

8.2. Elements of harmology¹ ^{ste}year, 1990-1991, 78 p.

Note: This course 8.2. follows course 8.1. *Elements of Thinking and Methodology* ; (ETM) the numbering of pages and of samples continues as before.

Contents: see p. 202

Sample 18.-- Harmology: division theory (complementation). (125/139)

Ordering is done “combinatorially”, i.e. essentially in pairs. For this purpose our mind divides the data - being(s) - into two elements or element groups (set theory) and/or into two parts or part groups (system theory).

In short: a totality is divided into two parts (division, complement). -- It is notable that, spontaneously, we give one of the two complements a kind of priority and speak of one fact, within the totality in question, and “the rest” (everything else within that same totality).

Of course, it can also be done as follows: One thinks of the totality and of what is situated within that totality. That then becomes “the totality” (either collection or system) and all that helps that totality come into being.

Shorter: all elements together and each element separately; all parts together and each part separately. Think of *ETM 39*: summative induction, a thinking operation based thereon (from each element/part separately one decides on all elements or parts together). This is a dichotomy ‘sui generis’ (with a very distinct nature). -- These abstract things become ‘alive’ thanks to applications.

1. -- Dichotomy: systechy (pair of opposites).

We already encountered this type (kind of) dichotomy: *ETM--harm 37* (su/stoichia: coherence of stoicheia (elements)).-- Some more about that follows.

Sumerian model.

Bibl. st.: *S.N. Kramer, L’histoire commence à Sumer*, (The history begins in Sumer), Paris, 1975, 153.

The Sumerians/Sumerians are an Archaic-Antique people - they called themselves ‘kengir’ - , who settled in Sumer (Sumer) between - 4000 and - 3000. In cities like e.g. Ur (Ur), Lagash, Uruk (Uruk), Eridoe (Eridu). It invented the cuneiform script.--

Note.-- What is now Iraq and Iran is the approximate region where they lived.

Opposite pairs.

In the texts one finds typical couplings, which are systechies: so e.g. ‘winter/summer’ or, rather, ‘Winter/Summer’ (for the seasons, a natural and cosmic phenomenon were the visible presentiment of ‘Causing Deities’, who ‘caused’ and immediately controlled those natural phenomena (as elements of the cosmos (*ETM 01*)).

Biblical model.

“The serpent was the most outsmarting creature among all the creatures in the fields (...). It said to “the woman” (*op.* Eve), “So that makes ‘God’ said ‘You shall not eat of all the trees in the pleasure garden (*op.*: paradise)’ ?

The woman replied: (...) But of the tree in the middle of the pleasure garden, God has said: “In any case, you do not eat from it. You shall not even touch it! Otherwise it will cost you your life”.

To which the snake replied, “I don’t believe that! To die? No way! But what is true is that ‘God’ realizes that the day you do eat of it, your eyes will open and you will be like the deities, viz. versed in good and evil. (...)”. Thus Genesis, the first book of the *Bible* (*Gen 3:1/5*).

Note.-- For the proper understanding of ‘good and evil’ see *ETM--harm 86v.* (harmony of opposites). The ‘first sin’ (Fall) would thus have been a cooperating with “the deities,” the pre-eminent elements of the cosmos, who “do not search so closely” and, if necessary, employ (ethical) evil to achieve their goals,--if necessary, a form of cynicism (*ETM 61v.*).

Good and evil together are “the totality” of the conscientious and the unscrupulous. As model and counter-model.

Antique-Greek model.

As Gad Freudenthal, *The Theory of Opposites and an Ordered Universe (Physics and Metaphysics in Anaximander)*, in: *Phronesis (A Journal for Ancient Philosophy)* (Assen), once expounded: Anaximandros of Miletos (-610/-547), the thought-mate of the founder of Greek philosophy, Thales of Miletos (-624/-545) sought the order(s) in the fuisis, natura, nature (understood as all that is), among other things in opposites. A prelude to a doctrine of order, -- very early in the Greek philosophical world.

The systechies of the Paleopythagoreans.

‘Harmonia’, incorporation, is a central feature of Pythagoreanism (*ETM 03; 72*).

Another list has been preserved, of which, of course, the basic dyad is “identity/non-identity” (*ETM--harm 112*). Further dyads (couples) were:

- (1) Ordered/disordered,
- (2)**a** form/shapelessness, firmness/unsteadiness,
- (2)**b** mathematical: straightness/curvature, -- physical science: light/darkness,
- (2)**c** humanities: masculinity/femininity, right-handedness/left-handedness,
- (3) ethical: good/evil.

Note.-- One now rereads *ETM 36v.*: the category list, in the name of the Pythagorean Archytas, is fundamentally a set of systechies.

Which we then find with Aristotle. Things like the couple “place/time” are the totality of nature (are(de)), but split into two ‘elements’, which, in their opposites, are nevertheless related.

Note.-- “Su-stoichos” can mean, e.g., “all that belongs to the same series”: thus, in a certain use of language, all the points of the same line are ‘su.stoicha’, going together.

O. Willmann, Geschichte des Idealismus, I (Vorgeschichte und Geschichte des antiken Idealismus.), (History of Idealism, I (Prehistory and History of Ancient Idealism)), Braunschweig, 1907-2, 273 (Paleopythagorean), 10 (Ploutarchos of Chaironeia (+45/+125; Eclectic Platonist) talks about the concept pairs “higher/ lower, good/ evil, perfect/ imperfect”, -- this, to show how the systechy continues to fascinate).

Platon.

The opposition pair “tautotès (identity)/ heterotès (non-identity)” - is a basic system. Especially e.g. to order concepts (and ideas): the diairetic method orders concepts from the most comprehensive to the less comprehensive (e.g. from ‘living being’ to (one type, kind of living being) ‘human being’); the synoptic method proceeds in reverse. *ETM 29 v.* spoke of such conceptualizations. Always there is something identical’ and something non-identical’.

The dialogue Parmenides.

The pairs of opposites are given very strong emphasis in that dialogue.

Thus, e.g., *Parm 129 a/e*. There, among other things, we have the ‘interweaving’ and the ‘keeping apart’ of notions. “In the greatest embarrassment one gets (...) by the demand that the ideas exist in themselves, i.e. separated from each other (133b). The ideas, after all, all appear to have their existence or being in their mutual involvement, -as, e.g., the ideas ‘slavery’ and ‘dominion’ encompass each other.” (W. Klever, *Dialectical Thinking (On Plato, Mathematics and the Death Penalty)*, Bussum, 1981,53)

As an aside, G.W. Hegel (1770/1831; teacher of Marx), the innovator par excellence of the ‘dialectic’ once called *Platon’s Parmenides* “die heilige Schrift der Philosophie” -- apparently because of its emphasis on the ‘koinonia’, interrelatedness, of ideas.

By the way: the dialogue *Sophistes* says “Only by mutual interweaving of ideas (“ton eidon sunplokè”) does insight arise.” (259th); -- ‘Harmonia’ the Pythagoreans said,-- interpenetration.

Note.-- Reread *ETM--harm* 99v. for a moment: the syntagma in the speech of language (= the use of language) consists of expressions, the smallest unit of which is twofold (and containing somewhat opposite terms). The whole of Structuralism is an elaboration of this.

2.-- Dichotomy: rational (intellectual) blindness/emptiness.

I.Kant (1724/1804; top figure of the German Aufklärung) once reacted against the “oppositional” opposition between, on the one hand, the pure Rationalists (Descartes, Leibniz, Wolff), who unilaterally emphasized pure reasoning, and, on the other hand, the empirical rationalists (Locke, Hume), who unilaterally emphasized sense perception as the sole source of valid reasoning.

In summary, Kant said, “Gedanken ohne Inhalt sind leer; Anschauungen ohne Begriffe sind blind”. (“Thought without (experiential) content is empty; (empirical) intuitions without concepts are blind”).

The conceptions ‘blind’ and ‘empty’ are both opposites and - apparently according to Kant - correlatives (*ETM 116*). In other words: a *sustoichia*, a pair of opposites.

The common property and the elements of a set exhibit precisely the same systechy:
a. a loose set of elements without a common property is “blind” (without unifying insight).

b. a common property without elements summarized by it is “empty” (“hangs in the air”).

It can also be put another way:

a. a regulative model (valid for all models that are the application of it, i.e., the applicative models) without applicative models is empty; -- so e.g., a speech “rule” (= regulative model) without applications;

b. applicative models -- however numerous -- are blind (“say nothing”) without a regulative model;-- e.g., a number of similar speech expressions (= applications) without the ‘rule’.

Even different:

a. a theory without corresponding facts and/or practice is empty;

b. but facts and/or practice without the theory corresponding to them are blind.

Summary:

a. “Nothing is more practical than a good theory.”

b. “Grau, mein Freund, ist jede Theorie, grün des Lebens goldner Baum” (Colorless, my friend, is every theory, green of life golden tree), (this last statement is credited to J. W. Goethe).

3.-- Dichotomy: Description (definition) of the form of being.

ETM 31 and 34 taught us what the essence form - the being or beingness - of something is.

a. To begin with, there is never a form of being without the systechy 'what/ that' (essence/existence). A concoction - a phantasm, as psychologists are so fond of saying - is something, viz. One can describe the 'what' of it ("I dreamed by day that my beloved was standing there, but when I opened my eyes after the little owl I caught, I saw 'nothing'": that daydream is 'something' i.e. exhibits a form of being) and one can also describe the 'that' of it (the 'what' only existed in my sleepy imagination).--Same for the absurd.

b. Further, when describing, there is invariably a dichotomy. After all, the creature form is that which makes something distinct/separable from "the rest" ("everything else").

1.-- The singular (individual, feathered) form of being.

Think of yourself: what you define, how will you describe, resp. define it? Only by pointing out all that makes you distinct/separable from 'the rest'.

Dichotomy. - The unique (only) sets itself apart from the rest and by the general form of being (application: thou art a human being ... and not an animal or a plant or a stone or an angel, i.e. what typifies 'the rest') and through the individual form of being (thou art this man here and now and ... not the one over there and beyond; although human like all human beings, yet are you this one of all other human beings ('the rest' of human beings) distinguishable/ separable). Divided!

2.-- The private/universal form of being.

A human being, for example, or part of a human being - think of the Negroes - has a universal (all human beings) or a private (some, a part) form of being. Irreducibility to the rest -- universal: all that is not human e.g.; private: all that is not some human beings -- is the means of definition. But only if a dichotomy (all/ all not; some/some not) is at the root. Cfr ETM 30 (a conceptual scope).

4.-- Dichotomy: foreground ("figure")/background.

The Structuralists, following de Saussure, pointed us to combinatorial reason. "Das Kombinieren im eigentlichen Sinne (von 'bini', je zwei) hat Gleichgeordnetes zum Gegenstande" (Combining in the proper sense (viz. 'bini', in Latin 'every time two') has what fits together when ordered, as its object). (O.Willmann,- *Abriss der Philosophie*, (Outline of philosophy), Wien, Herder, 1959-5, 46).

This text by a Willmann, the Platonist, proves that Structuralism made an ancient intuition modern.

So far we have given one-sided set theory examples of dichotomy. Do we now also dwell on system learning models.

1.a. Commonsense (*commonsensical*).

Everyone, with his/her “common sense” (i.e. all people, who are more or less normal, common sense) puts the “foreground/background” dichotomy first,--unconsciously. “That beautiful girl there, on the blond beach, playing in the sand,--how it stands out, with its jet black hair and its bronzed skin, against the facial horizon bathed in the light of the setting sun!”.

1.b. *Perceptual psychology*.

In perceptual psychology, one is called ‘figure’, a (geometric) form, which detaches itself from a totality -- think of the concept of ‘system’ (*ETM--harm 91 (coll. str.), 93 (systematology)*--). But precisely because of this, the ‘figure’ becomes foreground against a background! But always within the totality, in which both belong together. Dichotomy!

Appl. model.

One listens attentively - perception - to a beautiful song. The melody - in the form of the refrain especially - detaches itself, thanks to its perceived repetition, from the whole (totality) of the song. One can then speak of “the theme”.

Note -- The Gestalt- or form psychologists will, here, speak of ‘Gestalt’ (‘form’) instead of figure. And our Paleopythagoreans (*ETM 04*) (*ETM--harm 104*) speak here of ‘arithmos’, properly translated ‘number.form.harmony’. Both, Gestalt (form, perceptual form) and number-form harmony, always stand out against a background.

2.a. *Area/depth*.

M. van Loggem, transl., Norbert Sillamy, Lexicon of Psychology, Utr./ Antw., 1974, 87v., broadens this systechy.

a. The fact.

One ll. at school falls behind (surface).

b. The statement (interpretation).

That falling behind is merely the “coming to the surface” of a disorder (figure) that betrays both the total health condition and the total psychosocial situation (both aspects are background).

Says Sillamy: “The organism (of the pupil) functions as a whole from which the parts that occasionally come to the fore cannot be detached.” (A.c., 88).

2.b. Structuralist language.

When reading structuralist texts, one notices that the terms “surface/depth” - among others in the form of “surface structures/depth structures” - do appear more frequently.

5.-- Dichotomy: internal and external comparison.

Bibl. st.: L. Davillé, *Le comparaison et la méthode comparative (en particulier dans les études historiques)*, (Comparison and comparative method (especially in historical studies), in: *Revue de synthèse historique XXVII* (1913): 4/33; 217/257; xxviii (1914): 201/229.

The comparative method is commonplace in hermeneutics (about which later). The author distinguishes, thereby, two points of view, which ... Dichotomies represent. A given - e.g. an ant - can be “compared” (=analyzed) internally: the parts and various functions of the body (which is a biological system) are compared with each other so that the relations are exposed.

But that same fact can undergo an external comparison: the ant is analyzed insofar as it is situated within a totality, e.g. the ant’s nest.

If one wants: first the hypo or subsystem (internal equation), then the (hyper or super) system, in which the former is located (external equation).

Appl. model: Augustinian social criticism.

a.1. S. Augustine of Hippo (354/430; the greatest church father of Western Patristics) had, like many contemporaries, a great regard for the fact that Rome, as a world empire, had founded a kind of legal order, the basis of the ‘pax romana’ (the Roman peace). Many peoples who had previously lived in (sometimes continuous) discord were brought to ‘peace’ by the strict legal order of the Romans.

a.2. But Augustine was both a Christian and a Platonist. A Platonist

(i) establishes facts (= phenomena)

(ii) but in conjunction with the idea of those facts, which, in fact, constitutes the ideal behind it. Thus he proceeded from the premise that the idea (= ideal) exists ‘peace’, in a higher (divine) order.

Here is what he writes: “The order and justice founded by the Roman state amount - in the end - to a caricature (literally: ‘laughable imitation’) ,-- to a degenerate form - unholy in nature - of a natural and Christian order.” (*Fr. Ferrier, S. Augustin*, in: *D.Huisman dir., Dict. des philosophes*, Paris, 1984, 141).

In other words : the visible and tangible phenomena (*ETM 17*), the foreground, stand out, within a Platonic view, against the idea, understand: the ideal, the background. A typical Platonic dichotomy.

b.1. For *S. Augustine*, behind that mask of the actual Roman legal order, forms of injustice and violence (*ETM--harm 121: conflictuology*) are hidden.-- Two-part Augustinian analysis (= comparison).

(i) In an internal comparison, he notes that, within the Roman empire, centered mainly in and around the “eternal city” (Rome), a possessing class keeps piling up riches,--based on a life of enjoyment--a kind of Antique “Dolce Vita.

(ii). In an outward comparison, he notes that the Roman state(s) reveled in war profits, results of imperialist wars to the outside world. Wasn't the name of a conquered territory, at the time, ‘pro.vincia’, winged region?

It is clear: both comparisons - understand: analyses based on comparison - go “hand-in-hand”, i.e. they are correlative (symmetrical). There is, viz. a (causal or causal) connection between internal Roman capitalism and external Roman imperialism.

b.2. There was more:

i. the possessing class, as proponents of the premise that ‘property’ is ‘absolute property’ - *ius utendi et abutendi* (the ‘right’ to use and abuse ... what is property) -, had to stop the ears (note : *parafrosunè*, look and think beside it) for those who denounce such abuses;

ii. those who do not accept such a state of affairs - and, above all, say so out loud - had to be exterminated as a kind of “weed”, banished from the community and sent into exile: they were, after all, stirring up something that the capitalist class considered “its happiness”. Thus wrote the great saint in his seminal work *De civitate Dei* (On the State of God), 2/20.

Appl. model: the Grossian principle.--”Das Grosse’sche Prinzip”, in German.

Bibl. st.: *E. Grosse, Die Anfänge der Kunst*, (The beginnings of art), Freiburg im Breisgau, 1894;

Die Formen der Familie und die Formen der Wirt(n) schaft, Fr. i. Br., 1896.

The premise of this non-Marxist writer reads, “Economic activity:
(a) is the life center of any cultural system,
(b) is - in the most profound and irresistible way - the main factor of all other cultural factors.”

So much for the axiom.

Note.-- Grosse explains, somewhere, his premise with a phrase from Ludwig Feuerbach, radical-left disciple of Hegel.

Jakob Moleschott (1822/1893; mechanistic materialist), *Lehre der Nahrungsmittel für das Volk* (Teaching of food for the people), (1850), after being read by Feuerbach, in his *Natural Sciences and Revolution* (1850), is summarized as follows: “If you want to improve the people, give them better food instead of going out against sin: der Mensch ist er iszt (man is what he eats).” (*H. Arvon, La philosophie Allemande*, (The German philosophy), Paris, Seghers, 1970, 188).

Grosse, in turn, interprets this as follows: “Wenn man weisz was ein Volk iszt, so weisz man auch Was es ist” (“If one knows what a people eats, one knows at once what it is.

