

GENERAL ANTHROPOGENY

FIRST PART – BASIS

CHAPTER 5 – INDEXES

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GENERAL ANTHROPOGENY

FIRST PART – BASIS

Chapter 5 - Indexes

Latin-based languages make the distinction between *indicia*, we have just seen, and *indexes*, to which we now turn.

5A. Index vs indicium. Indexed indicia

Indexes are these gestures through which Homo's transversalizing, manipulating and upright body, endowed with a neutralizing brain, has little by little developed the power of pointing at targets, marking the beginnings and endings, tracing directions, determining angles, miming speeds, miming and triggering motions, therefore dancing, identifying forms and collections, adding or subtracting collections between them, distributing consecutions.

We must see that indexes and *indicia* work in the opposite direction. *Indicia* go from things to the one considering them; this is what the Latin objectal termination "-icium" in *indicium* indicates. Conversely, indexes go from the pointing, tracing or collecting specimen to things; what the "-ex" Latin subjectal termination in *index* indicates.

English did not keep this opposition. It uses "index" in the singular form and "indices" in the plural form for both words. This fusion or confusion is interesting insofar as it betrays the close link between both terms. But within the framework of the anthropogeny, it is indispensable to start from the Latin distinction, which marks a decisive anthropogenic step.

Indeed, as the *indicia* encountered by transversalizing, substitutive, complementative, comparative Homo were pointed and traced by indexes, technique was veritably on its way and even initiated science, in a physics, that is the indexation of indexables, and in a mathematics, that is the general theory of indexations. We must therefore first measure how much Homo's body - which we have seen to be techno-indicializing - is multiply indexating.

The encounter between *indicia* and indexes at the beginning of Homo is not a simple confluence of two heterogeneous series, as is often the case in Evolution. It is the emergence of

a veritable couple. Indicia, going from object to the manipulator, call for indexes. Conversely, indexes going from the manipulator transform everything to which they point into indicia. This couple will determine the powers and limitations of hominid technique and logic.

Homo erupting in the Universe is indissolubly indicializing and indexating, even indexating and indicializing. It is probably its most original, or at least basal, functioning. Therefore, as we will study dialects later <10D, 16, 17>, the anthropogeny will note that their elements and practices are usually, under deep and complicated exteriors, sometimes pompous, simply indexes, indicia, indexes-indicia bundled together. Lots of elements of images, music, writing, mathematics and logic too. An environment becomes hominid, and becomes transversalized, insofar as it consists in indexed or indexable indicia and in diversely indicializing indexes. A few indicia are then sufficient to raise indexes. Only a few indexes suffice to open a field of indicia.

5B. Corporal propositions to indexation

5B1. Indexating arms, hands, fingers and feet

The fact that the arm of the upright primate can extend and move linearly in every direction, and is even capable of wedging itself osseously at the shoulder in a stable direction, invited Homo to define global or specific orientations. More exact still, Homo's hands - particularly when they extend, stiffen and set plane - propose innumerable indexes of pointing, delimiting, tracing, convecting, deciding. The hominid thumb is very detached and highly innervated, and the finger that soars alongside it in angle opening, the **index finger**, although not the longest, plays a prevalent role in this respect. In German, it is known as the "Zeige-finger", the pointing-tracing finger. In French, it is simply the "index", as its phalanx, its phalange and its phalangelette, when they rise, in contrast with the four other fingers that depress around it, are per se the organ of insisting indexations. To which the wrists and mobile fixation of phalanges on the metacarpals add the indexations of rotation.

Furthermore, indexations are often proposed by Homo's two arms, two hands and two index fingers. And these pairs are capable to mark the beginning and the end of a segment simultaneously. To mark an angle. Or to mark the times and tempo of a consecution. Or still, to transpose magnitudes onto other magnitudes, into an application (mapping, function) engendering measure. Finally, by mirroring each other, they are capable of provoking direct, returned, bilateral symmetries. Because, indeed, there are four or five manners of making two hands fit into one another: both facing each other, both back to each other, one facing and the other backing, both in various shifts or crossings, etc. Furthermore, these mirror effects can also occur between the faces of the hands and the faces of objects, which then mutually index and indicialize.

Moreover, both plane hands easily form, when placed horizontally edge to edge, sometimes a unique cut, sometimes the two scales of a balance susceptible of receiving

collections of small objects (in French "manipule", manus, plere, filling), such as grains or pebbles, to present them to someone else or to oneself, to compare them in numbers or quality. The hands of another's body can serve this purpose as well as one's own hands, and the chain of indexations that runs from body to body, ensures more than anything the "cum" of collaboration and companionship.

The fingers of both hands have such independent distal commands that they are in a way ten indexes capable of applying to ten objects, but also to touch each other in bi-univocal applications, one by one, one to two, one to three, two to two, three to two, five to five, etc. The word "digit", meaning "number" in English, cleverly links "numbers" to the fingers (lat. digitus). After all, Homo's ten fingers-indexes-digits, which he will one day write 0 1 2 3 4 5 6 7 8 9, provide him with an abacus-indexator that is both sensorial, motor, objectal, multiply segmentarizable and substitutable.

