other hand - the motions, tensions, orientations, field effects <7A-D> of the articulating voice. Here again, this analogy can take place on the occasion of an isolated very distinctive thing-performance, but it is more frequent and solid on the occasion of the contrast of two things-performance forming an oppositive couple, for example that of two fruits, one with a (more) sharp and subtle taste and texture, **versus** another with a (more) flexible and dense taste and texture. We can make this concrete by thinking in today's French about our couples "lemon/peach" ["citron/pêche" (/it-êch/)], "lemon/pear" ["citron/poire" (/it-wâr/)], and even "lemon-orange" ["citron-orange" (/it-or, on/an/)]. Or even, for animals, to our couples /bear-weasel/, /rat-mouse/.

In all these cases, things-performances-in-situation are perceived for their specific qualities and qualifications. We should not be surprised that some "qualifiers" were put in place at the same time, even before, these "substantives", for example those of vital couples: edible/non-edible, strong/weak, brave/coward, clear/obscure, good/bad, beautiful/ugly. Often, material and qualifier had to overlap: rock-hard/wood-tender, wood-living-green/wood-dead-grey. Sometimes, qualifying phonies, light/heavy, had to combine with indexating phonies, high/low, in a double theme.

As for the designation of actions-passions that we are doing today using verbs, we should note that most are close to gestures and have thus been capable of being expressed by empty signs, sorts of marking sonorous indexes, such as gestural indexes, departure, return, arrival, to-fro, fleeing, charge, effort, grasp, abandonment, rest, up and down, past and future, towards, in, outside of, etc. It is so true that some of our current languages hardly distinguish verbs and prepositions; in Chinese, just one vocable suffices to render "towards" and "going". This is confirmed by most pidgins and creoles or still by the English language when it treats most verbs as simultaneously transitive and intransitive, or simply the analogical gestural language that always completes the macro digitalized gestural language, such as the American sign language (ASL). A speaker speaks by *themes* well before and much more constantly than he speaks by grammatical *classes* even if our habits of SAE (Standard Average European) speakers sometimes lead us to think the opposite.

And it is also one of our SAE speakers' habits that makes us think that themes of action (the cat eats the mouse) are more fundamental than themes of states (it is hot). But, as Whorf and Leenhardt demonstrated, the latter are fundamental in the Native American Hopi and New-Caledonia Houailou dialects of the first part of the twentieth century, where for example the "cloud" is not an object or even a thing, or even a performance, but a situation of the sky, of the weather, of the fecundity or sterility of soils, of seasonal joy or pain, a kind of neutral "cloudy", of "cloudiness", a mixture of action and passion, to what our substantive and verbs hardly correspond, and our adjectives and adverbs only correspond a little better. Since these two dialects are close of the "mythical though" and on the other hand the *state* (state of things) plays a key role in the ancient stratum of some of today's languages, even in Russian, we shall wonder if the *state* thus understood did not also play an important, even initial role in the ordinarily massive language. The repetition *baa-baa* can be a verb-substantive-demonstrative-of state-becoming-going-lasting before being classified as a substantive, and before designating sheep, sheeps, ovine in the SAE sense. This

theme expresses a state of "sheepishness", a "sheep" phenomenon, a "sheep" mood. This matches the huge affective charge of vocables, which is very often recognised by Homo and so strongly expressed by Rousseau in his *Essay on the Origin of Languages*.

Finally, before even considering the designations of states, perhaps we should have, since Homo is a primate, envisaged the designations of instances (families) and roles (clientele), which do not only allow to point a particular amongst others, but also allow to thematise it as a Mother, Brother, Sister, Father-Uncle, Old man, Young man, Friend, Foe, Foreigner, Known, etc. We cannot see why massive gestural and vocal couples, supported by the spatial-temporal position (so important in primates) of interlocutors in the group would not have prefigured very early on our detailed vocal couples sister/brother, friend/foe, by exploiting analogies of sonorous and articulatory relations, for example of the contrasted type /MA(ma)-PA(pa)/ for the conceptual contrast *mother and *uncle-father*.