Remark -- Systems theory: the whole culture can be indicated as a (hyper- or super)-system. If internal comparison is applied to it, it is readily apparent that the factor - ‘stoicheion’ (*ETM 01*) - ‘economy’ (understood primarily as the production, distribution and consumption of ideally vital goods and services), a hypo or sub-system of the overall culture, is a key factor such that it literally ‘dominates’ the overall culture as its basic premise.

Dichotomy within the culture itself, which places the emphasis -- a deserved and verifiable emphasis then -- on one or, perhaps, the main factor. Or still: the economy is the figure that controls its background.-- We now turn to one illustration of the Grossian principle.

The legal status of women.

W. Koppers, S.V.D., Die materiellwirtschaftliche Seite der Kulturentwicklung, (The material economic side of cultural development), in: *Settimana Internazionale di Etnologia Religiosa (IVa Sessione (Milano 17/25.09. 1925))* Paris, 1926, 109, gives - in the wake of Father W. Schmidt, S.V.D., (1868/ 1954; religious scientist known a.o. for his concept of ‘Urmonotheismus’ (Oermonotheism (*ETM--harm 87*)), whom Grosse joined in his religious science research - following applicative model.

(a).-- *Internal equation.*

1. Generally speaking, it is so that, in Modern Europe, since the liberal, i.e., free market economy, the legal position of women has undergone a serious change: thus, today - 1925 - she has at her disposal most of the time the right to vote, the right to university studies, the right to a free choice of profession (...), -- things which decades ago were non-existent for her.

2. "Who would now deny or even deny that the Modern - in particular: the Capitalistic - development of the economy is in the first place responsible for this state of affairs?". -- Thus literally Koppers.

Note.-- Conclusion: economy and woman are two hyposystems within the (hyper)-system 'culture'. Once compared, they appear to be in causal (causal) relationship: the free market economy causes a legal position that emancipates women.

(b).-- *External equation*

The concept of analogy reasoning. Let us begin with a very simple applicative model: both the Earth and Mars are planets; well, the Earth possesses an atmosphere; so Mars also possesses, - probably (*ETM 46*), an atmosphere.

Definition: from a known but analogous model one decides to an unknown original (in model theory language).

Or, as *Fr. Lahr, Logique*, 608, says, "As a method, analogy is a reasoning that concludes from some similarities (*note* : it is a case of metaphorical analogy) that have been verified (observed), to yet to be verified other similarities."

Koppers is now carrying out such reasoning.

(i) The data.-- These are such that, in traditional (Archaic, Classical) cultures, they give rise to an analogous (partly equal partly different) ratio of "economy to woman."

(ii) The name for the very special legal position, in very limited parts of the globe, peculiar to women is 'matriarchy' (mother rule). Or also 'mother law'. This means: to understand such a culture, one has to presuppose that the woman - embodied in a limited number of women or even a single one - dominates it, to a high degree.

(iii) Starting from the Modern legal position, in unison with its cause (the economy), Koppers concludes that well-defined economic reasons explain (make intelligible) that parent right.

(iv) Indeed, the position of those matriarchal ladies must have been such that - metonymically - the whole culture (not just a part of it) can be called 'matriarchal'.

6.-- Dichotomy: *Prosopoeia* (view description)/ *ethopoeia* (inner description).

H.I. Marrou, Histoire de l' éducation dans l' antiquité, (History of education in antiquity), Paris, 273s., gives, in thirty-six parts, the structure of -- what was then called -- the “enkomiastion,” still translatable today by what in academic circles, in Latin, is called “laudatio,” -- eulogy.

But look closely at the structure in its dichotomy:

a. One puts someone in the flowers according to his environment and his physical appearance;- the Behavioral aspect (that which is visible and tangible when viewed from the outside).

b. But those flowers, in classical antiquity at least, apply even more to the “soul,” i.e., the inner, of the praised.

Note.-- It is known that this dichotomy also governs the whole endeavor the Geisteswissenschaft (spiritual science) of W. Dilthey (1833/1911), founder of the understanding,--’comprehensive’, ‘verstehende’ method as the basic premise.

Throughout what is externally ascertainable, the Diltheyan seeks to penetrate, especially through empathy and dialogue, to the soul life - called ‘Geist’. Dilthey actualized and reestablished an Antique pattern of thought.

Appl. model.

To make those abstract conceptions ‘alive’ - to make the ‘empty’ (*ETM--harm 128*) ‘full’, to ‘fulfill’, as the Phenomenologists say - here is an application.

a. Herodotos of Halikarnassos (-484/-425; founder of land- and ethnology,--also called “the father of historiography”), in his *Historiai* (literally: information-gathering), gives us a.k.a. the porridge in the mouth.--But first a little characterization:

i. Herodotos was traditionally religious;

ii. but he was, with his extremely democratic openness, reinforced by his highly traveled business life (he was a businessman), at the same time a follower of the Milesian philosophy of nature, which, instead of mere faith in tradition, or rather with that kind of faith, engaged in ‘historia’, inquisitio, research of the ‘fusus’, the nature of things.

Conclusion: a synthesis of old and new.

b. Multiculture.-- Herodotos, as a Asia Minor Greek, was familiar with a great many types of culture that were sometimes very far from his own. This gives him a welcome inclusion (instead of traditional exclusivism) for Postmodernists of “all that is different” (cfr *ETM 41*).-- We will see that later.

Note.-- The multiculturalism does away with a rock-hard dichotomy, which led to the “Babel confusion” of peoples (cultures).

a. The Exclusivist(s) sees “all that is different,” as “non-me,” as so “different” that an unbridgeable gap gapes.

b. The Inclusivist(s), on the other hand, sometimes sees and experiences as very painful “all that is different,” but in a pursuit of “inclusion” he/she still tries to keep the conversation going. The gap is, as much as possible, bridged.

Note -- This radicalization of the dichotomy “I/other” is also somewhat reflected in the research behavior of many a Behaviorist(s): what is studied, the “other” human being”, -- in the eyes of the Inclusivist(e) the “fellow human being”, is apparently so radically different that one “einklammert” (puts in parentheses) one’s inner life,-- as what is called in electrician’s circles “the black box” (the electrician doesn’t get them open, but he can stick or pull wires in them), to which one applies “stimuli” in order to get “responses” (answers) to them. Stimulus-Response diagram!

That very thing exceeds the Diltheyan: he seeks at all costs to achieve direct contact-meeting (*ETM--harm 78*)--in a rather inclusive attitude toward “all that is different.”

c.1. What Herodotos says.

Bibl. st.: D.H. Teuffen, *Herodot (Sieben und andere Wunder der Welt)*, (Herodotus (Seven and other wonders of the world)), Wien/ Munich, 1975, 82/86 (*Die schrecklichen Reiter*), (The terrible horsemen), esp. 84f.

Note.-- ‘Neuris’, in ancient Greek, is the land of the Neuren (Neuroi), according to some a Scythian (// Skutian) people, in any case the northern neighbors of the Scythians (Skuten), just about in the east of present-day Poland.

What Herodotos learned about the Neuren simply struck him as unimaginable. “These Neuren - so he says, are, to my impression, a people of magicians. For the following is narrated by the Skutes and the Greeks living in Skutia (Scythia).

Each Neur changes himself once a year for the duration of a small number of days, into “a wolf” and then becomes “a human” again.”

Herodotos, unacquainted with what animates those Neuren, says: “I cannot be convinced by such stories. But one asserts it with rock-solid conviction, yes, one makes an oath to it”. (*Hist.*, iv, 105).

c.2. What current religious science says on the subject.

Teuffen, o.c. 84, writes: “Rightly do the witnesses make oaths to it, for “the wolf” was the totem animal of the Neuren. They were convinced that they were related to “the wolf.”

They portrayed this kinship in their liturgical games, during which they wore wolf masks and wolf pelts.

Such beliefs were commonplace among the peoples who inhabited the forests of the north, where the wolf, incidentally, was numerous.

Seventeen centuries after Herodotos

- in 1240 -- mentions, in *The Secret History of the Mongols* (recorded by order of the khan of the Mongols, Ugedei, the son of the infamous Gengis-Khan), what follows: "The primordial ancestor of Gengis-Khan was a "Grey Wolf", who was begotten by "the High Heavens" and chosen by "the Fates".-- His wife was a "White Hinde" (*op.*: female deer)." -- According to Teuffen, *ibid.*, the totem animals of two tribes are mentioned here.

Decision.-- As already 'classical' (understand strongly rational thinking) Greek (*ETM 05*), for whom the mythical view already belonged to the past, the otherwise so open Herodotos stands rather aloof - like the Behaviorist(s) - to what his sayers testify:

- a. he does see the view from it;
- b. but does not (any more) penetrate the inner world of the Totemist mentality. The dichotomy operates here between Rationalism in its rather exclusionary rejection of "mythical stories" and the empathic "understanding" ("verstehen" says Dilthey) with the inclusive attitude.

Appl. model.

Teuffen, o.c., 84.-- *The Scythian Shamanism (ETM 04)*. Do we read, in the same vein, further in Herodotos.

- a. **Herodotos** knew - says Teuffen - of the Shamanism of the Scythians only its external manifestation. What the soul of it was, almost completely escaped him.

Yet his report - he deliberately wanted to be a reporter - is so precise in its details that we - who have more information from religious science - can not only verify exactly what Herodotos meant but know immediately that we have, in his report, the oldest known depiction of Shamanism.

b.1. View description.

Writes Herodotos: "After a funeral, the Scythians perform the cleansing as follows. They anoint themselves the head and then immediately wash it off. Thereupon they 'cleanse' the body after the following preparations.

They let three rods lean against each other, spread strips of felt over them and pull them together as firmly as possible.

Thereupon they place a basin in the middle of the space between the rods and the felt strips and throw glowing stones into it (...).

Thereupon they take hemp grains, crawl under the felt cover and lay them on the glowing stones: the grains begin to give off smoke and they generate a strong vapor (no Greek sweat bath surpasses this vapor bath, I think).

The Scythians are so happy at this that they cry loudly.-- These are the baths. In water they never bathe". (Hist., iv: 73; 75).

Explanation:

Teuffen, o.c., 84, says: "Just now Herodotos has given an account of the funeral celebrations. Following that he describes the sweat bath.

In reading, one notes the exact perception of the visible and tangible actions. But between the lines one also reads that Herodotos only partially grasps the Scythian's sense of meaning,--if only he did not misinterpret them.

Thanks to current ethnological research we now have a wealth of reports on similar customs among numerous other peoples who have reached or, at least until recently, had reached the same cultural stage as the Scythians. These reports come mainly from Central and North Asia and from America".

b.2. View description.

Hist., i: 202. -- Teuffen: "Of America Herodotos could know nothing, nor was North Asia beyond his reach. But of the Central Asian Massagetes he mentions a similar use,- -admittedly from an indirect source, hearsay.

"There would be, with them, other 'trees' bearing fruit of a special kind."-- When the Massagetes are gathered in a larger group, they light a fire, set themselves in the circle around it, throw the fruit into the fire.

Thereupon - from the incense caused by the burning - they get into such a state of rust as Hellenes get drunk from drinking wine. The more they throw of those fruits into the fire the more 'drunk' they become until they spring up to dance and begin to sing."

Explanation.

Writes Teuffen, o.c., 85: "What Herodotos calls 'trees' were surely hemp plants whose branch tips contain a resin (which is also used for making hashish (marijuana)).

Note: -- This refers to the *cannabis sativa*, from which today's drugs are also purified. The resin produces the intoxication.

Now Herodotos did not visit the Massagetes himself, -- therefore did not see the fruit and its surprising effects for himself. Thus it did not occur to him that it was hemp.

This,--all the more so since he heard nothing in Scythia about its narcotic side effects.-- Perhaps, too, those side effects were kept from strangers by the Scythians because this was a ritual to be kept secret.

Consequence: Herodotos only learned about the usefulness of hemp for weaving linseed fabrics. This was all the more interesting for him since hemp, in contrast to flax, was still unknown as a commodity in Greece at that time.

Decision.

Herodotos could not find out that what took place in the Scythian sweat tent was not meant as physical cleansing -- which he thought -- but the exit which the living -- led by the shaman -- delivered to the departed in the world of the dead, -- whereby under the influence of the hemp they fell into intoxicating ecstasy. Thus one resolves the patent contradiction that for Herodotos was attached to the claim that the Scythians "rejoiced to such an extent that, like wolves, they 'howled.'" -- Thus Teuffen's comment.

Decision.

The dichotomy 'description of outlook (*prosopopia*)/ description of inwardness (*ethopia*)' in Greek rhetoric, with which Herodotos was already somewhat familiar, if only through the praxis in the public assemblies ('*ekklèsiai*'), where every citizen had the right to speak, makes sense, i. e. it hits home. i. it touches real things: one can as the natural science-minded Behaviorists and the like still describe the outward appearance as exactly as one can, of the inwardness, in/behind that outward behavior one thus still knows as good as nothing.

The cited texts of Herodotos, who however thought both deeply religious and radically inclusive (and thus was excellently suited to penetrate, the soul life - 'Geist' says Dilthey -) prove it by their, surface description without depth description (*ETM--harm 130*). We read, as a result, only two view descriptions.

Sample 19.-- Harmology: measuring comparison. (140/143)

L. Davillé, a.c., xxvii (1913), 20, says: “The comparison can be either direct or indirect.

a. -- Namely, one can confront at least two data with each other directly, without a detour, without a third data”. The binary equation of A and B without C allows one to speak of A or B only in terms of B or A.

b.-- Should one, however, in order to compare them, introduce at least a third data, one is dealing with indirect comparison. This is precisely the case whenever a common “measure” is used.

The ternary comparison of A and B with C allows us to talk about A and/ or B in terms of C.

Appl. mod.

One knows that e.g. one carat is equal to $1/24$ “fine gold” (“or fin”) in a given mass of “gold”; which makes perfectly pure gold $24/24$ carats. In order to measure ‘fine’ (‘pure’) gold, a measurement model ‘carat’ was introduced. All ‘originals’ of gold are translatable into the one model ‘carat’ multiplied by a number ($1/24 - 24/24$).

Euklidian model.

Eukleides of Alexandria (-323/-283), in his *Stoicheia geometrias* (Elementa geometriae, states a first axiom (= premise): “The data that are identical with one and the same third are at once mutually identical.”

This is a space and number mathematical application of the measuring equation. “If A and B are equal to C, then A and B are at once mutually equal.” (*L. Brunschvicg, Les étapes de la philosophie mathématique*, (The stages of mathematical philosophy), Paris, 1912-1; 1947 - 3, 88). In other words, C is the “measure” or (common) model of measurement of A and B.

Cartesian model.

R. Descartes (1596/1650; founder of Modern Rationalism), in his *Regulae, xiv*, discusses the comparative nature of the Euklidian axiom.

By means of comparison, we find the figure (*note*: configuration, space-mathematical form), the expanse, the movement etc.-the singular natures (*note* : Descartes thus calls the irreducible data)-in all the data in which they are eventually present.

On the other hand: given: a derivation of the type “Every A is B, every B is C; therefore every A is C”; it is clear that our mind compares the given and the sought term, A and C, among themselves yet under the viewpoint that both are B. (*M. Foucault, Les mots et les choses*, Paris, Gallimard, 1966, 66).

Thaletic measurement model.

Thales of Miletos (-624/-545; founder of Greek philosophy) was also interested in all kinds of, at the time, emerging (natural) sciences.

Gaius Plinius (Caecilius) Secundus (62/114), *Historia naturalis* (note: ‘Natural history’, the literal translation of the Greek ‘*historia fusikè*’, inquiry into the ‘*fusis*’ (nature)), 36: 82, reports that Thales found a method of measuring the height of an Egyptian pyramid. It is probably the oldest known example of measurement method based on comparison.

1. The concept of “model.”

A measurement model is only one type of model. ‘Model’ is a known fact G that serves to describe an unknown fact O (‘describe’ is to provide information). Here O, the original, is the height of a pyramid.

2. The Thaletic measurement model.

Given: the pyramid; asked (sought) its height.

Note:-- One can also speak differently: one asks to depict the height in

a. a measure (measurement model),

b. expressed in numbers (number model). Or: one ‘projects’ the height into measurement model and number model. ‘To depict’, ‘project’ is to represent in something.

Rule.

The regulative model of Thales reads: “For all vertical objects it applies that at a certain moment a source of light, e.g. the sun, shows a position - here the position of the sun (t_1 = moment of the position of the sun) - which for all measured models - e.g. the solar rod used by Thales - is such that the shadow cast by it (l_{hor} = horizontal length) is as long as its height (l_{vert} = vertical length) to be measured”.

Simpler: Thales looks for a stick that at a certain moment casts a shadow that is as long as the stick itself. Second part of the rule: “just then (t_2) is the position of the sun, at the same time, such that the shadow cast by the pyramid (l_{hor}) is as long as the height (l_{vert}) of the pyramid to be measured.”

Application.

If the shadow of the solar staff is as long as the staff itself (which is easily achievable (*ETM 16: technical review*)), right then one need only measure the shadow cast by the pyramid to find the height sought.

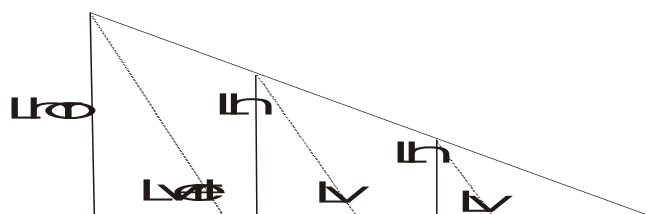
Decision.

The cast shadow is the known - model, measurement model - to 'describe' the unknown - original, the height of the pyramid to be measured - in measurement models that apply to both. These are then models in the second degree.

Fr. Krafft, Geschichte der Naturwissenschaft, I (Die Begründung), (History of Natural Science, I (The Justification),), 89, says: Thales simply applied the method long known in Egypt."

Such determinations give us a representation of the Ancient East. Not surprisingly, an old proverb says 'ex oriente lux' (from the East (comes) the light). Seen in this way, the Greeks, although our trailblazers, were actually latecomers.