Decimal systems, based on 10, illustrate well the power of the indexating hominid body. But vigesimal systems, based on 20, also do. The 2 x 5 toes added to the 2 x 5 fingers of the hands in a total of 20 fingers were long perceived as a privileged set in popular tales. Apart from the fact that, for some estimations, the basis 20 is often more significant than its 10 counterpart, the biped primate does not completely forget the quadruped primate from which it originates. Furthermore, since the days when the big toe, instead of spreading apart from the other toes like we find in monkeys, aligned itself with them to replace the median toe as fulcrum for walking and kicking, hominid feet have in turn become indexating pointing means. The transformation was probably consummated in Homo erectus after having been prepared in Homo habilis, if it is correct to attribute the latter, who was still quite arboreal, the fossil of a foot with a dominating median toe with an aligned big toe <PP.90>.

5B2. Indexating head, look, voice

Alongside the arms and fingers, Homo's head also became, at the end of its slender, mobile neck, capable of effective indexes to point targets, trace directions and movements, mark consecutions, collections, complementarities, sometimes leaning forward, sometimes raising a salient chin that we find in no other primates today, sometimes miming complete movements in the three directions at different speeds. According to the Greek "neF-ô" and Latin "nu-o", leaning the head forward marked agreement. It was the most important gesture of Zeus-Jupiter. Sovereignly nodding the head (caput, chief) from top to bottom or from left to right, will have greatly confirmed Homo as distancing animal.

The indexating head summarized itself in the indexating eyes, as gradually the prominent brow bone recessed and as was selected the white of the eye, until then unknown by the anterior animality, which allows us to "dart". The dart totalizes indexation, as we shall see for mathematics and for the role that the arrow and the trait-point plays <19 and Complement 11>. It indeed comprises three parts: a point of departure, a point of arrival, a shaft or intermediary trait tracing the direction, sometimes the force. The action of darting, with its correlates of throwing, tracing, encompassing, ordering, convection, made of the hominid vision the look, where the face summarizes, and which sometimes summarizes the gesture of the entire body <3E>. To dart gave the look its reduplicative and thematizing character (in

French: regarder, garder, re-). We shall remember that the hominid look, often guardian, is “taker” of point of view, angularizing and processional <1C1b>.

To the indexations of the face we shall add those of the voice, to which the differentiated cheeks and lips in the uprighting face, allowed to point horizontal orientations while its sounds and later its tones <15A> designated vertical directions by their height, and designated forces to be noticed or to be produced by their intensity.

5B3. Indexing gait

The biped walk completes this list of indexations with dignity, because it has been indexating from the outset by its frank and controlled pace, its directions, the spot (punctum, point) of its departure, arrivals, stops, and assuredly by its "tendencies towards" (ad-gressions). For Peripatetic philosophers, the walk and its pace, its allure, its drive, its internal and external distances, and rhythm in its many aspects, were not only an occasion of thought, but an important part of its exercise. The walk is gait as much by its distanciation than by its indexations.

5B4. The transversal and orthogonal referential

Assuredly, in order that this extraordinary panoply of indexes offered by Homo's body should flourish, it had to be salient and pregnant relatively to a firm frame of reference. Which is the case since, as we noted, Homo's upright and orthogonalizing body distributes a transversal plan, comforted by the left-right lateralization, and in relation to which two other plans orthogonalize. All the above-mentioned indexes work in relation to the norm of these three so-called "normal" plans that are normative between them <1A2-3>.

Awakened by Homo's intensely indexating body, the *world in turn produced indexes in an indicial way. A branch on a path was perceived as an indicating arrow or a sign of a track. The magic wand, and later the baton of the conductor, was both indicium and index.

5C. Modalities of indexation

5C1. Indexation as semiotic fixation and segmentarization: pointing

The point and the center are mutually referring to each other. The point comes from *punctum*, from *pungere*, *piquer* (in French) like a bee sting. The center comes from *centrum* (kentrum), from the Greek *kentron*, of *kenteîn*, which has the same sense as *pungere*. In both

cases, the pointing is targeted in its most determinate action, reception, and sensation, which is the sting. For the ancients, the most striking sting was that of the bee.

Pointing is the exemplary techno-semiotic operation for segmentarizing Homo. Homo operates the first distribution of the environment into segments in two forms: (a) as an in-between-two-segments, (b) as an end (term, limit) of segment. When the limits of a set belong to it, the set is said closed; if they do not, it is said open. And it is a pointing that determines what will be so important in stories: the country, pagus, from pangere, to stuck a dart, but also stuck a stake. Etymologically, the country is the portion of the *woruld where upright and transversalizing Homo stuck a central stake to make it his own. The study of the infants' gestures shows that holding up a fist to point to an object, which the primate never does, occurs very early on in hominid life.

5C2. Indexes as cinematic: direction and speed

The direction of an indexation does not deplete in the aiming of a point. It can mark and also mime from afar a real trajectory (jacere, trans), which can be rectilinear, curved, meandric. The straight line and the curve, in their immediate or distant tracing, do not suppose the same type of tension and wedging. These are distinct kinesthetic experiences.