Finally, primates have such cerebral possibilities of facial recognition <3F> that we cannot exclude the precocious emergence of the language correspondents of our first names, for examples according to such qualifiers as "big", "fat", "skinny". And perhaps even correspondents of our personal pronouns, pointing by empty signs (indexes) the three positions (a) of the other in front ("you"), (b) of the other third ("he"), (c) of the non-otherness ("I"). What could make us doubt of this precocity during the phylogenesis is that, in the ontogeny of the child, personal pronouns still become activated quite late, today still, because of their difficult functioning as *shifters* (starters), as say the linguists that have described them a little. But the simpler logical functionings of the "you", "he", "I" are perhaps not excluded ?

Did all this go hand in hand with a first general categorisation of the hominid *world? It is true that saying that Homo habilis or even Homo erectus had notions of *family*, *genus*, *species* such as they function in our minds would be untimely. However, speaking of "cuckoo", "baa-baa", "moo-moo" was probably a start to designating three typified animal populations, thus a certain specification, and not just specimens; and also, with a certain vagueness, three genuses, even three families. In a word, the beginning of semantic panoplies and protocols. In any case, we must suspect that the first early generalisations inherent to massive language exerted a decisive influence on the increasingly considering, contemplative, meditating, desiring grasping <6A> that the standing primate developed over its environments and congeners.

10D2c. Massive syntax and logic

Let us come back to the fact that language is always an inter-vention; it comes-between in an already technologically driven environment. This is what makes its task possible and reduced. Any technical thematizable is part of an **event** (venire, ex), of a **Sachverhalt** (active relation of thing-cause), where it is simultaneously *salient*, standing out from the others, and *pregnant*, being in resonance with the others; this is a thing-performance-*in-situation-in-the-circumstance-over-a-horizon*, a formula where prepositions are more important than the substantives <1B3>.

Here, we can see the both modest and efficient sides of language. It takes place in an already syntactic event, of which it only needs to influence an element to reach the entire event. The influence over an element (or two or three) generally consists in sampling it, triggering it, or (re)distributing it. Cases where language attempts at representing events, in the same way as the

image does, are extremely rare and partial; even our most elaborated Romanesque descriptions and narrations need a number of very restrained samplers, triggers, (re)distributors to show "what it is about". Language therefore handles more than it represents, and what we require from a word, then from a group of words is to be a **manious phonosemia**. In gestural language, a flick can gain or lose a battle; in spoken language, flicks are particularly slight, subtle, punctual, determined. This is particularly well illustrated by the word *désigner* (signare, de) in French and *bezeichnen* (zeichnen, be) in German. Spoken language is so much only a specification at the heart of a preliminary event that it can only be learned in interaction with interlocutors participating to the same event. This is less the case of sign language, and for good reason <*The Emergence of Language*, SA.135>.

Therefore, the syntax of a language is only an intervention, a phonosemic handling, at the heart of the preliminary syntax of the event (Sachverhalt). This is why, without lacking efficiency, it can be so reduced and so free, as the Chinese and the pidgins show. Contenting with just one word with its internal syntactic link (technical, semantic): "***rat" for "there is a rat to pursue, to flee, to consider as dead, to eat", according to the circumstance. Or of two words each with their internal syntactic link (technical, semantic). "***grain rat" or "***rat grain", to "signal the threat of a rat in the grain", according to the circumstance. Or of three words each with their internal syntactic link (technical, semantic): "***eat grain rat" or "***grain rat eat" or "***grain eat rat", etc. to sample, trigger, distribute either the rat, or the grain, or the eating. Moreover, a suite of propositions generally indicates enough, still depending on the techno-semiotic syntax of the event, and also some phrasing, if the relation of two propositions is temporal, causal, consecutive, final, or concessive. If we avoid the complications of customs, rhythms, enjoyment, pleasure, we probably need very little grammatical syntax, although a lot of syntax of event, to organise a journey to the moon. Or even to outline the theory of Relativity. Or the Genesis and Deuteronomy.