Note:-- The 'principle' (premise) and of, the Egyptians and of Thales is the principle of isomorphism (model identity), applied to uniform bodies.



The measuring equation according to R. Descartes.

Bibl. st.: *M. Foucault, Les mots et les choses, 67ss..*

Descartes notes that one can measure both continuous (uninterrupted) and discontinuous (interrupted) data.

a. In both cases

(i) one first considers the totality (= collection, system),

(ii) but divides them - Descartes' analytic method faithfully - into "parts" (elements, components) called "units.

Note:-- People sometimes accuse Descartes of having no sense of totalities. This is evidently false. But he is averse to 'vague' models of thought. That vagueness is overcome by breaking down totalities into 'parts'.

b. Descartes concludes:

(a) Comparing two quantities (how-to quantities, -- understand: continuous data) or comparing two discontinuous data requires, at least, a common unit (*note* : measurement model), employed in the analysis.

(b) Thus, in any case, the measuring equation amounts to the arithmetic relations of equality and inequality (*ETM-harm 112*). The 'measure' allows to analyze "le semblable", the similar, according to the calculable form of identity and non-identity".

This text typifies the Cartesian method "to the full."

The transsubjective, 'objective', nature of the (measurement) model.

Bibl st: H. van Praag, *Measuring and comparing*, Teleac, Hilversum, 1968, 7.

“As the French mathematician Henri Poincaré (1854/1912) has shown, :

- (a) the choice of measure a subjective one,
- (b) the use of the once chosen measure an objective fact”.

Appl. model.

(a) It depends on my free choice whether I measure “a road travelled” in meters, yards (three feet: 0.9144 m., since 01.07.1959) or vadems (une toise, in French,-- six feet or 1.96 m.).

(b) But, although chosen by the ‘I’, the measure has to do with an objective length (distance travelled, for instance): the result of the measurement - in metres, yards or fathoms each time different - will be exactly the same as far as the distance is concerned. The result of the measurement in itself will be identical,-- which every person will be able to duplicate.” -- Thus van Praag rightly.

Note:-- The Antique concept of “metron” (Gr.), mensura Lat.), translatable by “measure” or “norm” (“rule”), is usually broader than our present concept of “measure” says Van Praag, *ibid.*, which follows:

“The Greek philosopher Protagoras of Abdera (-480/-410; main figure of Greek Protosophism) aroused the indignation of Socrates of Athens (-469/-399; founder of Attic, ‘Classical’ philosophy) by his famous statement, ‘Man is the ‘measure’ of all things’. Socrates rightly argued that ‘measurement’ and ‘pure subjectivity’ are mutually exclusive”.

Do we, for a moment, revisit *ETM--harm 131v.* (Augustinian Social Criticism), in that light.-- Augustine--certainly as a Platonic--compares:

(i) the phenomena, Modern expressed: “the facts” concerning ethics in the structures of the Roman peace,

(ii) with the ideal of ‘Roman peace. ‘ In Antique languages one will not encounter ‘ideal,’ but one will encounter ‘metron,’ ‘mensura,’ ‘measure’ (model of measurement).

It is true that “measured” by the “measure” of the ideal, the Pax romana is “a laughable imitation” (caricature). The measure in ethical-political things (human scientific data) is, however, never expressible in numbers. The Cartesian method is therefore inapplicable there. Which does not imply that such a measure is purely subjective. There will always be something subjective in it. Yet the objectivity is also unmistakable.

Sample 20.-- Harmology: differential learning. (144/153)

Harmology is the study of relations.-- We have seen them pass before our eyes. Now again a new relation or, rather, network of relations (structure), viz. The range, the gamma, the spectrum,--what more learned: the differential.

Vocabulary.

Fan: think of the spread apart yet held together splendor of the peacock as it parades. Spectrum: the same white illuminating beam is spread out in color through the glass prism. Gamma: The definition is: “a series ordered by differences”. Like the musical scale or the color gamut.

Definition.

ETM--harm 112v. already gave us a first description. Let us now go into this in more detail.-- The structure called ‘differential’ can be described in three aspects.

a.1.-- Configuration.

A clear example of configuration can be found *ETM harm 104* (Pythagorean).-- A configuration or placement structure amounts to a number of places in which one can situate a number of elements/parts.-- In terms of the differential, there are three “places” on one line:



The n-lead of a differential is at least 3-lead, as above in the simplest example. But there are 4-membered, 5-membered etc. configurations.

a.2.-- Polarized value set.

It is already clear from the above drawing that the elements/parts should be classifiable into + (positive), +/- (restrictive), - (negative).

In other words: a differential is a systechy (pair of opposites) +, - which is torn apart and, in the created interval (interspace), filled with at least one value (here +/-). This implies that the theory of opposites (*ETM--harm 112 vv.*) retains its full weight here.

+	+/-	-
all well	not all	all not
entire	not exactly	not at all
greater than	equal	less than
good	good-and-evil	Evil

One sees it : invariably a graduated list of values.

Note.-- The term ‘polarity’ means, apart from the fact of being provided with poles, “the separation (divergence) of a unit into an opposite duality” (van Dale (1989)). ‘Polarize’ means to create or even to accentuate opposites.

b.-- Combinatorics.

Bibl. st.: C. Berge, *Principes de combinatoire*, (Principles of combinatorics), Paris, 1968.-

Other name “combinatorics. Well in French, in which ‘combinatoire’ does prevail. According to C. Berge, o.c., 6, *Leibniz*, in 1666, only twenty years old, is said to have published the first treatise of combinatorics, viz. *Dissertatio de arte combinatoria*. But o.c., 5, the author says that “la combinatoire existait dans l’antiquité chinoise” (combinatorics existed in Chinese antiquity).

Starting point: the configuration. Thus one looks for a ‘configuration’ - according to the proposer - whenever one wants to give ‘elements’ (e.g. objects) a place so that a well-defined order is respected.

E.g., Noë’s (Noah’s) ark, in which pairs of animals each had to have their place in order to escape the flood. Simpler: placing a number of goods in a (too small) closet.

The reverse is also possible: one has a number of elements and one looks for a place structure to bring them home.

The addition of the places and/or elements to be placed is also the work of the combinatorics...

Here: one places values - polarized values - in the ‘places’ appropriate for that purpose. What is evident from *ETM-harm 144*, below. The boxes (places) are provided with a certain order(s). Well-defined ‘values’ fit in them, whose structure is depicted in that order (arrangement).

Examples.

See *ETM: 43 (45)* (*alethic modality: necessary/not necessary/necessary not*),-- *ETM 46* (*alethic modality: true/ probable/ false or true/ probable/ unlikely/ false*),

-- *ETM 58(43)* (*ethical modality.: required/not required/not required*),

-- *ETM 68* (*judgement quality.: is/is not/is in some sense, in some sense not*).

Other example.

Placement of psychological strains on a line according to the object: introspective psychology/ depth psy./ information processing psy./ cognitive psy./ neo-behavioral psy./ naive-behavioral psy., -- are arranged on a kind of differential. which ranges from the analysis of the ‘inner life (*ETM--harm 135*) to the externally -observable behavior

Note.-- Humanistic psychology is excluded from this scheme because it opposes the professional science of psychology,--at least in the eyes of some psychologists.

Gestalt psychology reacts, around 1920+, against introspection, which it retains as a method but rejects as an object of psychology.

The diagram betrays cognitive and information processing psychology as a point of view.

In passing: cognitive psychology

(i) somewhat prefigures Neo-behavioral psychology: the Stimulus-Response-scheme (*ETM 36*). In particular: a stimulus (S) somewhere elicits a response (reaction) (R). But between S and, R situates Neo-behavioral psychology:

- i. motivations and motives (“motivation”),
- ii. reinforcements of motivations/drivers (“incentives”) and
- iii. the learning process (habit factor).

‘Behavior’ (view description) is the result of S -- motiv./ incent./ learning pr.--R.

But cognitive psychology situates between S and R, except for what the Neo-behaviorists place between them, primarily intellectual factors (“cognitive factors”). So that R ... creates a ‘meaningful’ understand: plausible to the human mind) situation.

Information processing psychology is a kind of cognitive psychology, but one that explores more of the inner self (‘Study of Mind’). In which the ‘S--R’ scheme is abandoned. The intricacies of inwardness and behavior receive more attention (a whole series of structures/systems make up the human being).

Emphasis will be placed on:

(i) the information (from the environment), accumulated in a distinguished ‘system’, memory (in the sensory, immediately processing and enduring form),

(ii) is recalled from memory and thus leads to ‘behavior’, springing from a ‘decision’.

Mathematical examples.

One knows the concept of a function (e.g. $x = y + z$) - read: “x is function (dependent) on $y + z$ ” - (*ETM 38*). -- Its variable(s) vary, exhibit differences, in preferably ‘minute’ (= infinitesimal) ways.

Consequence: the function itself varies with it (is the image). The ‘differential’ of a function is its variation (change). Course: the differential calculus.

The rule of three.

The rule of three is one application of a mathematical differential, i.e., from zero to e.g., one hundred (one thousand, ten thousand, etc.). Key position: right one.-- Consider: a statistical induction runs from e.g. 53%. This involves a range from e.g. 0 to 100, consisting of minute differences. Thus, e.g., one can know to the nearest hundredth (thousandth, ten-thousandth, etc.) how much percent, promille, etc., a value is.

Thanks to those “differences” ranging from zero to the maximum chosen, -- from smaller to larger.

The Cartesian Coordinate System.

Descartes revolutionized mathematics by, among other things, the introduction of coordinates: the x-axis (horizontal, for example) varies - with small differences - from infinity to + infinity; the y-axis (vertical) also varies from - infinity to + infinity. Two ‘differentials’ which cross each other and are involved in each other.

The logical differential.

It can now be sharply defined: it is a systechy, opened up in the middle (interval); it is the ‘place’ (combinatorially) of values that exhibit (small) differences in an ordered form.-

In addition to the mathematical and non-mathematical models above, there are endless “differentials. -- e.g., “all possible/all actual -- extremely much, very much, quite much -- quite (much/little) -- quite little, very little, extremely little -- almost none, just one - none”. One sees the ordered -- logically ordered -- differential.

The polarity profile (semantic differential).

A ‘profile’ is a sketch of something such that some - preferably the supporting, ‘relevant’, important - détails (aspects) come across as ‘telling’: think of the silhouette (side view) of a face.

Example.

Bibl. st.: D. Szanton, *Cultural Confrontation in the Philipines*, in: *Cultural Frontiers of the Peace Corps*, Cambridge (Mass.)/ London, 1966, 35/51 (fn. 53).

The article’s theme is “multiculture” (*ETM 41v. (Postmod.)*; *ETM--harm 135*). Peace Corps members had to process the culture in the Philipines along with the population.

The recording (reception) ranged from;

- (1) fondness/acceptance, through
- (2) aloofness, to
- (3) Rejection/disgust.

A differential, which is also found among students relative to teachers. And vice versa!

Opinion research.

Opinion polls are “in. The polarity profile is reflected here as well.

Bibl. s.: *Ch. Osgood* (1916/1991; American psycholinguist (1954: with T.E. Sebeok ‘Psycholinguistics’). - His *The Measurement of Meaning* (1957), improved a.o. by P. Hofstätter, gives a ‘semantic differential’ on opinion analysis, with mathematical accuracy.

Appl. mod. -- One analyzes the image impression (“image”) of someone -- e.g., a school principal, a movie diva, a politician -- among the public.

This is how a teacher can be examined: one presents the parents - in a secret interpretation - with a three-part differential with the values “competent/ undecided/ incompetent”. The parents fill in one or more of the boxes. Result: x percent “competent,” y percent “undecided,” z percent “incompetent. This is then collectively - x, y, z.

Teacher’s polarity profile.

Think of marketing (sales science): a new commodity can be scanned by a differential “sells well/undecided/sells poorly” among resellers and consumers. - A set of ordered differentials.

The scaliness.

By nature, scale is polarized: have the terms “large-scale” and “small-scale” not become - in recent decades - commonplace? They represent a differentiation that is gradually built into our everyday language.

Appl. models.

Thus e.g. (1) economic.

Large, medium and small enterprises populate a free market economy.-- More to the point, since Lord J.M. Keynes (1883/1946) one speaks of micro and macro economics. The popular economy on a small or medium scale (micro) and the popular economy on a national and international scale (macro).

Thus e.g. (2) ethical.

The so-called ‘political theology’ introduced an emphasis on macro-ethics - think of the ‘liberation theologies’ - : one can be, from person to person, extremely righteous, but as a member of a social class - the ‘rich’ for example - be rock hard towards the same neighbor. Micro-ethically just, macro-ethically unjust.

Thus e.g. (3) historically.

K. Bertels/ D. Nauta, Inleiding tot het modelbegrip, (Introduction to the model concept), Bussum, 1969, 86vv., talks about a student of the historian Lucien Febvre - proponent of the “histoire de mentalités” (psychological historiography) - namely Fernand Braudel (1902/1985).

The so-called “structural” view of history posits a typical (cultural) historical phaseology (phase classification).

Note:-- ‘Phasis’, apparitio (L.) apparition, was inter alia pronounced of the showing of a celestial body in the firmament, more accurately the showing up at the facial horizon. Think e.g. of the moon phases.

‘Phaseology’ means bringing up (the order of) the phases, stages, periods of time. -
- Well on cultural history Braudel distinguishes:

(a) micro-history - which takes place “by the hour”; “by the day” or some more concerning time frame - think of the hour-to-hour changing jousting within the political class in negotiations -;

(b) medium or meso-history;-- e.g., a development extending over several decades (decades) ;

(c) macro-history, covering long periods of time; e.g., the role played by the Atlantic Ocean from, say, 1600 to 1850.-- One clearly sees the chronological or diachronic differential.

Note:-- Science history model.

The history of the subject sciences - “historical” epistemology - is “in. *I.B. Cohen, Revolution in Science*, Harvard Press, 1985, analyzes what precisely might be a “scientific revolution.” Unlike many an epistemologist, who believes that a scientific revolution is a micro- or at most a meso-historical event, Cohen argues, based on his knowledge of certain revolutions in professional science, that some revolutions are macro-historical. He distinguishes, in particular, four phases, reaching from the individual discovery of something new that constitutes a reversal, to the general acceptance of that discovery. This process sometimes spreads over hundreds of years. For example, the ‘Copernican’ revolution (concerning geo- or heliocentrism).

The scaling of aesthetic categories.

ETM 36 taught us that categories are ‘fundamental or basic concepts’. ‘Aesthetics’, i.e. the doctrine concerning beauty in all its forms (beauty philosophy) - to be distinguished from the ‘aesthetics’ of beauticians, who specialize in feminine beauty (one type) - exhibits a curious scale, which again can be interpreted in terms of “small(scale)/ undecided/ large(scale)”.

Given that this is both important and not so immediately obvious, we now explain.

C. Lefèvre, S.J., *La composition littéraire*, (Literary composition), Bruxelles, 1936-3, 13s. says: “The terms ‘pleasant’ - ‘pleasing’, ‘beautiful: ‘exalted’ are notions which express - what may be called - ‘a progressing series’ (‘une progression’), (*Ricardou, De l’idéal*, 112s.)”

Indeed: the conceptions “gracieux/ beau/ sublime” - all three (aesthetically) appearing ‘pleasant’ - are scaled conceptions:

- a. the graceful (le gracieux) is clean on a small scale;
- b. the clean is the encompassing middle category;
- c. the exalted (le sublime’) is clean but on a large scale.

Examples.

a. The fine, colorful lace of today’s sex lingerie is small-scale “clean” - beautiful, lovely, graceful.

b. the classical image of a Greek goddess, Aphrodite rising from the baren, is “clean.

c. the high Alps, even in full summer gleaming with ‘eternal snow’, are large-scale ‘clean’, ‘erhaben’; ‘sublimes’.

The aesthetic antithesis.

When something makes us laugh or cry, we say that “it was clean”. The clean, in the thorough sense, includes the laughable and/ or tearful. But here is its own “category” at work, seriousness (*ETM 59: inviolability*).

But in the soteriological sense. ‘Sotèria’, salus, salvation, means the overall well-being. That we experience the overall well-being involves seriousness: for that is, for each being, the summary of all possible values (*ETM 33: axiology*). To this, subjectively, is bound our ‘happiness’ - again, a summary of all that is valuable to us.

Well, that too is ‘serious’. It is for this - for the sake of general salvation and happiness - that we devote ourselves, day in and day out.-- Now we can, at regular intervals, relax, i.e. leave the “seriousness” of life as a struggle for salvation and happiness out of consideration: then we give ourselves over, for example, to aesthetic appreciation of everything that is beautiful. Also the ugly!

- a. The small-scale ugly - the comic - is annoying, but not serious enough;
- b. the ugly is the encompassing middle term;
- c. the grossly ugly, “innocent,” is the tragic, too serious to laugh at anymore.

Models.

Guido Gezelle (1830/1899), Flanders’ greatest lyricist, has left us splendid examples.

Editor’s note: The language used by Gezelle is an older Flemish dialect. A lot of the words he uses require explanation. It is therefore not possible to translate these poems. We reproduce them in their original form. What cannot be translated we show in blue below.

A. *Het liefelijke.*

Voetjes (1858 (?)).

“Dit voetjen -- en dat voetje -- gingen te gare de kalvekes wachten.

(*opm.*: hoeden).

De kalvekes liepen in ‘t kooren.-- Dit voetjen -- en dat voetje, -- ze liepen al zere

(*opm.*: snel) vooren.

Dit voetjen en dat voetje -- zal ik te gare in het waterke wasschen.

Het waterke zal ze spoelen.

Dit voetjen -- en dat voetje -- zullen in ‘t water koelen.

Ze zullen zoo rood, als de roozeke, blinken.

Ze zullen zoo wit als de melk zijn.

Lijk bezekes onder de blaren”.

(*Fr. Baur, inl., Guido Gezelle 's dichtwerken (Tijdkrans, Rijmsnoer, Laatste verzen)*, Amsterdam, 1943-1,722).