The indexating tracing may still have, and therefore mime, various, differentiated, differentiable (ferre, dis, duo, putting in bifurcation) speeds. The arm and the hand, with or without amplifying baton or stick, are so subtle in their tempo that they will one day be capable of regulating the dispersed movements of a symphonic orchestra.

5C3. Indexation as dynamic: charge and discharge (purification of indexes)

Indexes are not only a case for kinematics and movements. They often put a force into work. Already for those who emit those indexes, spread into them, express (premere, ex, pushing outside) their energy (ergein, in, acting inside) in them. Then for those who perceive them, if it is true that hominid brains infer the forces from which a movement proceeds and the forces that this movement will trigger; in other words, grasp movances within movements<2B1>.

The **charge** of an index (carricare, convey) acts then doubly: positively by the vectoriality of its energy, negatively by the neutralization or cancellation of what would not go in its sense. And on this occasion, it exploits the character of every receptor nervous system, and probably also motor nervous system: reinforcing crests, neutralizing slopes, thus creating basins of attraction <2A2b>.

Thence the two major practices of the forefinger in Homo. That where he fully uses its convective charge, exalting its power more than its precision, in the warlord or conductor, the politician, the predicator. That, conversely, where precision more than power is targeted, such as in mathematics and physics, where indexations purify themselves from their charge as much as possible to only retain their pure vectoriality. The case of the arrow in mathematics

<Complement 11> indicates well the limits of this purity as it is perfectly defined, without being axiomatizable in the expression "a quantity tends to another"; probably because in this case there is no way of absolutely erasing the charge (tension) inherent to the trend.

Every index, like every step, implies an aggression. However, if the latter is initiated in the rostral-caudal aggressiveness of anterior animality, it ends in Homo's transversalizing and frontalizing *ad-gredi* (walking-towards) <1A2>. It is therefore and to that extent that the index can be discharged, purified, for example in mathematics and logic <19-20>.

5C4. Indexation as switch. Yes and no: judgement

At the slightest deviation, an indexation shows or does not show. Includes or excludes. Excludes insofar as it includes. In short, it is oppositive and exclusive by nature. Saying yes or no. Yes therefore no. This or not-this. Here or there. Acting or not acting. According to the rhythm of the gesture and the voice, it can even specify: almost that, almost not that; rather here, rather there. It is mainly the indexation that, applying to indicia, makes segmentarizing and transversalizing Homo give rise to things-performances-in-situation-in-the-circumstance-over-a-horizon <1B3>. Symptomatically, the negation of the verb in French exploits the two major indexes, the point and the step: "il n'y en a point (punctum, point)", meaning "there is none", and "il n'y en a pas (passum, step)", meaning "there are not any".

In other terms, the index, even before it mathematizes, opens the field of logic, meaning negation, exclusion, affirmation, choice and interrogation, with their reciprocal inferences. Logical calculation, just like mathematical calculation, is before all a calculation of indexations, or "indications" according to the words of Spencer-Brown. We will note that the same Latin root "jus" also gave us judgement, judge, justice, just (exact). Between its hands, Justice holds the scales, the most indexating of utensils: no/yes, bad/good, ugly/beautiful, true/false. *Urteil*, the German word for judgement also indicates the sharing (*teilen*) that characterizes every judgement, of logic and law, and presents this sharing as fundamental, radical, first (Ur-).

5D. The semiotic of the index

Indexes are signs, meaning segments thematizing other segments, and depleting in this thematization <4A>.

Let us apply this precisely. In indexations, thematizing segments are arms, fingers, heads, looks, sounds-tones, steps; thematized segments are pointed segments, and have no other determination than to be pointed; the link binding these two types of segments is the direction of the pointing segment; and the latter depletes in this directional thematization. Indeed, if I sometimes index a segment by touching it or by pushing it a little (like we find in some of Descartes' demonstrations), it is not this physical action that matters, as it would be if it were a

technical gesture. Stretching the arm or the finger or the look in a direction perhaps tells a collaborator to do such or such thing, but by itself, as a sign, it does nothing. Indexes are therefore actually signs.

Let us see how they contrast with indicia. And indeed, going from the subject that indexes to the indexed object, the index is an **intentional** sign in the primitive sense of tended in-to (tendere, in) conversely to the indicium that goes from the indicial object to the indicializing subject.

Index is also an **empty** sign. Assuredly, it is "full" of its indexation, its indexating charge, but this charge, although powerfully convective, points its objects without imputing internal determinations to them. The emptiness of index even gives the emptiness of **space**, which is the set of all simultaneous indexations, and that we shall not confuse with the extent (extension, tendere, ex-) and with spatiality, which are both more concrete. And the same emptiness of the index also gives the "emptiness" of **time**, which is the set of consecutive indexations, that we shall not confuse with duration and temporality, that are also concrete <29B2>.