10D2d. Proto-linguistic choices of existence

In this sense, massive language and its empty or full vocables and syntax seems to have been sufficiently complex in its phonosemics to encourage Homo to first thematizations of topology, cybernetics, logico-semiotic, presentivity, in a word, to encourage him to first destinies-choices of existence <8H>, especially as massive language often works by analogy of (two) relations or melodic motion. The practice of insisting music and the practice of urgent language then had to interfere constantly, as they still do today in the language of most peoples.

We can think that where they affirmed themselves, language destinies-choices of existence determined new collaborations, communities, inter-group and intra-group educations. And also that they stabilised the enmities between the groups and sub-groups gradually as the proto-language of everyone, despite its elementariness, thus its intuitive translatability, started being less well understood by the proto-language of others. Thus, hominid *in-groups* (*we-groups*) were defined by opposition to their *out-groups* not only because of their physical differences, kinship, technical performances, proto-musical and proto-dancing performances, but also because of their differences in their proto-languages. And we shall not forget that destinies-choices of existence and their fundamental fantasies do not only concern aesthetic and existential experiences, but are also a powerful additive of technique in specimens disposing of fuzzy thinking and that have to

sample forms *in* and *over* backgrounds. We can see there many evolutionary advantages, both powerful and limiting, of the Homo species-genus.

What particularly evolved was without doubt the distance between the technical gesture, the language gesture and the language sound. First the three physically overlapped, reaching magic. Then the language gesture detached itself from the technical gesture and the language sound from the language gesture to become increasingly distancing and endotropizing. In short, the core [of the language] moved from the inter-gesture to interlocution.

10D3. Natural selection of massive language as a stage

Massive language was probably very profitable in the competition of a hominid group towards animals and towards other hominid groups too. So much so that its development must have exerted a considerable selective pressure over Homo habilis, insofar as the latter possessed the embryo of it, and on Homo erectus, who developed it almost certainly. Particularly, the pleasure, even the enjoyment, as we have already signalled its importance for Homo, for the fulfilling of his existential flaws and dehiscence as a standing animal, intervenes here again, like in massive image and music, since this language allowed to circulate, and to compatibilize a thematized (designated) and its thematizer (designator) through the exotropic and endotropic regimen of one brain, or many brains in intercerebrality <2B9>, without the weight of cumbersome and demanding exotropic realisations. Allowing Homo to take pleasure to the consoling echoes inherent to the resonances of sound and technical-semiotic relationships in general.

We probably have the confirmation of this selection by recognizing, in the left hemisphere of some fossils of the Middle Palaeolithic, a first marked development in the regions that have today become Wernicke's area, relay in the syntactic grasping of language sounds, and Broca's area, relay in the articulation of language sounds, as well as the powerful beam that links them together. Despite the reservations stemming from any passage of the brain anatomy to cerebral functions, the affirmation that these are the first areas of language seems plausible insofar as it is formulated in sufficiently general terms.

This would match quite well the hypothesis that we expressed above, of a left hemisphere more specialised in macro-digitalizing tasks, whilst the right hemisphere would be more dedicated to analogizing tasks <2A2e, 2B6>. Because, let us not be mistaken, if massive language is founded on some analogies between phonic manipulative relations and technical manipulative relations, its essential structure is without doubt macro-digital. Macro-digital on the side of the thematized (designated) where, to specify that we were speaking of a "bison", it was enough to exclude what was not a bison in a closed panoply (that of hunting), in a macro digital way. And also macro-digital on the side of the thematizer (designator), where the phonic oppositions "*Baa/*cuckoo/*moo", "*hôt-hiss/*houp-laa", "*ma/*pa", considering the few sonorous and phonic traits available at that moment, had to soon constitute a closed system where every sound was worth by exclusion of the others as much and even more as by its own characteristics (without it being "phonematic" traits like we find in detailed language) <16A1>.