Luisteren wij naar ‘*O Zaarde blomke*’.

Opm.:-- ‘Zaarde’ is verwant met het Duitse ‘zart’ (zacht).-- “O zaarde blomke,-- ‘t moederhert -- der aarde eerst uit- -- gekropen, hoe heerlijk is -- uw hoofdsieraad -- met morgendauw -- bedropen”. (*Caesar Gerule, Keurgedichten van Guido Gezelle, II*, Amsterdam, s.d., 127).

Opm.:-- De diminutiva, verkleinwoorden, zijn één van de taalmiddelen om het kleinschalig schone weer te geven, te suggereren. Ook de baby- en kinderwereld is een verzamelpunt van het liefelijke. Gezelle, dicht bij het volk, hield ervan.

B. *Het verhevene.*

Dezelfde estheet, die Gezelle was, komt heel anders over in *De reuze*.

“Uitgekleed, in ‘t zonnebranden, -- al uw leden naakt en bloot, -- heerser in de nederlanden, -- koning van de bosschen groot, -- eekenboom (*opm.* eik), zoo sterk voorheden, -- wie heeft u neërgestreden? -- Winden vielen, vast en vele, -- stormend’ u en stootend’ aan; -- grepen u bij hals en kele, -- wilden u in, ‘t zand gedaan: staan, zoo liet het al te booze -- windgevaart’ u, schrikkelooze! -- Donderende drakentoten (*opm.*: drakenmuilen), hemelmachten, onbekend, -- vonken viers (*opm.*: van vuur) en vorken schoten, -- dapper u den top omtrent: -- niets en heeft ontroerd of onder ‘t -- bliksemvier u neërgedonderd.-- Wie dan heeft u omgestreden, -- groene reus, met al uw macht? -- Wie kon al uw krachten dwingen, -- haarlooz, en in schand’ u brengen? -- Staan en blijft, voor menschenhanden, -- niets, ‘t en zij dat eeuwig leeft. Koning van de nederlanden, -- sterk is hij die nooit en beeft ‘t menschdom heeft u, baas bedegen (*opm.*: bedijgen = sterk worden), groenen reuz, omneêrgekregen.

(01.10.1896; *Fr. Baur, ibid* 391).

Opm.:-- Bemerkt de antithese “staan/ omneêrgekregen”. Wat een verschil inzake esthetisch meeleven met dit gedicht, dat het grootschalige vertolkt.

Nog één exemplaar: *Van den ouden boom*. Zie hier de aanhef:

“Met uitgestroopten arm, -- ten halven afgeknuist (*opm.*: afgeknot totdat er een knuist van rest), -- wie staat er daar en steekt -- een onbestaande vuist -- ten hemel? Is ‘t een reus -- in beelde? Neen ‘t, ‘t en is -- geen menschenbouw. ‘t Is eer -- een wangedaantnis, -- een steenen berggedrocht, -- dat, staande fel en fier, -- de scherpe houwen, torst -- van ‘t vonkend hemelvier (...).”

Opm.-- Het is bekend dat in de aloude mythen (*ETM 05*) grootschalige wezens allerhande soms een vooraanstaande rol spelen: alles lijkt erop te wijzen dat Gezelle hier “de reus van een boom” ziet als een mythische wangedaantnis, als een berg-gedrocht. Ook de balladen kennen zulke figuren. Zeggen wij maar dat Gezelle, wanneer hij in het grootschalig schone vertoeft, balladeske teksten scheidt. Het grootschalig lelijke, dat als ‘demonisch’ (= onguur) overkomt, sticht geen lachen maar dodelijke ernst. Naar het tragische toe.

One type of “harmony of opposites”.

We have already met this central idea of Archaic and Classical myths (and fables and parables and fairy tales) - *ETM--harm 86; 126* - in the ethical-religious sense. Now in the aesthetic sense.

(1) ***Jean Racine*** (1639/1699) is one of the great “Classical” French tragedians. In his comedy *Les Plaideurs* he has a summoned man say - humorously - to the commissioner: “Monsieur, ici présent, -- M’a, d’un fort grand soufflet, fait un petit présent”.

Note.-- “The gentleman here today has given me a punishment, a big jaw blow as a little present”. -- Something in itself, in special circumstances, serious, - a jaw blow - is here, in the framework of the comedy, which puts the seriousness of life into perspective (‘diminishes’), transformed into something comical, which has lost almost all seriousness.

(2) ***Nikolai Gogoly*** (1809/1852) was a tragi-comic in Russian literature. *Bibl. s.:* *L.Kobilinski-Ellis, Die Macht des Weinens und des Lachens (Zur Seelen-geschichte Nikolaus Gogols, (The Power of Weeping and Laughter (On the History of the Soul of Nikolaus Gogol,))*, in: *R. von Walter, Uebertr., Nikolaus Gogol, Betrachtungen über die göttliche Liturgie, (Reflections on the Divine Liturgy)*, Freiburg i. Br., 1938, 80/100.

(a) At first glance, Gogol (also: Gogolj) constantly laughs,-- matter-of-factly -- soberly reflecting all the pettiness in his infinite smallness -- in the Ukraine around him and in himself.

It reminds one of microscopy, - says Kobilinski-Ellis. "One hears the soft giggling and even grinning of things, in their soulfulness."

(b) At the same time, however, all that Gogoly finds laughable (and therefore unserious) is that why/ by which he weeps. - That is the tragicomedy of Gogolj.

Platonic aesthetics.

Gogolj was deeply religious Orthodox Christian. Consequence:

a. He sees the "phenomena" (*ETM 17*) - everyday life in the Ukraine as a caricature (*ETM--harm 131 v.* (// S. Augustine)), which stands out against the background of the normal and/or ideal.

b. But that normal-ideal situates Gogolj, as the East predominantly does, in God's ideas concerning creatures. The "realist" Gogolj laughs; the mystic Gogol, who sees everything in comparison to what God expects of it (God's ideas), weeps. The laughing weeping of Nikolai Gogoly.

Note.-- The circus clown finds himself almost constantly in an analogous situation: the deathly serious life he transforms into an endless series of laughable things, by imitating them in such a way that the deadly seriousness is put in brackets, for the time of the aesthetic perception of things, and the laughable can come through.

Excerpts:

(1) "Already Gogoly's first still freshly folkish and comic work - *The Evenings on the Manor Farm near Dikanka* - contains two main characters who already show the characteristics of the demonic caricature: the magician (*The Terrible Revenge*) and the beautiful witch (*We (The Earth Spirit)*". (O.c., 84).

(2) The wizard figure - visible presentiment of sin and eternal damnation - contrasts with the heavenly angelic ideal of the Eastern churches.

The greatest sinner - a kind of Evil Antichrist - knows himself to be given up to the terrible laughter of all the things of the world. In his utter despair he asks the pious eremite to pray for him after all. But the latter curses him. Whereupon the magician: "Little father, thou dost laugh at me! ... I see thy mouth monkling. (...)". (O.c., 85).

Note.-- The Byzantine liturgy has a phrase: "the totally ridiculous underworld." In Gogolj's work, hasn't this phrase been magnificently elaborated into world literature? Unforgettable is that endless, "other-worldly" laughter of all things -- all being -- at the caricature that is hell.

Sample 21.-- Harmology: quantitative change/ qualitative jump. (154/163).

We again elaborate on the differential.-- The (gradually) changing realities - 'being' - show with the regularity of a clock at (gradual) changes - again: differences - suddenly a qualitative jump.

One still encounters people who see how-greatness - quantity - as (contradictory) to quality - quality -.

Consequence: sometimes caustic criticism - antilogia - of quantification (conversion, depiction into quantitative data, e.g., numbers, calculations) and of the mathematical methods used in doing so.

However justified in some cases, yet this criticism is misplaced in the others. *ETM* 37 -- the categories -- showed us how already Aristotle solved the problem; properties - qualities -- and -- magnitudes -- proportions intertwine in the pair, pair of opposites, "quantity/quality." Consider the phrase, "He sees his female fondly," compared to the phrase, "Danig sees his female fondly." The adverb "danig" expresses the quantity - here: intensity - of loving, which, in itself, is of course a quality.

Conclusion: it is therefore no longer surprising that when there is a change in quantity/ or quality there is a correlative change in quality and/ or quantity. In Antique Greek: there is "harmony (union) of quality and quantity".

A.-- The eristic doctrine on the subject.

'Eris' in Antique Greek is (reason) strife. 'Eristic' is reason. The dialogue becomes, at some point, a tense conversation, which may degenerate into bitterness.

Bibl. st.: *E.W. Beth, The Philosophy of Mathematics (From Parmenides to Bolzano)*, Antw./ Nijmegen, 1944, 78/86 (*Eristics*); 86/92 (*Skepticism*).

Beth, logician-mathematician, rightly teaches the proper value of eristics. O.c., 85, he says: notwithstanding apparent pettiness or flat thinking - in it active - eristics:

- (1) is the introduction to deeper research, and
- (2) eventual; demonstrates full probative value.

In other words: the eristics can also be method.

Just reread *ETM--harm* 86 ("antilogia") 110, where that method appears.

Theses of all kinds are refuted - falsified - by means of the counter model.

A.1.-- Euboulides of Miletos (-380/-320)

is a Micro- or Kleinsocietiker (of the “Dialectical” direction (Megarian school)). To his name are two paralogisms (logically incorrect reasoning of an unconscious nature), which disregard gradual differences and their repercussions on quality.

Model 1.-- The bald head.

Depriving someone of just one hair does not mean that he/she will become ‘bald’. Depriving him/her of two, three, etc., does not. So one can deprive someone of all hairs without making him/her ‘bald’.

Note.-- Note: at some point, everyone will say that the depilated person becomes “bald. At that point, the qualitative leap occurs.

Model 2.-- The grain heap.

Reasoned Euboulides falsely: just one grain is not yet a “grain heap. Two, three, etc., also not. So a hundred thousand grains do not yet make up a ‘grain heap’ either”.

(a) The natural languages.

Note the ordinary, everyday language and its akribeia, accuracy. Cfr. *ETM 27 (Neo-Retoric)*. No matter how subjective regarding the qualitative leap, one is called “bald” when the impression is that the head is massively hairy.

The natural languages distinguish between “just one” grain, “some” grains, “a heap” of grains, “a heap” of grains, “a big heap” of grains, “an indistinguishable heap” of grains; the uncultured folk distinguish, often very sharply, such qualitative leaps.

Note.-- Compare the natural language usage regarding “one coin”/”bank bill”/”pocket money”/”amount”/”capital”/”capital”.

Sensing, threshold feeling, agreement and habit each play a role in assigning distinct names for qualitative jumps, of course.

(b) The artificial or artificial languages

These, of course, also distinguish these parts of the set or system (singleton (just one element), less or more extensive private sets, universal set). But in the absence of ordinary akribeia, they have no names for them.

The reasoning error.

P. Lahr, Logique, 701, says Euboulides knows (1)

(i) what is true of each member individually, namely, that even when accumulated, it is not a collection/system, allow

(ii) to even the whole collection of individual elements.

Note.-- *ETM 39* taught us what summative induction is: “from each individually to all collectively.” This totalization, with Euboulides, who abuses this as an eristic, does not continue. The terms “just one,” “private,” and “universal” are there thanks to qualitative leaps in accretive summative induction.

A.2.-- *Ainèsidèmos of Knossos* (+ -50)

He is a Skeptic. The Skeptic (*ETM 17*) places “skepticism,” inquiry, at the center but in such a way that this inquiry ends only in uncertainty and doubt - hence the name “skeptic(s)” for doubtful.

He is ‘phenomen(al)ist’: we know only the ‘phenomena’ (‘*ta faingmena*’), i.e. all that is immediately given. What our senses - internal and external - perceive, is ‘true’ (real). But e.g. a general form of being (essence) of a group of phenomena - think e.g. of all the bellflowers - escapes our direct perception and is therefore ‘uncertain’, ‘fanciful’.

Bibl. st.:

-- *V. Brochard, Les sceptiques grecs*, (Greek skeptics), Paris, 1887-1; 1969-2, 253/298;

-- *R.G. Bury, Sextus Empiricus*, 4 vols., Cambridge (Mass.), 1961, I (*Outlines of Pyrrhonism*), xxxvii/x1;

-- *JTP. Dumont, Aenèsidème*, in: *D. Huisman, dir., Dict. des philosophes*, 22/24.

Furthermore, *Ainèsidèmos* (= *Aeneidemus*) was a student of *Herakleitos* of *Ephesos* (-535/-465; the first actual ‘Dialectician’), who placed enormous emphasis on the continuous process that encompasses differences. This is called ‘Mobilism’ or philosophy of movement.

(1).-- *Tropics*.

Now pay close attention: do not confuse with the term ‘troop’ from tropology (*ETM 20*). ‘Tropos’ is turn. Turn of phrase. Also: opinion, i.e. a turn in interpretation.

Well, with the Cretan who was *Ainèsidèmos*, the turns of opinion are central. He is a ‘relativist’, i.e. our opinions as twists on reality are very relative, because both our observations and our thought movements do not reach far enough into reality. Even so that we must ‘suspend’ any final (‘dogmatic’) judgement about the things themselves - in an ‘epochè’, suspension of judgement - because we, in essence, do not really know.

To “prove” this, he employs “tropes”.

The tropes, understand: interpretations (for the turn that our opinion represents amounts to an interpretation), rest on - what in Platonic language is called - “the noble yoke.” ‘Yoke’ means ‘that which spans (connects) at least two poles, parts’ extremes’. ‘Noble’ means “all that enforces and amazes”. -- Now how does Ainesidemos see that noble yoke of our experience, resp. knowledge?

(i) the object itself, in itself, of our perceptions and our insights of an intellectual nature, may give rise to more than one trope, understand: turn of opinion, interpretation. How should something rare - and therefore unknown, unprocessed - be seen?

(ii) the subject, which Ainesidemos strongly identifies with our senses, can cause more than one interpretation. Thus e.g. a poorly hearing

a. does not hear well what is said and

b. immediately he/she doesn't know and think it's so best either.

(iii) The ‘yoke’ itself between object and subject may also give rise to doubts. One discerns, e.g., at a great distance ‘something moving’, -- with the result that because of that distance that object is susceptible to more than one ‘trope’.

(2).-- Tropics based on quantitative differences.

The object itself undergoes, eventual, changes (differences).

(2).a.-- Distributive (metaphorical) modifications

ETM 20 learns what metaphor is; *ETM--harm 90* what distributive structure is.

Regulatory model.

If something (= a form of being) - within the range (‘yoke’) of our perception and our mind - occurs either more frequently (more frequently) or more rarely (less frequently) within the same time span (interval), then at some point it appears qualitatively different, possibly leapfrogging.

Appl. models.

a. Both the tail star (comet) and the sun are celestial bodies (similarity). Yet the comet - for the reason of its rarity - arouses wonder in the population, while the sun - for the reason of its frequency - does not sensationalize (difference).

b. With us, earthquakes are rare (elicit shocks of mind); in California, e.g., they are “daily occurrences” (the shocks of mind are flattened).

Summary.

The ancient Romans said “*Assueta vilescunt*” (Things, once one gets used to them, lose their sensational character).

Analogous examples are found later e.g. with the Gallic rhetor Favorinus of Arles (80/160). They are, psychologically and axiologically (value theoretic).

The differential: some (unique)/ very/ rather rare/ rather/ very frequent.

(2).b.-- Collective (metonymic) amendments.

ETM 22, learns what metonymy is; *ETM-harm 91* what ‘collective’ structure is.-- ‘Something’ (= creature form) - e.g. a mass of clay hanging together - insofar as collectively, i.e. in the coherence of the parts, is modified, changes qualitatively, possibly in leaps and bounds. Behold the regulative model.

Appl. models.

a. According to Ainesidemos, precisely one grain of sand appears “prickly,” whereas many grains of sand in an accumulated mass together are sensed as non-prickly.

b. A substance (‘mass’) in small quantity -- one glass of wine e.g. -- strengthens the soul. With increasing dosage, however, large quantity works in reverse,-- too much wine e.g. This is a case of “reversal in the opposite”. Posology, i.e. the science of dosage, works precisely on the basis of the differential suggested above, within which jumps occur.

c. After this biochemical model, an ethical one.-- Take the ‘décolleté’ (lower neckline of a female garment). Seen within the ethical standards (= norms) of previous generations:

i. if cut too deeply, then “immoral” (hurting the sense of shame) and therefore immoral (against conscience);

ii. if not cut too deeply, then “demure” and therefore morally justifiable. The sense of value reacts with qualitative leaps at the décolleté’s deflating differences.

Note.-- The leap between immoral and demure regarding stripping of the female body, while somewhat mathematically expressible (“A few inches of fabric wouldn’t hurt”), seems, to a large extent, arbitrarily (*including multicultural; ETM 42*) determined.

Differential: too deep, deep, shallow cut/ just, little, very little cut, -- with somewhere, between the two, the breaking point, the turning point to the contrary.

B.-- Dialectics.

In Antique Greek, ‘dialektikè’ is “the skill of engaging in conversation.” But, in a stricter sense, the term ‘dialectic’ means “the total interpretation of reality (making it one type of ontology) as a whole of changeable opposites.” -- it is in this narrower sense that we now mean it.--

Bibl. st.:

- W. Van Dooren, *Dialectics (a historical and systematic introduction)*, Assen/ Amsterdam, 1977 (esp. o.c., 5/8 (*Phases and aspects of the dialectical method*));
- P. Foulquié, *La dialectique*, Paris, 1949;
- D. Dubarle/ A. Droz, *Logique et dialectique*, Paris, 1972;-- *Aspects de la dialectique, Recherches de philosophie*, II, Paris, DDB, 1956;
- J.-P. Sartre et al, *Marxisme et existentialisme (Controverse sur la dialectique)*, Paris, Plon, 1962.

Given the enormous influence of dialectical thinking in Western cultural history, first a description

(i) Objective dialectics.