However, although intentional and empty, the index is **quite motivated**. It is true that it admits the arbitrary. In some countries, peoples say "yes" by shaking their head from left to right and "no" by moving the head back and forth. What signifies "go away" in one place means "come here" in other places. What was the precise reach of the gaghals (gegen-hals, mit zurückgebogenem Kopf) of ancient Nordic? But this arbitrary is limited, and two hominid specimens usually manage to get along on technical operations only using gestures, meaning a few shared indicia and many indexes. To signify that a profile of object goes in such a direction, why make a gesture in the opposite direction, even if this is not excluded per se. In the same way, why designate the greatest using a smaller gesture and conversely? And what hominid specimen doubts the direction of a physical and figural arrow? Indexes are less motivated than indicium, but still very motivated.

The motivation between index and indexed finds confirmation in the proximity of the index (exterior sign) and in the indexation (concept, neuronc synody) that it expresses. Specifically, between the mathematical sign (index) and the mathematical concept it achieves (indexation), there is almost an equivalence or equipollence <19C>. But this proximity also creates the power of authoritarian gestures. Indicia and indexes strongly contrast on this point. In indiciality, as it is a transfer of internal determinations that are inevitably blurred, all sorts of errors, exaggerations, attenuations, and possible deviation can slip between the indicium (material sign) and the indiciality (which the sign conveys cerebrally). On the other hand, since the index is an empty sign, there is little or no deviation between it and the [cerebral] indexation it completes. And the index is usually even more constraining that, as is the case in mathematics, everything is done to avoid every possible deviation.

Let us go back to the notion of implicit or explicit charge of the index. It is not a *mechanical charge*; physically, it does not move anything directly, even if an eloquent and furious general lacerates his headquarter map by tracing the future path of his troops. In indexation as such, this aspect is not pertinent and is placed between parentheses. But it is often a *semiotic charge in its result*, at least when the indexating finger triggers actions and does not strictly limit itself to the assessment. And it is sometimes also a *semiotic charge in its source*,

if it is true that the intensity of the physical effort of the indexator goes hand in hand with the importance of the semiotic effect he wants to produce. We suspect that on the morning of Salamis, the arms, look, voice and gait of Themistocles pointed to the Persian vessels with a rare physical and physiological en-ergeia, and that his sailors were accompanied by it. The Australian frescoes of Wandjina man have shown for the past 50 thY that extended arms convey shamanistic exergy.

5E. From technique and indicia to indexes

Now is the time to ask ourselves what anthropogenic paths were called upon to put in place the index, a sign that, like indicium, supposes the practice of a distanciation other than technical distance. Two paths stem from what precedes.

(a) *The technical path* - In technician collaboration, it must have been frequent that the arm, hand, head, look, directed voice, step of a worker should start pointing, orienting, identifying, distributing enough the panoply and the protocol so that the eye or the ear of a collaborator, by following this hand, look or voice should reach a "thing" (cause), or precisely a thing-performance-in-situation-in-the-circumstance-over-a-horizon <1B3> and should perceive them as equivalents of an effector gesture, but sometimes also as purely thematized, not only at a distance, but in distanciation. The full technical gesture was becoming then the empty sign of the index.

(b) *The indicial path*. - Around an indicium, it must have been frequent to double the link between the indicializing and the indicated using a mime. This mimed indicial link, causal or semi-causal, could over time become simpler to the point of taking place in few localizations at a distance, and even in distanciation, without particular determinations.

In the strictest sense, technique, indicium and index call each other. Indexes whip technique and indiciality, and we can even wonder if these latter could have developed or be maintained without the help of indexations. Inversely, the indefinite complexity of technical and indicial cleavages leads to the complexification of indexes, which then call upon the (a) mathematics as general theory of indexations and absolute practice of the indexes: (b) logic as specific theory of negation-exclusion, affirmation, interrogation; (c) physics as applicability of increasingly purified indexes to increasingly purified indexables (events), in observation and experimentation.

5F. Indexes and macrodigitality

When we considered the brain, we distinguished two neuronal modes of representation: analogue representation and macrodigital representation, the diverging properties of which are exploited by "analog computers", "digital computers" and "hybrid computers" <2A2e>. Without excluding macrodigitality, indicia rather illustrate the fecundity of analogy in its metaphors and metonymies. Indexes, without excluding analogy, rather illustrate the fecundity of macrodigitality.

Indexes belong to analogy, insofar as they mime - although in an arbitrary manner - the indexations they achieve. They even analogize amongst themselves, since they can inter-mime each other by miming at a distance the same directions, angulations, extremities, speeds, underlying forms, cardinal and ordinal values, the same known and unknown values (x, y, z), the same affirmations, negations-exclusions or questions, etc. This is the beginning of mathematics and hints at the major role that the traced figure and writing played in it.

But indexes are particularly marvelous in **macrodigitality**. Because in every panoply, all they need to do is point to a sufficient number of non-searched objects for the searched object to stand out. We will have the opportunity to see that the semantic of spoken language and written characters, and even that of the most resembling images rests for a good part on such exclusive oppositions: that is partially "that", analogically; but it is also "not that", "not that either" and so on, macrodigitally. As we also find in the figure and writing.