10D4. The permanence of massive language as a stratum

Massive language is not only a curiosity of palaeoanthropology. Up until today's detailed music <15H>, the sung words often exploit the resources of massive, almost animal language, in Cathy Berberian singing Berio, in Nella Anfusio singing Monteverdi and Vivaldi, or in Tippett's choirs. Moreover, language before the tone is always active in today's language: "Yes", coming back to "yeah" or "ya, yep, yup". And especially in the formation of new words, directly or indirectly.

To the point that if we consider the **native creation** (Urschöpfung) of the words of one of today's detailed language such as German, we find, with other accents, what we indicated before on the native creation of the words of a massive language. Here are for instance the six paths of what Kluge's *Etymologisches Wörterbuch der deutschen Sprache* (1995) calls the **onomatopoeia**, understood etymologically as the action of making words (onomata, words, poiein, making). (1) The **sonorous imitation** (Lautnachahmung) of an activity of an object or of an animal (Kuckuck, cuckoo), or of the noise accompanying a process (plumpsen, falling heavily). (2) The **sonorous gesture** (Lautgebärde) which sends back to a designated (a) by an accompanying noise (Mama for the Mother that one sucks), (b) by the very form of the sonorous production (bibbern, b-bb-r, zittern, z-tt-r, trembling, vibrating, quivering), (c) by the sonorous equivalent of a non-sonorous sensation. (3) The **sonorous motions** (Lautbedeutsamkeit), such as i/or, è/a, to evoke in German the semic oppositions of light/dark, day/night, top/bottom, quick/slow, little/big (this is what we evoked earlier under the name of analogies of relations or analogies of motions). To which are added to create semantic nuances: (4) The **sonorous widening**, (5) The **articulatory shifting**, tz, pf, (6) The **repetitions** (of consonants, of syllables), particularly in verbs (ti-tHè-mi), but also in childish substantives (ti-tHè-nè, nursemaid).

10E. Enchantment

Words such as *incantation* and *enchantment* that run from Latin (cantare, in) to French and English are remarkable. They mark exceptionally well how, for primitive Homo, the spoken word and musical sound proceed from the same phonosemic source <16B2a>, and how, conjoining the virtues of language and music, they create and enjoy a self-sufficient universe. Triggering an imagined, and especially imaginary *woruld, therefore made of vague tensions and impetuous, rather than of determined objects and acts. A few fragments of insignificant tribal memories, through barely varied humming, sometimes helped by a few rudimentary instruments, manage to justify the existence of the proferator, to give him a past and a future, to swell him with his glory, to confer him a people, to give him physical and spiritual powers.

Today's Ethiopian bard who, in a few rambling fragments of phrases, celebrates indefinitely the Emperor "Thewodros"(Theodoros, c.1850) in a monotonous tone, shows the primary phonosemic source of all sagas and all psalms. And he shows, albeit crudely, the interior discourse that initially makes up the religious and political faith and every sort of hominid consciousness (scire, cum). The fact that enchantment, the bamboozling song-word <17F5a, 17F12>, may become a means of sorcery allowing to save and lose a specific X by surrounding it with the forces of nature (and culture) through the means of the word and of the song, the sung word, the spoken melody, is only a particular consequence of this rhythmical performance of hominid word-music. This is where the poet returns, as the title of Valéry's poems *Charmes* (carmina, incantatory songs) indicates. But also every mumblor, isolated or making up a couple and group in *chattering*.

Assuredly, today we experience this in detailed language and music <16, 17>, but massive language and massive music remain the underlying matrix. English says this perfectly, since *to chatter*, before meaning "to talk idly, incessantly, or fast (jabber)", means "to utter rapidly succeeding sounds suggestive of language but inarticulate and indistinct", and that the word is "of imitative origin" <Webster's>. Rap is the familiar climax of this ancestral experience.

SITUATION 10

In this chapter, we did not treat massive music before massive language only for reasons of rhetorical convenience. It was indispensable to make the fundamental theory of the sound and the voice, or even of the musical instrument, before envisaging language, even if both have been in circular causality from the start. There is indeed an anthropogenic suite: upraising > transversalization > gesture > voice > language, without which language would be radically misunderstood in its origin, function and functioning.

Translated by Paula COOK, 2017

(Last update, October 15, 2017)