Reality is one encompassing process, i.e. change. Or, at least, that reality is brimming with processes such that the main impression is one of “one big process”. That process, those processes, consist of opposites, which themselves evolve along with the changes. In those changes dialecticians discern quantitative changes which lead to qualitative jumps.

That whole complex - the system’ of reality (says Hegel, one of the great dialecticians in Modern times) - is such that the opposites in reality undergo ‘Aufhebung’ (literally: dissolution; better catharsis (*ETM --harm 79*), purification-on-higher-level).

Behold the four axiomata of dialectics. They appear, among others, in *J. Stalin* (1879/ 1953), *Dialectical materialism and historical materialism* (1937; as a corrective to *R. Descartes, Discours de la méthode pour bien conduire sa raison et chercher la vérité dans les sciences* (Discourse on the method for conducting reason and seeking truth in the sciences), (1637))

Note.-- Many dialecticians deny the possibility of a strict logical definition of dialectics. But ever since Fr. Engels (1820/1895; thinker of K. Marx) and, following in his footsteps, ‘Diamat’ (= Dialektischer Materialismus,-- by Plechanof, in 1891) often define dialectics fourfold as above:

- a. Totality (“all that is”),
- b. Change (movement, -- kinèsis, motus; mobilism),
- c. qualitative jumps
- d. Purification.

(ii) Subjective dialectic.

Opposite the object, which is dialectic in itself, stands - within the ‘noble yoke’ (Platon) - the subject, which not only perceives but also experiences that dialectic, existentially involved in the total process as it is. The subject too exists as a totality, with changes and jumps, as well as the purifications included in it.

***Herakleitos of Ephesos* (-535/-465).**

Heraclitus of Ephesus (Lt.) passes as the first “dialectician” in the sense just described.-- Some excerpts.

(1) *The Universe Mind (“Logos”).*

The preposition par excellence for Heraklitean thought is the fact that everything is ‘logical’ and comes into being somewhere. “(...) Everything becomes (‘ginomenon’, literally: comes into being) according to the Universe Mind (...)” (Fr. 1, in: *H.Diels, Die Fragmente der Vorsokratiker (Griechisch und Deutsch)*, (The Fragments of the Presocratics (Greek and German), I, Berlin, 1922-4, 77).

(2) *The Universe Fire.*

Second premise: analogous to what many Archaic cultures know, namely a universe fire, Herakleitos, in parallel with the Universe Mind, puts forward a universe fire, i.e. an omnipresent energy. But his ‘rationalism’ reinterprets this sacred fact already so early in Greek history: “‘God’ is day/night, winter/summer, war/peace, abundance/famine. ‘God’ undergoes transformations. Like the fire which - if mixed with incense - changes its name according to the scent of the various perfumes processed in it.” (Fr. 67; 0.c.,90).

Note.-- This is already a prelude to thinking in differentials: at the religious incense sacrifice (e.g., to a deity) one observes, mixing, that suddenly another odor comes through.-- Behold one type of basic scheme of a dialectical nature.

(3) *The Universe Process.*

‘Kinèsis’, motus, movement (in the extremely broad sense of ‘change’) is central. Hence the name ‘Mobilism’ (philosophy of movement).

Some excerpts.

a. Fr. 61: “Seawater is the purest and most detestable: for fish drinkable and life sustaining, for men undrinkable and deadly.”

Note the “harmony (union) of opposites,” so characteristic of all dialectics.

b. Fr. 88: “One and the same” in us: living and dying, waking and sleeping, young and old.-- When something turns into its opposite, ‘this’ is ‘that’. And “that” is “this” as soon as it turns into its opposite.

Note the basic concept of “turning (to the contrary)” in all dialecticians.

c. Br. 59: “The ‘way’ (*note*: the course) of the fulling screw is both straight and curved. It is “one and the same”.

Note the far-reaching identification of the opposites in one and the same reality.

Fr. 60 : “The ‘way’ (*note* : process) up and down is one and the same”.

Behold what logos and “fire” work out as whole principles.

Diamat

'Dia.mat' is the contraction of 'Dialectical Materialism'.-- Following on from Engels and Plechanof.-- Let us see, now, how Stalin, in his Dialectical materialism and historical materialism, describes the relations. between quantity and quality -- in a dialectical way. Cfr. P. Foulquié, o.c., 645.

1.-- The "movement" (= change both arising (becoming) and decaying (falling)) of matter (with which the materialist Stalin radically identifies all being (reality)) founds (causes) something new.

2.-- This new, however, arises in two ways.

(a) circular (circular). Thus e.g. the fact that, with heat energy, one generates motion (in the purely mechanical sense, here), with the kinetic energy decaying back into heat energy.

(b) jumpy (revolutionary).

Appl. mod.

a. *Natural Science.*

Physics: water that reaches zero degree Celsius freezes; once it reaches one hundred degree Celsius, it evaporates. Two gradually achieved qualitative jumps. Chemical: arsenic trioxide ("ratweed"), a chemical, has a healing effect in small doses, a killing effect in large ones.

b. *Psychological.*

A bullying, suffered once, is tolerable and bearable; repeated too much it becomes hateful. Until "the drop too much makes the water overflow" (says 'dialectically' the popular man). Qualitative leap that becomes e.g. aggression. Think of the revolutions of the proletariat.

c. *Sociological.*

The working masses, if not overly exploited, find this bearable; the very same masses, if overly exploited, become revolutionary (think of the Russian Revolution in 1917).-- The same - yes, as Herakleitos says - "one and the same" - masses carry the rock-hard and merciless knotty system of the Soviets for some seventy years. Until the disadvantages of the command economy, inherent in any socialism worthy of the name, weigh so heavily that within a few years a "revolution" in the opposite direction, toward the free market economy, takes place in the Soviet world. Everyone is amazed by "the suddenness", the reversal, of such a qualitative change.

d. *Aesthetic.*

One likes to hear a compelling piece of music the first time. One likes to hear it over and over again. Until one begins to tire of it. Or, due to too much repetition, "can't hear it anymore" (a small series of jumps).

C. -- *The experimental science on the subject.*

Don't think that the "quantity/quality" ratio is seen only by eristicians and dialecticians.

Anaxagoras of Klazomenai (Lat.: Anaxagoras of Clazomenae (-499 -428).

Bibl. st.: D.E. Gershenson/ D.A.Greenberg, *Anaxagoras and the Birth of Scientific Method*, New York, 1964-1 (with introduction by Ernest Nagel).

Proponents claim that Anaxagoras' work - within Antique thinking - exhibits virtually all the main features of today's natural sciences. Thus, among other things, The Experimental or Trial Proof.

Well, one such proof is an application of the "gradual quantitative change/sudden qualitative jump" structure.

Aerial experiments:

1.-- Partially mythical worldview.-- A myth tells that "the air beneath the earth carries it".

2.-- Anaxagoras reverses this mythical notion: he concludes from it that every gas was susceptible to a significant dose of pressure.

He applies this, cf. o.c., 40, to the gas that is the air:

- i. air is invisible, seems like "nothing";
- ii. yet moving air - wind, storm wind - is especially palpable, perceptible (think of the destruction caused by a storm wind).

The experimental proof: Like current scientists, Anaxagoras was not content with "folk observations" peculiar to the common sense. He moves to experimentation, where man himself creates (and controls) the conditions. Thus he provided the proof that air "however impervious, can resist a strong force". In this he was one of the first.

Dialectically expressed, "one-and-only" air, which is easily dispersible, when we step through it - e.g., going against the wind - air usually offers little or no resistance to any material body - suddenly does offer resistance.

Anaxagoras brought forward public experiments, of which we still have reliable reports today.

One model.

1. He takes a wine sack (of leather), twists the neck of that sack - gradual quantitative changes -, until, by increasing pressure, the compressed air made the very pliable sack of just now undeformably hard. The bag first pliable then hard is one type of reversal in the opposite

2. Then he had pressure tests to prove that the bag resists pressure.

Note.-- Anaxagoras also did the same or analogous things over with e.g. the ‘klepshudra’ or water clock.

Note.-- In the first trial - with the wine bags - recall the moment when Anaxagoras wriggles so much that the leather of the bag ‘bursts’ (this is a clean case of qualitative jump).

Note.-- What Anaxagoras proposed, that is, end of Middle Ages/beginning of Modern times, is repeated, but in modernizing context. Evidence:

a. Francis Bacon of Verulam (1561/1626)

Novum Organum scientiarum (1620), the experimentation of an Anaxagoras is called in the Latin of those days “productio experimenti” (the emergence of the experiment). The wording reads as follows.

Given: just once, a causal relationship - e.g., heating water, which, in normal conditions, boils and evaporates at 100° C - is actually established.

Question: is this one case of verification generalizable to all cases? In other words: does water boil and evaporate in all cases, if heated to at least 100° C ?

Sampling method.-- The only way out is sampling (induction) In such experimentation a kind of law applies: “if - says Bacon - the cause (heating in this case is gradually changed, then - if it is a general law of causation - the effect (in this case; boiling evaporation) also gradually changes.-- In other words: there is proportionality, to some extent, between the two changes.

b. John Stuart Mill (186/1873)

Empiricist; *A System of Logic, Rational and Inductive* (1843)) restates the ‘tables’ (rules of induction) drawn up by Fr. Bacon. What the latter calls “productio experimenti”. Stuart Mill “the method of accompanying modifications”. Formula: “if a phenomenon is modified, while in the process “all factors except one” (which is a curious dichotomy ; *ETM--HARM 125*) remain unchanged, then precisely that one factor is the cause sought”.

Appl. mod.-- Father Lahr, *Logique*, 589, gives following model.

a. Sign (antecedent, factor (‘element’). -- Modify the number or amplitude of the vibrations of a sound-producing body (e.g., a shepherd’s flute).

b. Continuation (consequent, consequence).-- The effect of the previous modification is to change the sound. Thus, the different pitches -- one after another -- emerge as in a spectrum.

Sample 22.-- Harmology: 'chaology' (disorderly). (164/175).

Although this chapter is actually applied harmology (doctrine of order), one cannot ignore it: since the beginning of this century there has been a buzz, first among some (*ETM--Harm 149*), later among many, as is the case in a scientific revolution, of 'disorder', 'bifurcation', 'fluctuations', 'over-sensitive reactions:' unpredictability' and the like.

Bibl. st. :

- *l' Ordre du chaos*, (The Order of Chaos), Paris, Belin, Bibl. Pour la science, 1987;
- A.V. Holden, *Chaos*, Manchester University Press, 1986;
- H. Degen, et al, eds., *Chaos in Biological Systems*, New York, 1987;
- J. Gleiek, *La théorie du chaos (Vers une nouvelle science)*, (Chaos theory (Towards a new science)), Paris, A. Michel, 1989 (*// Chaos*, New York, Viking Press, 1987);
- Ervin Laszlo, *La grande bifurcation (Une fin de siècle cruciale)*, (The great bifurcation (A crucial end of the century)), Paris, Tacor International, 1990 (*// Design for Destiny (Managing the Coming Bifurcation)*), New York, Harper and Row, 1989 (Foreword by Ilya Prigogine);
- Ilya Prigogine/ Isabelle Stengers, *Order out of chaos (The new dialogue between man and nature)*, Amsterdam, Bert Bakker, 1987 (Foreword by Alvin Toffler).

From this impressive - and extremely incomplete - bibliography emerges something that, at first glance and insofar as misunderstood by a great many publicists, is directly contrary to any idea of order. Hence this little chapter.

Lateral reference should be made to J.-P. Oupuy, *Ordres et désordres (Enquête sur un nouveau paradigme)*, (Orders and Disorders (Investigation of a new paradigm), Paris, 1982 (notions such as 'ordering coincidence', 'order o.g.v. noise (disorder): 'self-organization' ('auto-organization') are brought up by Francesco Varela, Henri Atlan, René Girard, Cornelius Castoriadis, Heinz van Förster, Ivan Illich, among others).

Reference should be made, among other things, to a publicity piece such as "Coincidence and Innovation", theme developed for *la Radio romande Espace 2* (Switzerland) by two world-renowned figures: the semiologist (semiotician) Umberto Eco (1932/2016), author of, among other things the filmed novel *The Name of the Rose* (translated into more than twenty languages) and *The Pendulum of Foucault* (a Mannerist writing), on the one hand, and, on the other hand, the 1977 Nobel Prize winner for chemistry (irreversible or irreversible thermo-dynamics), Ilya Prigogine (1917/2003) (with Is. Stengers, author of *La nouvelle alliance*, Paris, 1977).

The larger audience is somewhat warm to ...

Even literary pieces reflect the “disorder theory,” which is becoming more prevalent: *Jake Page, Chaussettes en goguette (Pourquoi diable y en a-t-il toujours une qui se fait la belle?)*, (Socks on the go (Why on earth is there always one doing the beautiful?)), in: *Sélection (Reader’s Digest)*, 1990: juillet, 68/69 (narrator interacts with adolescents and finds that they have an invincible tendency to leave disorder just about everywhere in the house).

Note -- M. Ambacher, *Les philosophies de la nature*, (The philosophies of nature,), Paris, 1974 – esp. o.c., 103ss. (*Les Philosophies de la Nature procèdent d’ une expérience qualitativement constituante*) – ((The Philosophies of Nature proceed from a qualitatively constitutive experience), teaches us that nature was twofold interpreted in the past:

(i) nature viewed as a machine, in whose initial conditions the rest of its course is deterministically -- mathematically deduced -- and predictably -- locked in (Cartesian, Leibnizian, -- Newtonian view);

(ii) nature - the same nature - seen from, among other things, Dialectical presuppositions (*ETM-harm. 158vv.*), which calls forth a more qualitative nature.

As E. Beth once wrote: the ‘mathesis universalis’ (= general order doctrine, but mathematical) of a Descartes and a Leibniz is, among others by the Dialecticians, replaced or at least supplemented by - also - a ‘mathesis universalis’, an order doctrine which proceeds less mathematically, more philosophically of life and cultural history. The new disorder doctrine clearly combines the two indications of nature.

In evidence. I. Prigogine/ I. Stengers, *Order out of chaos*, 13.

The Brussels School (Leader: Prigogine) puts forward a comprehensive systems and change theory.

1. The universe - universe - consists of two types of subsystems (parts).

a. Some parts work just like perfect “machines” that form a closed system. These parts are stable, predictable, derivable and calculable from initial situations. They are fundamentally determined (hence the physical Determinism, which was prevalent throughout the Modern era). These types of systems make up the smallest part of the universe.

b. The universe consists, for the most part, of open systems, which exchange matter, energy, and information with their surroundings.

Consequence: “most of the universe is not at all stable or in equilibrium, but in more or less a state of disorder, -- with all its consequences. including the fact that it is bubbling and sizzling with change and ‘disorder’ and with constantly occurring processes.”

Summary: **a.** Equilibrium systems, **b.** near-equilibrium systems and far-out-of-equilibrium systems populate the ordered universe

2. Fluctuations.

Non-equilibrium systems ... fluctuate', i.e. change rather chaotically. Sometimes it happens that a single fluctuation or a set of fluctuations together - by means of 'positive' feedback - is strengthened to such an extent that the initial conditions (the initial order) are destroyed. - The Brussels school calls this event or process 'singular point' or 'bifurcation'.

Unpredictability.

Such reversals exhibit the structure which the popular man, with the commonsense language peculiar to him, brilliantly characterizes as "how a dime can roll." It is radically impossible for the professional scientist, mathematical or not, to determine or calculate in advance the direction in which the non-equilibrium system will evolve. And this is concerning the basic twofold, namely, either to pure chaos (disintegration) or to reestablished or actualized order (new system).

Dissipative (energy wasting) structure.

When a system emerges reestablished or actualized from provisional and partial disorder, one speaks, in the Brussels School, of "dissipative structure," because these processes - unlike simpler structures (whose place they occupy) - require more energy to survive.

Self-organization.

A more controversial premise of *Prigogine* et al. is that out of 'disorder' (which is invariably only partial and provisional) 'order' and 'arrangement' ('organization') arise 'spontaneously'. What is then called 'auto-organization'.-- The book *Order from Chaos* gives numerous examples of the latter.

Appl. model. O.c., 14.

a. A Primitive Population. In equilibrium state: thanks to food and drink and other living conditions, mortality and birth rates are "in equilibrium."

b. In near-equilibrium situation: the birth rate increases gradually. There is equilibrium disorder. But manageable and predictable.

c. In far-out-of-equilibrium situations: the birth rate "literally skyrockets". Nonlinear effects: small precursors anticipate large sequels.

In other words, the course of the Primitive community in question becomes erratic, unpredictable. Until some fork in the road (bifurcation) decides whether or not it will continue to exist or survive on a higher plane.

Note.-- It is evident that energies of all kinds and energy levels of all kinds are involved in what we describe.

As an aside: somewhat in an analogous vein, *Jeremy Rifkin* writes, *Entropy (A New WorldView)* London, Paladin Books, 1985,-- o.c., 20/39, in which the proposer brings up the universe views of the Greeks, the Christians, Modernity (*The Machine Age* (o.c.,27f.), *The Architects of the Mechanical World View* (O.c., 29/40)), -- and then in Part Two “*The Entropy Law*” (O.c.,41/70) and in Part Three “*Entropy: A New Historical Frame*” (o.c., 71ff.).

The author first of all highlights the energetic side of the problem, whereas the Brussels School first of all highlights the chaotic moment.-- For the rest, both points of view govern the crisis of Modern Determinism. Nl. by the introduction of the idea of “deterministic disorder”, one of the many names for scientific innovation.

Incidentally, *Order out of Chaos*, e.g., 17v., points to the revolutionary role of thermodynamics, regarding energy processes (think, “the second law” - the world machine is dead-ending toward “heat death,” o.g., the inescapable loss of energy in the universe (“entropy”)), the starting point of J. Rifkin’s reflections.

Decision.