5G. Indexes and society

The contribution of indexes in technical actions, peaceful or warlike, doubles with their social contribution, if it is true that indexes make up most of languages, first gestural then spoken, and thus also most of collaboration, education, sexuality, instances, clientèle, thus, in a word, make most of the encounter in general <3>.

5G1. Index and languages: the language of gestures. Framings

Although slower in some occasions, the gestural language can almost completely compensate spoken language, and it is even more efficient than spoken language in transmitting technical knowledge, which is essentially made up of mimetic and indexating gestures. Today still, the apprentice learns more by following the substitutable and coactable segments as well

as the *indicia* indexed by his master than by reading carefully drafted descriptive texts. It is rare that a technical specification sheet is enough without "joining the gesture to the words".

Recent studies verify that the learning of gestural language is synchronous with that of spoken language. This suggests that the fundamental phenomenon in both cases is the development of the conceptualizing association and neutralization of which Homo's neuronic synodies are capable and which, according to opportunities, express either linguistically or gesturally. In this sense, an anthropogeny can only be attentive to the fact that autists communicate better using gestures, for example using the American Sign Language, than with spoken languages. The existence of writing independent from specific languages, such as Chinese writing, completes this picture.

However, gestural language essentially consists in indexes and indexations, with only a few detailed mimes, themselves strongly indexed or indexating. And we will note that, in spoken language too, the most prestigious concepts, not only mathematical and logical but also philosophical, are mainly bundles of indexes comforted by *indicia*: "sublimation", "inwardness", "transcendence", "immanence", "weighting", "balance", "evidence", "desire", "hope", etc. Apart from extreme cases, the ideological content of a political Right or Left is usually limited to feeling more "to the left" (at odds with) or more "to the right" (straight).

Moreover, indexes play a role in every transmission of information (understood as shaping) insofar as they are the most economical and decisive instrument of framing and that - for transversalizing, orthogonalizing and globalizing Homo - there is no techno-semiotic transmission without some form of framing, whether we're cutting a prey, elaborating a meal, deciding of the implantation of a habitat, writing a text, making a photograph. A frame is both an index and indexation referential. As is the rectangular sheet on which our rectangular texts take place.

5G2. Index and positive election or power: slicing, charge and indefinity

The internal charge of indexes implies and explains their imperative, exclusive, comminatory (*minari*, threaten, *cum*) character. They exclude, oppose, impose, intimate, forbid. It takes just a little bit of abruptness for the hand that picks "the one" to put "the other" out of the game. Once indexed, what is established turns to the order, obligation (*ob-ligare*, link frontally), to imposition (*im-ponere*, placing by weighing over), to exclusion. The semantic evolution of Latin word *interdictio* shows well this type of switching. At the start, it meant say-between (*dicere inter*) that marks the injunction, and ruling over "ut + subjunctive". But any injunction (*jungere, in*) is so often a warning (*ut ne, not + subjunctive*), or exclusion (*a + ablative*) that *inter-diction* (say-between) now means forbidding.

Between the "rejected" and the "taken", indexes and indexations have so invented, more than found, good and evil, true and false, ugliness and beauty, into couples where the negative pole probably preceded the affirmative pole each time. For logician Homo, before any demonstration, *p* is equivalent to non-non-*p*. And if it is the out-group that defines the we-group (in-group) rather than the contrary, it is largely because of indexes.

It is still indexes that mean that hominid *power* is not simply a continuation of animal leadership: Homo owes to indexes the indefiniteness, which makes him not graspable. By opposition to indicia, full signs, the indexes of commandment, empty signs, although triggering very specific tasks seem to proceed from an infinite source and to go to infinite aims. We find a good illustration of this in Tarragona, this statue of Augustus advancing toward the sea just an arm, a hand, a finger, a firm eye, which were enough to govern the empire, by cleaving its flows, like a rudder does to the water. Let us repeat that the front to back head movement, the "neFsis", expressed by itself the supreme power of Zeus-Jupiter. The French says of a leader he is drunk with power; power indeed is intoxicating insofar as the indexes to which it is due are charged; some people feed on power both physically and semiotically.

There is a tight relation between indexes and weapons. Homo's tensed and pointed arm was first ended with a massive flint, then a cut flint, then a spear, a sword, a revolver, sort of supercharged indexating finger. True or fake weapons combine so well the caudal-rostral motricity of animality with the transversality of indexation that they must have fascinated hominid specimens since ever from childhood onwards, at least the males, thematizing salience <3C1>. They make power through their forces, but just as much through the indexation that brandishes them and that they are. The staging of the firing squad makes that it does not miss its target, but mostly that it points good versus evil, false versus true, ugly versus beautiful, the in-group versus the out-group (we-group). Indexations have triggered as many and more wars than interests and have maintained them even for longer.