A revue like *Actuel*, 1990: juillat/ août, 148ss., titled some of its contents as follows: “*Délires chaos*” (*La théorie du chaos a révolutionné les sciences. Il explose dans l’art*).—(“Delusions of chaos” (The theory of chaos has revolutionized the sciences. It explodes in art).), “Everywhere “the disorder””.

In the professional sciences that detect “disorder” and unpredictability right down to the circles of a burning cigarette.

In the “House Parties” banned by Mrs. Thatcher, England’s Prime Minister. In a clip by Adamski, number one in England. In cartoons, informational art, fashion, fractal painting. Everywhere (a.c., 150).

A.c., 156, even talks about a “Chaos Happening” by a group of musicians, computer scientists, young creatives.

In other words : Disorder, from the point of view of the professional sciences, becomes a fashion.

A model.

What we are describing now is more than a basic school model. Scientists are discovering partially disordered processes everywhere, ending in a fork in the road.

A study group at the University of Santa Cruz (New Mexico) has analyzed, in a rigorously scientific manner, the tap test.-- Here is an outline of it.

(1) *Equilibrium/near equilibrium.*

We open a water tap very carefully.-- The drops begin to fall (from a static system the water becomes a dynamic system)-- in an identical and thus predictable, calculable, deductible manner from an initial situation.-- We open a little more.

The drop accelerates concerning rhythm (increased frequency), but remains regular and predictable.

(2) *Far-out balance.*

A 'critical' (understand: a 'crisis' involving) phase: the drop gradually or suddenly exhibits a totally irregular, 'fluctuating' rhythm. Hypersensitivity. Unaccountability. "Chaos. Other name "turbulence" (in French: 'turbulence').

(3) *Two-pronged.-- Equilibrium/near-equilibrium.*

We open further still. - The system returns to equilibrium, thanks to self-organization (without human intervention): once again a continuous (uninterrupted) stream of water appears. Determinism' regains its rights,--at once predictability.

Another model.

Again, at first glance, and elementary school model and vocational science model.

(1) A fragrant Mary-Long cigarette is lit (she becomes a dynamic system from a static system).-- Equilibrium/near equilibrium.-- A regular - defined - column of smoke rises, in an uninterrupted manner, to a few centimeters above the burn area.

(2) Far-out-of-equilibrium.-- Suddenly -- one never knows exactly when -- the smoke particles circle impetuously, in whimsical-Manic circles. Name "deterministic chaos. Now we understand the allusion of the *revue Actuel*, 1990: juillet/ août, 150, where she says that professional sciences discover 'chaos' even in a burning cigarette.

It is one of countless simple yet complicated processes in our predominantly of similar 'dynamic processes' universe.

We, especially as teachers, keep these simple models before our eyes,--perhaps even in our teaching that prepares for society.

Edward Lorenz's water wheel. The concept of "butterfly effect".

If a small cause has large - unexpected, yes, incalculable - consequences, then one can speak of a 'butterfly effect'. The flight of a butterfly can - namely in, far out-of-balance conditions of e.g. our weather - cause, at least partly cause, a whole series of storms. Thus J. Gleick, *La théorie du chaos*, (The chaos theory), 38s..

The models cited contain such butterfly effects. Do we now look at another model.

A mathematically trained meteorologist, at M.I.T., Edward Lorenz, "simulated" (= mimicked) the weather - since ± 1960 - with the help of the first computers. He was the first to see through the butterfly effect.

J.Glieck, o.c., 46ss. (*La roue hydraulique de Lorenz*), (The Lorenz water wheel), states. One can 'depict' (and immediately prove by sampling, inductively) the butterfly effect in a purely mechanical system, the water wheel.

Note.-- To convince the doubters among the peers, Willem Malkus, prof in applied mathematics at M.I.T. (Massachusetts Institute of Technology) - years later - constructed the water wheel in the basement of his lab.

a. Static system.

A water wheel is a wheel with blades (containers). Once these are filled with water, sooner or later movement occurs. Think of our watermills.

b. Dynamic system.

i. Equilibrium/near equilibrium.

From a water supply device situated above it, water flows continuously into the blades, inside the wheel. As long as the supply - 'input' in computer language (cybernetic) - is very small, the receptacles do not get full enough to overcome the frictional resistance of the stationary wheel. The wheel remains motionless.

Still further supply of water -- dialectically: gradual quantitative increase (*ETM--harm 159*) -- causes fuller trays, with the result that the wheel -- e.g., to the left -- begins to turn,-- with constant speed (thus calculable).

Even more advanced feed causes a series of accelerations.

ii. Out-of-balance.

Malfunctions occur. Sometimes the trays, due to the speed, do not get filled enough. Sometimes - unpredictably the movement to the left (in this case) turns into its opposite, to the right (again: dialectically speaking) a reversal).

Cosmological model.

J. Kletczek/ P. Jakes, Universe and Earth, Groningen, Rebo Productions, 1987, 96v., formulates it well.-- "From chaos to order". This is how the authors of the book summarize the development of the cosmos as a comprehensive system of processes.

A. An "ordered universe.

From an immeasurable and extremely dense confluence of "fire," i.e., a collection and system of highly heated elementary dust particles in utter disorder ("jumble").

That same entity once experienced a turbulent, 'turbulent', 'turbulent' period, which earned the name 'big eruption' (in English: 'big bang') or primordial explosion such that the density dropped and the size (volume) expanded ('expanding universe').

In the ten billion years since then -- hadronic, leptonic, photonic and stellar periods -- from them arose e.g. atoms, molecules,-- crystals, minerals,-- all that lives (as far as dependent on inorganic matter),-- celestial bodies, super galaxies. An "ordered universe", cosmos (as we have said since the Paleopythagoreans; *ETM 03*). With Prigogine we would say "by self-ordering".

B. The butterfly effect

Suren Erkman, Voyages en zones de turbulences, (Journeys in turbulent areas,), in: Journal de Genève 28.11. 1987, linking to the butterfly effect on weather conditions presents one possible final model of the universe, in the wake of recent chaology: perhaps the whole system of the universe, if it ever reaches a far-out-of-equilibrium state, gets so out of whack - series of fluctuations - by the fluttering of a butterfly that it 'bifurcates' downward into chaos.

This in turn resembles the "heat death" of the universe of the nineteenth century thermodynamicists.

Which in turn frames with some, by no means all - religious outlooks - 'prophecies' - that predict a fire death of the universe. But these are just analogies (partial identities), of course.

But we mention them because, in the wake of recent purely scientific discoveries regarding "deterministic chaos," some publicists and "rhetoricians" will try to inculcate such a worldview, through a variety of means.

Which will then become yet another ideology (ossified-dogmatic, seemingly "scientific" view of life and the world). Against which we must already oppose in advance, because it has no serious foundation.

Definitions.

After some simplifiable models the regulative model or creature form.

1.-- Disorder (chaos).

As *E. Laszlo, La grande bifurcation*, 135. says, “disorder” traditionally means “confusion,” “perplexity,” -- the negative, resp. privative nothingness (*ETM 50*) concerning order(ning). - But the new meaning is “one type of order(ning)” that excels by:

- a. complexity (intricacy),
- b. hypersensitivity (“sensitiveness”) with its imperceptibility (“subtilité”) and unpredictability,
- c. with eventual germs - what appears after the fork in the road - of a re-established, actualized order(s). Thus also o.c., 15.

Decision.-- So one does not confuse the traditional sense of the word “chaos” with the recent one. Yet not without more.

Note.-- Laszlo emphasizes “complex systems.

1. “The characteristic property of a linear system is that, e.g., a doubled ‘input’ (*note*: factor) also gives rise to a doubled ‘output’ (*note*: result).”

Note.-- Consider the water wheel: in a regular phase of it, the speed of movement doubles if the water supply accelerates.

2. “The behavior of a nonlinear system, however, is much ‘richer’ and can ‘differ’ dramatically according to the degree of nonlinearity.”-- Now, of course, nonlinear differential equations have traditionally been known in mathematics.

a. The solutions, however, one can control only for small values of the nonlinear parameter”.

Note.-- Remember the near equilibrium states.

b. “Partly due to the development of the computer, one has observed a remarkable phenomenon: with increasing nonlinearity, a system tends to behave, at first quite chaotically.”

Note.-- Remember the far-out-of-equilibrium states.-- “But, after that, new stable solutions may suddenly appear (which do not occur at all in the quasi-linear region). This keeps repeating itself so that such a system can exhibit a great wealth of structures.

This complexity can already be observed in systems with only a few degrees of freedom (understand: particles): typical examples are the ‘mobiles’ produced by the gadget industry, which often consist of combinations of only two or three pendulums.” (*M. Fannes/A. Verbeure, New visions in physics: cooperative phenomena*, in: *Our Alma Mater*, 1989: 3, 249).

Note -- Paradoxes.

(1) G. Jacoby, *Die Ansprüche der Logistiker auf die Logik und ihre Geschichtschreibung*, (The claims of logicians on logic and its historiography), Stuttgart, 1962, 138 (also: 85, 87, 94, 135), says that the antique meaning of ‘paradox’ is “all that goes against established opinions”, such as e.g. at a certain point in cultural history, the notion of ‘antipodes’ (antipodes) or the notion of ‘n - dimensional geometry’ (which works with e.g. four or more dimensions).

(2) Erik Pigani, *Qu’ est-ce qu’ un paradoxe*, (What is a paradox,), in: *Psychologies* (Paris), No. 70 (1989: Nov.), 64.

a. ‘**Paradox**’ is o. m. a judgment (statement) that involves a contradiction or a set of judgments that contradict each other (*ETM 70*). E.g., “Stay here and leave!” Or, more subtly, the sentence “What I say is false”. The latter is an eristic example.

b.- ‘**Paradox**’ exists, in the natural sciences, when the same matter, respectively energy and information simultaneously exhibits more than one mutually contradictory state.

For example, the vibrations of light:

i. light is, among other things, ascertainable as wave motion;

ii. in 1900 Einstein, however, discovers that light consists of particles (photons).

According to the type of experiment one applies to it, light therefore exhibits sometimes wave character then again quantum character. This is the ‘paradox’ of light.

Note.-- It is clear that Pigani uses the term “contradiction” in case b in the improper sense of “opposite.

Thus we can now say that matter (energy, information) simultaneously or after - exhibits both order (deterministic then or almost) and disorder. One more ‘paradox’ in matter.

2.-- Surge.

Says E. Laszlo: in the natural sciences or biology, for example, the direction that a two-pronged system will take is unpredictable. Why/why not?

An even exact knowledge of the initial conditions of the system itself or of its environment (hyper- or super-system) does not allow one to deduce the progression from what comes before.

All one has at one’s disposal are “fluctuations,” i.e., phenomena in or outside the system that involve a degree of coincidence.-- At least until when one or more fluctuations again dominate the system (after the fork in the road).

3.-- Two-pronged.

Always according to E. Laszlo, o.c., 14, 17.-- Generally speaking, 'fork in the road' is the divergence of 'roads'. Fork.

The more recent redefinition of "fork in the road" comes:

i. from the theory concerning "dynamic" systems,--a recent branch within classical dynamics,

ii. from thermodynamics concerning the disequilibrium (= thermodynamics concerning the irreversible processes). This natural science analyzes the structure of forces ('dynamics') and the development of the 'complex' systems in the material universe.

As in the examples above, when systems shift from equilibrium to near-equilibrium and, especially, to far-out-of-equilibrium, "dichotomy" occurs.

a. Balance.

'Equilibrium' here means not only symmetry (reciprocity) and rest (static system), but also and above all a 'dynamic state' such that the internal forces operate in such a way that the system does not lapse into inertia ('inertia'), but remains 'active'.

Think of the water wheel before water is supplied and also when there is equilibrium and near equilibrium, from any water supply.

b. Far out of equilibrium (far out of balance).

If a system gets far from its equilibrium, then sudden, non-linear events occur. For example, purely inorganic systems then reach the level of biological beings and even that of human culture.

Which involves a kind of broadly conceived "cosmic" evolution.-- O.c.,17.

A "fork in the road" founds:

a. an opaque 'disorder' (we now know how limited, indeed, determined (at least in the inorganic world) that disorder is) - which corresponds to the Platonic concept of 'anankè', 'fate' (what happens to us without being transparent),

b. however, in such a way that 'creative forces' are at work in this disorder, which may create another state (a re-established system).

4.-- Unsteady/ shaky system.

This is pointed out by I. Prigogine, *Une nouvelle alliance de la science et de la culture*, (A new alliance of science and culture), in: *Le Courrier de l' UNESCO 41* (1988: May), 9/13.

a. Unstable, stable system. Predicting the position of the Earth is possible because the movement of the Earth around the sun - at least as far as the essential characteristics are concerned (one neglects, for example, the disturbances caused by other planets) - is a stable dynamic system.

Modern dynamics up to and including Einstein postulates that the entire universe is such an unchanging, “deterministic” system.

b. *Shaky(b), unstable system.*

However, predicting the development of the Earth’s climate within a relatively short period of time (as e.g. meteorologists do) is unfeasible because short-term climate states are an unstable dynamic system.

Here Prigogine refers to the meteorologist Edward Lorenz (*ETM--harm 169*).-- People like Henri Poincaré (*ETM--harm 143*) and the Russian mathematician Andrei Kolmogorof,--like a Karl Popper (the famous epistemologist) postulated a universe consisting essentially of unstable systems.-- Thus Prigogine regarding the crisis of classical Modern dynamics.

Final Summary -- “The New Rationality”.

We saw, in passing, what “rationality” was (*ETM 05, 18*).

A.-- For the Brussels School, the presupposition of a universe as an unstable system is a definition of ‘new rationality’ (a.c.,13). ‘Rational’, then, is henceforth reason insofar as it has insight into unstable systems. -- More to the point, this ‘new’ - chaological - rationality extends a Prigogine to the whole of culture: it is the pedestal of a new culturology (including (re)education).

Sometimes this view is also called “holism” but in the sense of “(re)situating man within the dynamic, ‘evolutionary’ structures of an unstable universe.

Consequence: Prigogine sees in it a rapprochement between the natural sciences and the humanities.

Which brings to mind *C.P. Snow, The Two Cultures and a Second Look*, London, Cambridge University Press, 1974 (reprint): he, too, sought an amalgamation of ‘culture 1’, natural science education, and of ‘culture 2’, ‘humanistic’ (literary) education. One can call this ‘cultural assimilation’.

B. -- *In contrast, cultural differenti(al)iation.*

E.g. *Herman De Dijn, On the gap between science and culture (and whether it should or could be closed)*, in: *Onze Alma Mater* 1988: 4, 299/309, who puts a (Postmodern, gaps emphasizing) question mark behind the theory concerning the two formation systems of the Brussels School, as well as that of a Frank Capra.

De Dijn, from a narrow Existentialist point of view, situates Holism, typical for Prigogine/ Stengers and Capra, within an incipient cultural revolution of which other progressive movements such as ecologism, liberation theology, feminism etc. are also part (a.c., 301). Not a word is mentioned about the term 'New Age', which is however regularly mentioned as a comprehensive term -- alongside that of 'Postmodernity'.

De Dijn - rightly - emphasizes that it is not rigorous science itself, which involves an extremely high degree of specialized knowing, but a representation of it in unspecialized terms that is incorporated into life - "existence," as it has been said since S. Kierkegaard (1813/1855; "father of Existential thought").

"That which is in fact disseminated is not the scientific insights themselves but mostly a decoction." (A.c., 301).

In this regard, De Dijn makes little or no distinction between vulgarized science and - what he calls - "all kinds of para- and pseudo-science, often accompanied by a surrender to all kinds of unfounded practices and panaceas" (a.c., 300).

What Prigogine/ Stengers and even a Capra advocate should not be lumped together as quackery (which, by the way, does exist and is prosecutable). As for those ... (discarded by Rationalists) quackery, the distinction between valuable and worthless or deceptive is not always as simple as De Dijn hints.

De Dijn confuses too much the contribution of the sciences with its purely theoretical part. "To find a right attitude to life is something entirely different from possessing a theoretical solution" (a.c.,303). This is, of course, quite correct. But the question is whether the vulgarized (or non-fulfillable) chaology e.g. does not bring precisely something more than that, namely models of thought that are analogically transferable to other cultural domains.

To speak of existence, life, in terms of "meaningful living," "acceptance of self. -- of a set of existential virtues ("endeavoring to live in truth") is, perhaps, complementable by speaking of the same existence in terms of "system," "equilibrium," "near-equilibrium," "far-from-equilibrium," "disorder," "fork in the road," etc.

Sample 23. -- Harmology: crisis theory. (176/184)

A. Noiray et al., *La philosophie*, t.1 (*Abondance/ Expression*), Paris, 1972, 83/86 (*Crise*), teaches us that the term 'crisis' - in the Antique Greek 'distinguishing', but also 'that which decides about something (denouement)' or 'decisive phase of e.g. a disease' - actually: shifting, - became common in the professional sciences and philosophy during the XIX - century.

With the Liberal thinkers and with Marx in the economic sense; -- with Nietzsche and Freud in the culturological (psycho- and sociological) sense; -- with Husserl, the Phenomenologist in the science-historical sense. In doing so, it is immediately clear how analogously -- partly identically partly non-identically -- the term 'crisis' is used.

The economic crisis.

One speaks of "crisis" in the economy when the whole system of the economy becomes "unstable" (unsteady system). When the 'active population' - through analysts especially - wonders "how the dime of the economy will roll".

This is apparently a "far out of equilibrium" situation, with all the unpredictability that entails.

a.1. Classical-Liberal crisis theory attempts to show, on the basis of economic optimism ("progress belief 'growth belief'"), that economic crises are either impossible or transitory.

a.2. But the "phenomena" (the ascertainable facts) falsify, at least in part, this theory. Consequence: since "the Great Depression" ('depression' means 'protracted crisis') within the Capitalist systems of the West - between World War 1 (1918+) and World War II (1939+) - the crisis has been central to economic theorizing or, at least, heavily weighted by

b. Karl Marx, as one of the first, tried to analyze the crisis in depth. His interpretation: it is the result of overproduction.