Indexation culminates in fascination and hypnosis where the hypnotist, using orientations of his voice, lights fixations and simple convecting rhythms, creates in the hypnotized a gravitation of the attention that takes over any possible evasion <2B9>. The spotlights of film maker-photographer Leni Riefenstahl pointing on Hitler at Nuremberg indexed him, turning him in turn into a gigantic hypnotizing and hypnotized index. His word and the screams responding to his voice only had to follow the convections already traced by the indexes of lights. Great revelations will often consist of (jets of) light and (raised) voices, those two vehicles of major indexations.

5G3. Index and negative election: the scapegoat

We have just seen that the indexating charge is as much negative-exclusive than it is positive. Let's imagine three children who find a dead bird. At the same moment, a fourth child appears. They know him less well than they know each other. They are three, he is one. But perhaps above all, because of the configuration of the terrain, everything is played out. They come from above, while he comes from below. Their arms signaling (indexing) that he is arriving (from the bottom) are three accusing arms (from the top) that point at him. Instantly, the bird is not dead from natural causes, it has been killed. Killed by the one that is coming. Here, the location is as accusatory as the incident and as the human relations, as film directors will well understand.

Let's widen this example to the situations of native Homo, and let us suppose in a hominid group the perishing of plants or game, the spreading and repetition of illnesses, a destruction of goods. In other words, let us imagine that a state of instability accompanied by a diffuse maleficent charge is created in a group. And let us imagine that a few troubling indicia

appear. In a plant. In an animal. In a member of the group. Especially if this takes place in a place or a moment already predestined.

Then, just a vacillating or fixed, blurry or defined, voluntary or aleatory indexation going to this indicial focus will be enough for the entire charge immanent to the group to rush, by convection and intercerebrality <2B9> to this point-trait and thematize the scattered things (causae) into accusations (causare, ad). In French "pointing to someone with the finger" means "questioning". As etymology states, accusation (causare, ad) is linked to transfers of causality. And it will soon change into guilt in the primitive sense of stumble, false step (not yet of internalized fault) since the false step (passus) is the classic error for rhythmic walker Homo <1A5>. Under the charge of indexation, the indexed is subject to the indexating "questioning" gesture like he will later be subject to the witnesses "against". And this can go even further, the charged "someone" attracts others "some ones", fascinates them in the literal sense; indexed, it becomes index. And the false step will comprise its remedy. Because all the social charge being thus accumulated in a bad index, it is probably enough to destroy it, to dismiss it, to submit it, to emit it, so that *everything* for which it is the indicium should be dismissed, submitted, emitted at the same time.

It goes without say that the scapegoat can also be an entire people (the Jew for the German, the Palestinian for the Jew, the Jew for the Palestinian). And that anyone, or even anything (cause) can become scapegoat. Any hominid specimen or group offer enough unpleasant or worrying indices that may be voluntarily or involuntarily indexating or indexable enough to accumulate a charge and constitute, in cases of emergency, derivators (scapegoats) through a simple indexation that has become indicial.

The couple of the chief and the scapegoat, both of whom result from the indexation, illustrate how the indexator and the indexed can turn on one another, and how they are both attractive and repulsive in an invincible circularity. The ambiguity of love turning into hatred and hatred changing into love is a very subtle phenomenon in a tragedy by Racine. But it is also one of the most archaic and rough experiences of Homo indicializing and indexating <11L2-3>.

5G4. Index and violence. Rape

Hominid groups are often violent. They defend their values, their saliences and pregnances that only activate-passivate each other well in contrast with other foreign values, those of the out-group allowing the in-group to articulate. If a hominid group is as easily unanimous and focusable, it is because it is enough that someone or something should become an index in it, carrying the charge of any indexation, to create a more or less rhythmical convection and gravitation. Sometimes pointing to a vertiginous target. Sometimes propagating scattered fragments. But always through adhesions to a yes/no concerning as much the switchover itself as the opposed terms. Violating an object or a valued member of the other group is the basic method of violence, indexating both because of its strength, but also because of its implications of breakup. In English, to violate duplicates to infringe, transgress, interrupt, disturb, and break.

5G5. Index and commerce: presents, presentations and merchandises

One of the most powerful indexes is the one Homo realizes when he does with both his flat hands a unique cup to present something, and therefore make it present, make it go-before (prae-esse), or still offer it, carrying it across the encounter (ob-ferre). Homo can also use both of his hands like the two comparative plates of a scale. In these two cases a merchandise is created in the wide sense (merx, element of exchange), either that the object of the right hand-platter compares to that of the left hand-platter, or that the object in the cup formed by the two hands of a specimen should compare itself to the object in the cup of the two hands of another.

Commerce (merx, cum) in the full sense is the exchange of merchandises in the wide sense (merx, cum). According to the French use, it then extends from merchandises in the strict sense, i.e. objects and services that can be valued in monies, to thoughts and sentiments, roles and grades, sexual relations ("commerce with"); English uses the same semantic extension. In the primitive bargaining, not only objects but also prestige are exchanged, where double take is adjoined with a double gift (Mauss), involving the giver as much as the given. Boas and Mauss assuredly exaggerated the prodigality of the native American potlatch, imagining that to every gift of one responded a greater gift of the other until the ruin of one of the two. But this primitive bargaining practice, of which Barnett, Drucker and Heizer have demonstrated the functional and non-destructive characteristic, remains emblematic of the fact that the prestigious exchange overruns the simple trade. Merchandise in the narrow sense, giving way to strictly evaluable trades and purchases is a derived economic conception characteristic of our very industrialized societies but, today still, bargaining remains a weighting of objects and roles, and it is frequent that Africans make the difference between buying and paying, whence "paying" designates the action of exchanging goods against money as in supermarket that only offers merchandises in the narrow sense, while "buying" means a much wider exchange implicating advances, refusal, agreements on value, interests and desires.