The Capitalist system, after all, places the profitable production of goods and services at its center; all the more so since it has the means of production--land, factories, machinery, capital. Thus, with gradual increases in volume (*ETM--harm 159*), usually rather unexpectedly, overproduction arises,--with the consequent effects on sales.

For the Marxist, this is one type of "contradiction" with reversal to the contrary: because production "succeeds" to such an extent, it turns from profitable to loss-making. "Harmony of opposites".

c. The cycle -- or cyclical theory claims that the economic system is an up-and-down: phases of prosperity (“economic boom”) alternate with times of adversity (supply outstrips demand, resulting in decline (“recession”), crisis, even depression),-- some three to four per century. This frequency has been falsified by some since the great crisis of 1929.

Brief structure description (ETM--harm 90; 117; 121; 123).

It resembles - what the popular man calls - “a demonic or infernal cycle.” If overproduction - oversupply of goods and services -, then lack of sales (the market does not keep up).

If such a stockpiling occurs, prices will fall and people will be thrown off the market (which in turn will reduce purchasing power).

In summary, “La crise est un cycle qui s’étend” (Crisis is an expanding cycle).

Yet the Capitalist system - unlike many a Socialist experiment (think of the depression in the Soviet countries) - has survived every crisis so far :

a. the free market system, as a dynamic system, contains, in addition to equilibrium and near-equilibrium, also far-from-equilibrium. The crisis therein is a series of “fluctuations” with opaque disorder, which usually presupposes gradually increasing factors (overproduction, reduction of purchasing power);

b. but that same free-market system contains dichotomies: even in a depression, factors that are independent of what preceded and that allow for a ‘qualitative jump’ to a reestablished system stick out, so far. Thus the free market system survives its ‘disorder’.

The psychological crisis.

Bibl. s.: Ch. Zwingmann u.a., *Zur Psychologie der Lebenskrisen*, (On the psychology of life crises), Frankf. a. M., 1962.

The book shows us a series of qualitative leaps.

a1. Growth crises (in children and adolescents; e.g., crises leading to adolescent suicide);

a2. crises typical of middle age (unmarried - and ompotent crises, marital crises);

a3. crises typical of the “third age” (premature aging, personality changes, climacteric, retirement, periods of mourning).

b. crises independent of age (seasonal crises, illnesses, dying crises).

Note.-- Concerning stages of life: J.K. Feibleman, *The stages of Human Life (A Biography of Entire Man)*, The Hague (The Netherlands), 1974 (*the single person as changing system*).

Definition: -- Ch. Zwingmann, *Einführung*, (Introduction), (in: Ch. Zwingmann u.a., *Zur Psychologie d. lebenskrisen*, xi/xvii, clarified as follows.

(1) Subjective.

A life crisis involves “fearful expectations”: one fears a more or less profound deterioration.-- Note: when one uncertainly expects something happy, one does not speak of crisis, even if the change is very profound. - Crisis involves a pejorative appreciation.

(2) Objective.

A crisis is one type of change, with two specific differences.

(i).-- Quantitative.-- Within a period of time (interval) the psyché changes faster than before and after.

(ii).-- Qualitative.

The crisis as change - as opposed to the previous and subsequent life process - is unpredictable (way out of balance).

Says Zwingmann: “Die Krise steht therefore, sozusagen, unter einem Fragezeichen” (The crisis (as crisis, understood) is, so to speak, ruled by a question mark). In other words: one never knows how the dime of the psyché-in-crisis can roll. -- So much for the regulatory model.

Appl. model. -- The Severe Illness.

From a medical - clinical point of view, according to the proposer, the dynamic system that exhibits a severe disease is a phenomenon which, with gradual change, suddenly includes a prognosis-free stage that can end either in life or in death. What is pure “disorder” regarding biological life. The undecidability is expressed in that ‘either/or’. Unpredictability.

Appl. model. -- Identity Crisis.

Human systems, as soon as they - individually, intersubjectively (between individuals), socially (in community context) - in the face of all kinds of quantitative changes live through a qualitative leap (e.g. in the life of urges; think of wishful thinking), which contains a ‘substantial’ (operating in depth) unsatisfactoriness, are “in a state of crisis.” Note: the overall structure of the psyché is at stake and as a course is unpredictable.

Chaological interpretation.

The current disorder doctrine interprets biological and psychological crises as follows.

E. Laszlo, o.c., 13.

The term “fork in the road” is applied to it. If complex systems end up in a hypersensitive reaction phase (*note* : phaseology (*ETM-harm 149*), and thus are difficult or even impossible to grasp, then they exhibit the possibility of double-jumping.-- Laszlo emphasizes:

i. Some understanding of what tween is actually is important, for we humans are ourselves complex systems subject to “tensions. (*ETM--harm 117*: taseology).

ii. Also the systems in which we live -- apart from the cosmos, e.g. the technologized societies -- are their own type of complex system.-- As individuals we are not necessarily subject to “tensions” (understand: crisis tensions, “acute” tensions). But it is clear that e.g. our societies are indeed subject to acute tensions. -- More than that: the level of tension they reach may well reach a critical threshold (*note*: dialectically, “a qualitative leap”). Thus Laszlo.

Conclusion. -- A theory of crises such as that of Zwingmann et al. corresponds to a very large extent to the recent chaology on the subject: they confirm each other, although they partly use other terms. At the same time both theories are a confirmation of dialectical presuppositions, which are both confirmed and improved by them.

The culturological crisis.

E. Laszlo, o.c., 16.-- Laszlo gives briefly outlined examples of cultural crisis.

1.1. The system of Tsarist society, in 1917, due to internal disagreements and military defeat, passed the critical threshold (understand: crisis threshold) of its permanence (‘stabilité’).

1.2. Out of that chaos of 1917, with the October Revolution rises a Lenin with his unexpected Marxist system of the Bolsheviks.

2.1. The system of the Weimar Republic, in Germany, 1920+, reaches the threshold of its permanence and lapses into disorder.

2.1. Out of that chaos rises a Hitler with his Nazi system.

3.1. 1948: the system of the Nationalist Shan Kai-shek with the powerful Kuo-Min-Tang collapses.

3.2. The Communist system of Mao Ze Dong (Mao Tse Toeng) rises from its ashes.

Conclusion: chaology can serve to represent cultural denominations of a revolutionary nature as accurately as possible. Do not forget: the three cited revolutions are more than political inversions: they are 'ideological', i.e. they put forward a well-defined concept of culture, which replaces or, at least, restores or improves the previous concept of culture that has become 'dilapidated' ('unreal' (*ETM 60*)).

In chaological language.

E. Laszlo, o.c., 18.-- Concerning the domain of the humanities and/or humanities, the proposer says what follows.

(1) When the "belief" (the quietly putting first) in the established order becomes "unstable" (unstable dynamic system), all sorts of "fluctuations" occur. These take the form, in the human world, of conceptions and/or movements (advocating conceptions) which want to revise the social order that has become questionable.

(2) Striking difference with non-human systems: a human system, even in far-reaching disequilibrium ('far out of equilibrium'), is not necessarily uncontrollable. Reason: the 'actants' (the acting beings) in society are the people themselves. Thus it is conceivable that they, situated within the system itself, themselves intervene in the multiplicity of fluctuations (think: conceptions, currents around conceptions).

Among such fluctuations, E. Laszlo names new "life styles" (a new term), alternative forms of behavior (think of the Hip behaviors in the sixties), technological inventions (think of the computer revolution and the information society associated with it), Ecolo-Pacifisms, -- we add to his list: the Neoliberal ideas, which are taking root as far away as Marxist states -- think of the Eastern Bloc.

Note.-- One can see that, when one transfers a term like "fluctuations" from the physical (natural-scientific) order to the human (human- and human-scientific) order, the proper meaning becomes "transitive" (metaphorical/ metonymic; *ETM 20 vv.*).

As we *ETM-harm 175* have already clearly stated. Which - in passing - is why e.g. Existentialists see a gap rather than a connection between a (merely) physical and a (merely) humane world.

On that background, one can very well understand the "critical" reflections of a De Dijn.

The ecological crisis. *Prigogine, Une nouvelle alliance de la science et de la culture*, (A new alliance of science and culture), in: *Le Courrier de l' UNESCO*, 1985 (May), 11.- Everyone is beginning to realize that our living space - our "ecosystem" - is moving toward a critical reversal.

Behold how Prigogine, with the optimistic spirit of his disorder doctrine, sees it.

(i) Thanks to the development of new observational models - from radioactive isotopes to artificial satellites - we have learned to recognize that eco-systems are shaky systems.

This, -- precisely when nonlinear dynamics (*ETM--harm 171*) provides us with the theoretical means to understand the scaling ("amplification") of fluctuations and the appearance of twins that may occur in such systems.

(ii) 1. An improved understanding of the wobbles of the ecological systems -- together with the analysis of the future prospects of our planet (*note*: a kind of futurology) is of course a priority.

2. We must go beyond the idea of conservation. We know that - ten thousand years ago - our planet had an optimal climate in the Sahara and Gobi deserts, where civilizations flourished.-- Nothing prevents us from cherishing the utopia of a return of such facts.

Note.-- This contrasts sharply with the sour and pessimistic outlook (a form of doom-mongering, perhaps), which one regularly finds in "alternative" circles. The spirit of Modern natural scientists - since the days of a Galilei or a Newton still blows in Prigogine's chaology and the 'new rationality' he advocates.

Self-organization ("auto-organization").

ETM--harm 166 taught us that the Brussels School mentions self- or spontaneous order.--This reminds of "the invisible hand" that establishes order out of disorder, from the liberals.

Bibl. st.: *Guy Sorman, Les vrais penseurs de notre temps*, (The true thinkers of our time), Paris, Fayard, 1989, 245.

The author is in interrogation with Friedrich (von) Hayek (1928/1992), the man who founded Neoliberalism, which e.g. mirrors Reaganism and Thatcherism. See here how 'chaological' (von) Hayek thinks.

"Liberalism is the only political philosophy that is truly 'Modern.'

In fact, it is the only one that can coexist with the most recent physical, chemical, and biological disciplines, particularly with disorder science, which Ilya Prigogine “formalized” (*ETM--harm 84* (logical syntax), 94 (“formal systems”))

As in nature so in the free market economy:

from chaos emerges order. The spontaneous ordering process of millions of intelligence (= information) and decisions leads not to disorder but to order of a higher order (*ETM--harm 177*: survival even of economic crises)

Adam Smith (1723/1790; *Wealth of Nations* (1776), the magna charta of older Liberalism) had, first, an initial premonition of this, two centuries ago.

No one can really “know” - says always (von) Hayek - how to plan economic growth (*note*: planned economy), because we do not really “see through” its workings. The free market mobilizes such a vast number of decisions that no ordinator - no matter how powerful - can process them.

Consequence: believing, as Socialism does, that state power can replace the market is an absurdity.”

Von Hayek says, “no one can really know”; “we do not really fathom the workings of the market”; “if such an oversimplification of decisions, then even the most powerful ordinator is powerless”. Such is the unpredictability of the dynamic system of economics. Translated into chaological language. Unpredictability that counts on “the invisible hand”, which Smith et al. talk about, to “explain” (an inappropriate term, here) the fact that despite chaos-in-market form, abundance regarding goods and services arises. Which is precisely what does not take place when millions of state officials in state service, want everything to run ‘orderly’.

Von Hayek, indeed, correctly understood the very strong resemblance between Prigogine’s self-ordering and Smith’s invisible hand.

Self-ordering/ invisible hand.

These two terms seem to be ‘explanatory’ but are they really? One could perhaps also speak of a series of coincidences that have succeeded so far. But to explain something out of pure chance, to make it understandable,--what kind of ‘explanation’ is that?

Recall *ETM--harm 180*: Did Leninism, Nazism, Mao-Ze-Dong communism ... risen out of chaos as a result of self-ordering or invisible hand(s) ? The result, in any case, is not appetizing.

“The difficult or even unguessable rules of the game.

Bibl. s.: Raymond Ruyer, *La Gnose de Princeton (Des savants à la recherche d’ une religion)*, (The Gnosis of Princeton (Scientists in search of a religion)), Paris, Fayard, 1974.

The Princeton nosis is the name for the philosophy of a number of American professional scientists “in search of a religion”. They are also called “Cosmolaters” (= Cosmos worshippers), “Palomarians” (allusion to the famous telescope of Mount Palomar). The term “Theosophists” is, perhaps, still the best, because in addition to phenomenal and rational, they also postulate transphenomenal (transempirical, transrational) realities (*ETM 18*).

Well, these Cosmos worshippers, who are pantheists (recognizing no personal Supreme Being), nevertheless put forward an “unknown game master” (O.c.,13). See here how.

(I).-- Model.-- the Eleusis card game.

Game Master(s) is, in turn, any player/player who draws up a set of rules, drawn up in secret but put on paper, which, after playing, are revealed.

So, for example, the leader of the game puts a card on the table and the other players react to it by guessing (what Peirce would call ‘abduction’). If a card is placed on the table, it is placed to the right of the first card, if she succeeds, blindly, in responding to the secret rules. The player who guesses the secret rules the quickest, gets rid of all his available cards first.

(II).-- Original.

In the model of the Eleusis card game, we see the actual, secretive structure of the entire cosmos, “the system of real life” (o.c.,13): life in the cosmos “puts a card on the table,” the rules of which we are supposed to guess.

Transfer: Perhaps Prigogine’s self-ordering is just a name for such a secret game plan, -- who knows?

New Age.-- The term “New Era.

not usually translated from English -- signifies an increasingly pervasive cultural movement, which, in its origins, is Astrological (the Aquarian Age perk).

In other words: however unmodern, a number of Postmodernists (*ETM 41*) - also “in search of a religion”, but profoundly different from the Princeton-Gnostics - propose that our cultural crises are the reflection (model) of a “cosmic revolution”, which only the Astrologer recognizes.-- One sees: since the Biblical belief in God disappeared, a lot of “Ersätze” (substitutes) appeared.

Crisis Magic.

This leaves us in, the sphere of New Age, which actualizes Archaic conceptions.

Bibl. s.: *Arnold van Gennep, Les rites de passage (Etude systématique des rites)*, (Rites of passage (Systematic study of rites),), Paris, 1909-1, 1981-3. -- Now reread *ETM--harm 111 (Primitive psychodrama)*.

The fact that the Pomo-Indian collides with a turkey, in the midst of the fields, causes a 'crisis', even an identity crisis (for he is no longer himself when he returns home). In Van Gennep's language: the 'encounter' with the bird is a 'passage', a 'transition' that contains a critical threshold.

Van Gennep thus studied going through a doorway, crossing the threshold, hospitality (which "brings" a non-family member over the threshold), adopting a (foreign) child,-- pregnancy, parturition, birth,-- infancy, puberty,-- initiation, ordination, -- engagement, marriage, -- funeral, -- seasonal change.

These are as many "transitions," understand: in the mind of Archaic humanity crises.

Says *H. F. Lans et al, Volkenkundige encyclopedie*, (Ethnological encyclopedia), Zeist/ Gent, 1962, 20/34 (Religion and magic): we acts (i.e. sacred or sacred acts) or 'rites' "bring man over his crises."

Indeed: the "soul" (possibly: soul substance, life force, concentrated in the soul (*ETM 05*),-- "dunamis", virtus (Lat.), in the language of the Gospel), in the midst of a "far-out-of-balance state", in the midst of a qualitative life-jump (*ETM--harm 159*), falls into "soul-death", i.e., into deficiency of life force.

To remediate this disorderly situation, Archaic cultures founded "rites," involving catharsis, purificatio, (Lat) -- cleansing acts.

The magician(s):

- (i) presupposes the soul-in-need,
- (ii) cleanses them ("cleansing" in the narrower sense) and
- (iii) elevates them on a higher plane.

In the language of traditional Christian theologians, (disordered) nature (and outside nature) (i) is taken as it is, (ii) is purified, and (iii) is elevated, re-established, -- in historical language, "actualized" on a higher, in casu (in this case) "supernatural" plane.

In other words: with this, a fork in the road is resolved by an evolution on sacred ground, i.e., on the ground of the mysterious life force ("soul").

This explains why so many revitalization religions are showing up to deal with the current cultural crisis. Revitalization amounts to reestablished order.

Sample 24.-Harmology, comparative (comparative) method. (185/194).

This course is not only a logic, with its presuppositions (= foundations, ‘fundamentals’), but also a doctrine of method. We can now outline the first and most general method. All other methods presuppose comparison.

A historical fact.

We are 1990. Two hundred years ago, in Figeac, Jean-François Champollion, the French Egyptologist, was born,--which of course, in Paris, was celebrated with an exhibition. He dissected the infamous stone of Rosette: by comparing the Egyptian text, in hieroglyphics, with the Greek text on the stone, Champollion deciphered hieroglyphics for the first time.-- This is a spectacular example of the comparative method.

‘Method’

Ancient Greek has the term ‘methodos’, the ‘way’, approach, method of approach to be followed. The ‘way’ (hodos) is the one that leads to the stated goal, namely to describe and interpret (explain, make understandable, understand).

Bibl. st.:

-- L. Davillé, *La comparaison et la méthode comparative (en particulier dans les études historiques)*, (Comparison and comparative method (especially in historical studies)), in: *Revue de synthèse historique*, xxvii (1913): 4/33; id. xxviii (1914): 201/229;

-- H. Pinard de la Boullaye, S.J., *L'étude comparée des religions (Essai critique)*, (The comparative study of religions (Critical essay)), II (*Ses méthodes*), Paris 1929-3, 40/87 (*La méthode comparative*);

-- M. Foucault, *Les mots et les choses (Une archéologie des sciences humaines)*, (Words and Things (An Archaeology of the Humanities)), Paris, 1966, 66ss. (*Descartes' theory of order*);

-- I.M. Bochenski, *Philosophical methods in modern science*, Utr./ Antw., 1961, 149/155 (*The methods of Mill*);

-- H. van Praag, *Measuring and comparing*, Hilversum, 1965 (*quantity/quality; addition, topological arrangement and sequence; counting, measuring and weighing; gradation, interval measurement and time measurement*).