We will compare that to grades. Polynesia "grade societies", the Roman's "cursus honorum", the "spits" of Napoleon's Braves, the Freemason's "degrees" of initiation, the "standing" of contemporary habitat are all indexes situating hominid specimens in a social distribution that they often perceive as natural <25B2c> by conversion of the indexes into *indicia*. We shall specify that the notion of grade is wider than hierarchy, which implies subordination. In primary societies, subordination did not intervene structurally, but only occasionally, for a few punctual efficiencies, in hunting, combat, customary decisions, chieftainship.

5G6. Index and collaboration. From community to society. Socius

What precedes is enough to explain what indexes brought to the articulation of hominid groups in their *woruld (world, Welt) <1B>. They brought both the precision and the grasping in distanciation, because they are more distanciating than *indicia*, the proliferation of which always ends up submerging he who handles them. Indexes also stimulated negation-exclusion, affirmation, and interrogation. And as Homo was gradually lateralizing, they reinforced the

couples: accentuated/unaccentuated; high point/low point; beaten time (thesis)/lifted time (arsis).

More specifically, indexes establish the opposition of marked/non marked poles <3B>, where the non-marked was the obvious (such as the masculine and singular in French) whereas the marked required a specific determination (such as the feminine and the plural in French). That way, the *woruld was distributed according to the markings: right/left, singular/plural, masculine/feminine, adult/elderly, adult/young, high/low, etc., by which the pre-indicial and post-indicial cleavages of technique accentuated <4C2>.

French makes the distinction between community and society. The **community** defines the group consequences resulting from the common charges (munus, cum) of transversalizing Homo. And an anthropogeny discovers it at the same time as the *woruld. **Society** supposes not only technique but also the sign. It needs the field of indicia and indexes, with their consequence of commerce, power and false step. *Socius*, a term thematized by Janet in around 1900, then designates the hominid specimen insofar as it functions in the technical and semiotic field. German makes the same distinction between *Gemeinschaft* and *Gesellschaft*, by insisting, often with nostalgia, on the reign of affects, either violent or smoothed, in the former.

5H. Indicia-index

On our way, we have encountered many examples of the excitation of indexes by indicia, and indicia by indexes. In some cases, this reciprocal excitation borders on coincidence.

5H1. Indicializing indexes. Numerology

Therefore numbers, and more particularly the digits that write these numbers, have always exerted an easily understandable fascination on Homo. They are a matter of pebbles and fingers. The Latin calculus is a small calx, meaning a small pebble used to play, therefore apt for calculation. The Latin digitus gave us both the finger (doigt, in French) and the digit in English. Indexing fingers the ones by the others, or stones ones next to each other, or still, indexing fingers using pebbles and reciprocally is completing a mapping, an application (plicare, ad) of a set on another, it is calculating, playing at indexing little 'calces', discovering the functions that unite them, or rather, the functions they involve once they are activated.

However, these indexations and applications are not independent. They refer to each other by forming suites and series. Therefore, calculation seems to unveil, and even betray (tradere, pulling outside) a secret, hidden order. And to that extent the indexes, empty signs, then become indicia, full signs. Knowing Homo's tendency to confound in magic the semiotic thematization and technical thematization <4D>, how can we fail to believe that numbers and their digits, these particularly abbreviated signs, neighbor the mystery and that they could even

reveal it, and that by entering into them and moving cleverly amongst them one can change or at least grasp the order of the world? Homo has been numerologist since Egypt, since the Neolithic, and perhaps since the "blazons" of Paleolithic images. Today still, some head-hunters seeking for high-performance staff for a company, exploit or at least pretend to exploit numerology as a diagnosis or at least as an activation process for the interview.

5H2. Indexating indicia. Astrology

The Greek phallos or the Indian lingam designating the hominid penis in erection or surrection, and thus the resurrection of the dead and of spring, owe their prestige (stringere, prae, linking in front of) to their quality of both indicia of fecund copulation and of pointing indexes, the former analogizing and the latter macrodigitalizing. In the same way the baton, related to the phallos-lingam, became the *sceptre*, indicium of the strength of the warrior (as strike) and of the wisdom of the old (as support) without ceasing to be an index of the commandment in particular and of the power in general. The sceptre crossed the entire hominid history as the tightest of index-indicia and indicia-index.

The trail sign is exemplary. Reaching a bifurcation (Scheideweg, in German), there is a branch on the ground. It faces one of the paths that it opens. Was it placed there intentionally, and is it therefore an index? Or did it fall there unintentionally, and is it only an indicium? Is it a sign materialized in a material, the branch, or is it a material, a branch, that makes a sign? We already know that the indicium is magic when sliding from semiotic thematization to technical thematization <4D>. We must add that it can turn to an index, pointing-tracing the *woruld, thus engrossed (pregnant) with a new layer of paranoia <4F>.

The switchovers between indexation and indiciality can extend to the cosmic scale when a mountain becomes the indicium of a tectonic movement and of its secular erosion under the wind and rain (weathering, Wetterung) at the same time as it becomes the index of something transcendent: sky or celestial power. The Japanese still haven't finished decrypting the indexing indicia and the indicializing indexes of Mount Fuji.

Astrology triggers a culmination of all the collusions between indexation, indiciality and magic. (a) Stars are indexators that privilege their constancy. (b) They are sufficiently periodical to have given rise to numbers, and therefore to ordinal and cardinal numerologies. (c) They are sufficiently immobile to create figures and encounters carrying metaphoric and metonymical indicialities suggesting links and nodes of the Universe: isolated points for the Arabs (Aldébaran, Altaïr) or constellations for the Greek and Aboriginal Australians (Big and Small bear). (d) Belonging is the widest path of indiciality <4B2>, and stars are the ultimate belonging as they move to or from the last envelope of the *woruld. (e) Hominid things-performances are in-situation-in-the-circumstance-over-a-horizon and the stars are the patent reification of the horizon <1B3>, and of the presence-absence <8A> that activates and passivates in it in an exemplary manner.

How then would these macrocosmic trajectories and encounters, and these ultimate belongings not influence, for indexating and indicializing Homo, the microcosmic trajectories and encounters that he believes himself to be, when he brings back the Universe to a *woruld? Astrologer Homo's thirst for indiciality and indexation is so great that it survives to the

evolutions of signs from which it comes. The precession of equinoxes over 26 000 years means that the constellations move forth by a twelfth of dial over their zodiacal correspondent every 2 000 years approximately. However, in spite of the current lag between the Aries and other Zodiac signs, "Aries" hominid specimens have remained "Aries" for the past two thousand years. And they will probably still be so in two thousand years, when the zodiac constellations will have gone forth two notches in the dial.

5H3. The constant overlapping of index and indicium

The slidings between indicium and index perhaps explain that English speakers, who are strong logicians, have only kept one word, index (pl. indices) to designate both; pushing the confusion up to the point that they use indicia in the sense of index on postal items. Indeed, according to a certain vision of things, the *world not only "makes sign technically" in technical objects, or "contains signs" in non-intentional *indicium*, but almost "makes sign semiotically" in the sense that it seems to index certain things. Such was the fundamental destiny-party of Emerson and Walt Whitman's American transcendentalism, followed by Ch. S. Peirce, who wanted nature to be so indicial-indexating that it showed God: "As to God, open your eyes, and you see Him". The United Kingdom is the land of haunted castles *per se*, and what are phantoms if not indicia doubled by indexes, and indexes doubled by indicia?

However, it was the Romans who elaborated the distinction between indicia and indexes, indicia/indices, as they were the first to see the extent to which politics was, at the scale of an empire that encompassed the Mediterranean, the art of playing, laterally and very far, with a few indicialities and indexations that were simultaneously flexible, vague, and extraordinarily adaptable. But the Romans themselves underlined their link by making them both derive not only of the same *deik (showing) root, that is also that of the Greek deik-nu-nai (showing), but also of dicare-indicare, which designates the pacific elective declaration (dicare, devote, consecrate) or the accusatory declaration (indicare, accuse), in contrast with dicere-indicere designating the simple objectal declaration (dicere) or the solemn declaration (indicere).

Homo often wondered if for him experience preceded conceptualization or if conceptualization came before experience <2B2>. Taking into account indexation allows us to see that the question is perhaps misplaced since the indexes, particularly when applied to a field of indicia (the "things" of the *world indicialized by technical segmentarization) give birth to experiences and conceptualization, to the blurry and the specific, to the singular and the general, to the charged (impure, concrete) and the discharged (pure, abstract). And they signal how the vagueness of the **notion** (from *noscere*, inchoative verb) constantly precedes and introduces the **idea** (eidos, detached figure) and the **concept** (conceptus, capere cum, taken into a system).

SITUATION 5

It would be necessary to build a logic of indexed indicia and indicial indexations, meaning all the possible encounters of indiciality and indexation. This logic would be complicated although feasible. It is remarkable that Homo has little or not yet initiated it. It would have saved Homo from many insignificant or gratuitous psychologies, sociologies, epistemologies and ontologies. And from some misplaced logics too. Because nothing determines more imperiously the cognitive and practical possibilities and limits of hominid specimens.

As to the theory of pure indexations (discharged), it is made up by mathematics, which is the general theory of pure indexations and the absolute practice of pure indexes. This is also the case of logics insofar as they become formalized. We shall develop this in chapters 19 and 20, where we will signal the proximity between indicialities, indexations and invariants of perception.

Translated by Paula COOK, 2016

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