Compare.

First, thorough note: do not confuse, in language usage, compare with “equate” or with “look for or emphasize similarities.”

Those who compare, seek relations (*ETM--harm 77*) - reflexive (loopy) of something with itself or as itself, not reflexive of something with something else--.

He who compares, pays attention to embodiments (*ETM--harm 80*) - reflexive (something embodies itself), non-reflexive (something embodies something else). Whoever compares, note identities (*ETM 24*) - reflexive or total of something with itself, non-reflexive or partial (analogous) of something with something else.

He who compares, in a value-free sense, also pays attention to the absence of relations, contents or identities: he/she then also pays attention to differences and gaps. The presence and absence is the work of the comparative.

Compare.

Second, fundamental remark: do not confuse relations, contents, identities with metaphorical relations, contents, identities! Also the metonymical relations, contents, identities are relations, contents, identities.

Reread for a moment in this sense *ETM 24 (metaphorical, as well as metonymic synecdoche)* as well as *ETM--harm 90 (distributive and also collective structure (all, as well as whole)), 97; ETM--harm 103 (iconic and indicative sign; ETM--harm 106 (similarity and coherence).*

Carefully review the basic differential *ETM--harm 112*, where it is also said that ordering also sees opposites.

Decision.

The whole harmology stands or falls by its method, comparing.

A slogan by Max Müller (1823/1900; religious scholar).

Remember it well “The comparative spirit is the truly scientific spirit of our age, nay of all ages”. (The spirit of comparison is the truly scientific spirit of our age,--what am I saying? Of all ages).

In other words: confronting data with each other is the true science.

A definition.

L. Davillé, La comparaison, in: *Revue*, xxvii (1913): 23, says:

“(1) **Instead** of dealing with individual cases, when it comes to dealing with phenomena or objects,

(2) the comparative method seeks to highlight collections (‘ensembles’) that are either (i) similar (ii) or complementary.”

Davillé thus also sees the duality “collection/system” (collection relies on distributive similarity; system on collective coherence).

A definition.

R. Descartes, Regulae ad directionem ingenii, xiv, says:

“(1) If one disregards the intuition (‘contemplation’) of a separate reality,

(2) then - it can be said - through the comparison of at least two realities, one obtains all knowledge.” (*M. Foucault, Les mots et les choses*, 66).

Unity doctrine.

Unity' in ancient Greek meant, among other things, identity. Comparison is therefore both unity in the multitude and seeing the multitude in the unity. Plurality' both metaphorically (difference) and metonymically (gap). Unity' both metaphorical (similarity) and metonymical (cohesion).

Update-- H. Jans, *Order out of disorder* (Ilya Prigogine, Belgian Nobel Prize winner in chemistry 1977), in: *Streven* 1978: March, 527v.

Fr. Boenders, *Prigogine and Wildiers on Teilhard de Chardin* (1881/1966; Jesuit paleontologist), in: *Streven* 1982: July, 930/941.

Boenders writes: "Ilya Prigogine : (...) Our time is indeed characterized - and this will become even more evident at the end of this century - by a search for unity in diversity. One of those who best understood the necessity of this search for unity beyond the realm of science was precisely Teilhard (...)" (A.c., 930).

The axiomata.

The postulates of all compare we can with R.A. Koch, *Die Uraxioma in ihrer Bedeutung für die philosophischen Grunddisziplinen*, (The Uraxioma in its significance for the basic philosophical disciplines.), in: *Tijdschrift v. philos.* , 31 (1969): 4, 749/766, as follows.

a. There is a universe (*note*: total reality) with all its parts. All that is called "being(s)" is either a part of the universe or that universe itself.

b. There is a universe with all its parts valid. All that is called 'being(de)' has validity ('applies') either as part of the universe or as that universe itself.

Notes-- Koch formulates the prepositions twofold: descriptive and true-divine (*ETM* 33)-- 'Universe' is collection and system of, all that is.

Mathematical.

In *Le Courrier de l' UNESCO (Voyage au pays des mathématiques)*, (Journey to the land of mathematics), 1989: Nov., 11, we read, "The description already given fifteen centuries ago by the Greek thinker Proklos of Constantinople (410/ 485) says: "The mathematical mind exposes the one in the many, -- the undivided in the divided, the unlimited ('infinite') in the finite."

Edmund Husserl (1859/1938; founder of intentional phenomenology), in his *Philosophie der Arithmetik*, (Philosophy of arithmetic), The Hague, 1970 (a work from 1891) thus begins with the conceptions of 'multiplicity'/ unity' and 'number'. Unity theory can be called the mathematical part of thinking.

Note:-- The ancient thinkers possessed a number of mathematical concepts.-So:

- a. 'stoicheion' element (*ETM 01*);
- b. 'plèthos', collection (quantity);
- c. 'sustèma' collection, system
- d. 'arithmos', number.

For example, Thales Van Miletos (-624/-545; first Greek philosopher) defined number as follows. "The first definition of number is attributed to Thales, who defined it as "a collection of units" ("monadon sustèma"),--a definition almost identical with Euclid's, namely "the multitude made up of units". (...) Eudoxus defined a number as a 'determinate multitude' ('plèthos horismenon')". (*Thomas L. Heath, A Manual of Greek Mathematics*, Oxford, 1931-1, New York, 1963-2, 38).

Translated: "The first determination of the essence of 'number' is attributed to Thales. He defined 'number' as "a set of units", -- a definition almost identical to that of Eukledes, namely "a collection consisting of units". (...) Eudoxos of Knidos (-406/-355; mathematician-astronomer) described 'number' as "a well-defined set".

Note:-- In Thales' definition the term 'monas', unity, occurs. This is defined, in Antique Greek thought, particularly the Paleopythagorean (*ETM 04*), twofold', the unit exists for any set or system,-- terms that refer to at least two units. Thus the number 'two' is the smallest number, immediately after the 'one' (unity). So that 'the monad' (this is also how the term 'monas' is translated) exists both for each 'number' (in the Old Greek sense) and in each number as a unit of matter. Cfr. *O. Willmann, Geschichte des Idealismus*, I (*Vorgeschichte und Geschichte des antiken Idealismus*), (History of Idealism, I (Prehistory and history of ancient idealism)), Braunschweig, 1907-2, 272).

'Analysis' and 'synthesis' as a general method.

The great tradition on method theory has always held that comparison is the method par excellence.

Ch. Lahr, Logique, 550/556 (*La méthode générale : l'analyse et la synthèse*), (The general method: analysis and synthesis), confirms this.

1. The analysis (ana.luo, I dissolve something into its elements) is the dissection of a totality into its 'parts'. The 'synthesis' (sun.tithèmi, I put together) is the (re)composition of the totality, which was broken down by the analysis.-- Remember 'totality' is both 'collection' and 'system'.

2. Lahr distinguishes two types of analysis and synthesis:

- a. the 'rational' analysis/synthesis;
- b. the trial-and-error (experimental) analysis and synthesis.

The “rational” compares internal and external concepts or truths. The experimental compares extramental realities, which are located outside the mind of man.

For example, I can dissect (analyze) the term “spirit-gifted living being” and again think together; I can dissect the proposition (truth) “Man is a spirit-gifted living being” and again think together. That is “rational” analysis/synthesis.

But I can, in experimental psychology e.g., check whether that definition corresponds to the reality of concrete people. Which is experimental analysis/synthesis.

In the language of I. Kant, one would speak of “analytic” (rational) and “synthetic” (experimental) analysis/synthesis.

Note:-- The Platonic meaning of ‘analysis’, backward examination of a reality, and of ‘synthesis’, forward examination of a reality, signify ... something different from what a Lahr means by it. We have already touched on this briefly *ETM 02 (hypothetical method)*.

What Lahr’s definitions do correspond to within Platonism is the “stoicheiosis” (Lat. elementatio), the stochiastic method, which consists of what Lahr calls “analysis” and “synthesis.”

The Cartesian method.

René Descartes (1596/1650; founder of Modern thought) saw in mathematics--next to direct intuition or “contemplation” (*ETM--harm 186*) and the experimental method (think Galileo)--the paragon par excellence of philosophy. He was not merely methodical in his reasoning; he wanted to be a methodologist before anything else.

Bibl. st.: E. Lenoble, *René Descartes*, in: J. Bricout, dir., *Dictionnaire pratique des connaissances religieuses*, (Practical dictionary of religious knowledge), II, Paris, 1925,778/786. Lenoble characterizes the Cartesian comparative method.

1.-- ‘*Mathesis universalis*’.

As M. Foucault, *Les mots et les choses*, (Words and things), Paris, 1966, 66/72, explains, Descartes intended a general theory of order, which he conceived “as a mathesis, understood as a universal science of measure and order” (o.c., 705.). ‘*Mathesis universalis*’ is “comprehensive mathematically conceived theory of order”.

2.1.-- *Totality/element.*

‘Reason’ (‘raison’) - according to Descartes - grasps, to begin with, something with its intellectual intuition, which grasps the totality, globally. The same ‘reason’ grasps “le simple”, the singular element “ready and clear”.

Consequence: the full Cartesian method involves division of a whole into constituents - 'simples' - and recomposition into the whole. Analysis and synthesis. Global method but also and especially disaggregating method,-- to avoid vagueness. The 'global method' leads, indeed, to vagueness.

2.2.-- Analysis and synthesis.

a. Faced with complex data - compound and even complicated data - we must break it down until we uncover its irreducible elements.

That Descartes does not forget the totality, is clear from what follows: the 'and umération complète', complete enumeration (= *summative induction*; *ETM 39*) examines at the end whether all separate components or 'simples' have been examined and are ready for the mind. That is the testing of the analysis.

b. Only now can the recomposition of the totality begin. One by one we think the elements together according to singular relations. Thus from the simplest data -- step by step -- to the most complex.

Testing: again 'and umération complète', complete counting, summative induction. Checking whether all relations and all elements have been dissected and recomposed of is a test of the synthesis.

Note:-- What the Ancient Greeks called 'akribeia', accuracy, becomes, from the Modern natural sciences, exactness, to the mathematical swimming precision.

Note:-- Idiographic/ nomothetic.

'Idiographic' means "that which reflects the unique individuality" (e.g., the local color of a landscape; the uniqueness of a person (*ETM 30: articulated concept*)). 'Nomothetic' is "all that represents the universal (general)" (*ETM 30*).

Fr. E. D. Schleiermacher (1768/1834)

Founder of the current Hermeneutic method (*ETM--harm 135: Dilthey*), in Romantic spirit, says that Hermeneutic psychology proceeds in two steps.

(1) Divinatory method.

Schleiermacher seeks to "directly understand" a given ("unmittelbares Verstehen"). "The divinatory (literally: empathizing) method consists in transforming oneself in some sense into the other (human being) in order to grasp the individual immediately."

(2) Comparative method.

This Schleiermacher calls "mittelbares Verstehen" (indirect understanding). "The comparative method looks at who is to be 'understood' (*note:* the 'verstehende', 'understanding', or even 'comprehensive' method) as something general (something universal).

It then finds the characteristic (the distinctive) by being compared with others under the same general (universal) point of view.”

(3) Not separating

“Both methods must not be separated from each other.” (*Kl. E. Walker, Die grundsätzliche Beurteilung der Religionsgeschichte durch Schleiermacher*, (Schleiermacher’s fundamental assessment of the history of religion), Leiden / Köln, 1965, 29/30).

Conclusion.

The hermeneutic method, as conceived by Schleiermacher, directs attention first and foremost to the uniqueness of the individual. But it never does this without situating the individual in something general, namely by comparison.

Schleiermacher - in the spirit of (German) Romanticism (late XVIIIth/early XIXth century) - wants to penetrate into the deeper soul and spirit life of fellow human beings (*ETM harm* 130: surface/ depth); 135 (*prosopoeia/ ethopoeia*)).

Note.-- This corresponds to what L. Dévillé calls “inward and outward comparison” (*ETM--harm* 131). Schleiermacher looks first at the individual being that is his fellow man - “divinatory” (i.e. pretty much like the clairvoyant trying to penetrate intimacy) -, yet not without at the same time situating that divided being in something general - “comparative” -.

The divinatory approach is idiographic (it means the individual), the comparative is nomothetic (it means the universal).

Note.-- The terms ‘idiographic’ (‘idios’ in ancient Greek means “what characterizes something/someone in its essence”) and ‘nomothetic’ (‘nomos means, in ancient Greek, “all that is universally valid”) come, actually, from a revivalist on humanities, viz. W. Windelband (1848/1915; axiological Neo-Kantian): the natural sciences look for universally valid laws in ‘nature’; the humanities, especially psychology, look for the unique in all its connections in an event (history) that springs from human ‘mind’.

Note.-- *As an aside*, the measuring method--so frequent in the current sciences--was already set forth as a comparative method *ETM--Harm* 140,

After all, measurement in the Antique sense is always comparing something to a measure.

Some other uses.

The comparative method takes endless forms. In addition to those outlined just now or earlier, here are some more examples.

1.-- *The mathematical equation.*

Anyone who has studied algebra, for example, knows the enormous role played by comparing quantities (how many).

(1). *See e.g. figure calculating*

“ $7 + 3 = 10$ ”. All those who learn arithmetic in elementary school usually do not do anything else but teach such ‘number forms’ (= formulas). But one forgets to see that this is the application of the comparative method: the sign ‘=’ means equality in quantity as it appears when comparing. Only those who compare see equivalences.

(2). *Do we look at e.g. letter arithmetically*

“ $x + y > / = / < z$ ”. It is clear that only after comparing x , y and z can the sign ‘>, = or ‘<’ be put.

The professional scientists - physicists, chemists, biologists, human scientists - who make it to some numerical or literal formula of comparison consider themselves dead wrong.

Bibl. st.: F.J.Thonnard, Précis de philosophie (en harmonie avec les sciences), Paris, 1950, 124/131 (Les sciences mathématiques), points out the central role of comparison in mathematical operations.

2.-- *The language and literature comparison.*

Just one model.-- the syntax (*ETM--harm 84; 98*).

Two terms have taken hold in the meantime.

a. Taxinomics.-- That is classification science (to classify is to order).--

b. Taxonomy.

b.1 General: any classification system.

b.2. Special: the biological classification system (think Linnaeus).

Nor should we forget the term ‘taxology’, i.e., the scientific study of classifying (‘ordering’ by comparison, internal and external) anything.

Appl. model.

(a) *Spoken (grammatical).*

Our traditional speech arts order, comparatively, words and sentences according to juxtaposition and subordination (parataxis/ hypotaxis).

“When the little blonde came running there, his mother was extremely happy”. Main or independent sentence “His mother was happy”. Adverbial or dependent sentence “When the little blonde came running there”.

Platon distinguished ‘onoma’ (nominal composite), subject with what goes with it, and ‘rhèma’ (verbal composite) proverb with all that goes with it.

The 'arrangement' (= order, classification) of words, within the (full) sentence, is governed by that duality: at least one subject (spoken or not) and at least one saying (spoken or not) forms the structure (*ETM-- harm 121, 123*) of a judgment (sentence). The arrangement of words obeys this. So that to compare, here, is to botch structure.

Note.-- Compare juxtaposition/ subordination with metaphorical/ metonymic (// distributive/ collective). Cfr *ETM-- harm 186*. What dost thou discover?

(b) Literatological (literary).

Do we read, for once, an outdated but still instructive work: *J. Loise, Les secrets de l'analyse et de la synthese dans la composition littéraire*, Mons, 1880.

"Unity (*ETM-- harm 187*) - though clearly delineable in opposition to diversity - is unthinkable without that diversity. This is true both in the philosophical and e.g. aesthetic field". (o.c., 3).

Or still: "The unity is only the perfect, condensation ('condensation') of several elements into a harmonious whole." (o.c. 3) .

O. c., 1/22 is entitled 'Le principe "l'unité dans la variété"'. (The principle "unity in variety"). Behold the preposition par excellence of literary analysis.

Appl. model.

Alain-René Gélinau, éd., The Poetry of Transcendence/ La poésie de la transcendance, Paris, Argel, vol. 1, 1984.

This bilingual book is an introduction - poetically then - to Postmodernity (*ETM 41*). Dwell on the American poet Walt Whitman (1819/1892).

"Not I, not anyone else can travel that road for you, -- You must travel it for yourself. -- It is not far, it is within reach. Perhaps you have been on it since you were born and did not know. Perhaps it is everywhere on water and on land". (o.c., 32/33).

Translated, as far as translation goes: "Neither I nor anyone else can walk that road for thee, Thou must walk it thyself. -- It is not far, is within thy reach. Perhaps thou walkest through that way since thou wast born and knewst it not, -- Perhaps it is everywhere on the water and on the earth."

Note.-- One main idea: once beyond the reach of all that is "rational" (*ETM 18*), man, as a solitary individual, stands alone.

The sentences reflect that spread.

Note -- The term “transcendence,” here, means the fact that Postmodern man, e.g., in the form of poetry, transcends (transcends, “transcends”) the merely rational such that he/she explores transrational areas of total reality,-- quite alone (at least so claims Whitman).

The reader(s) of the poem un(der)consciously compares the phrases of the overall text and thus discovers -- with the poet -- its “unity,” which at once also introduces him/her to transcendent realities.-- This confirms Loise’s postulates.

3.-- The space mathematical equation.

Reread *ETM* for a *moment--harm* 93, 104, 188.-- Look at the drawing of the point figures 104. Suddenly, when one understands Paleopythagorean mathematics, one “structures” as it wants: one sees the figures as models of originals, which are the square numbers. Which is done comparatively. ‘Seeing’ is only possible through comparing, confronting,--however unconsciously.

Space Figures Test.

Let us take the frame-figure test (W. Vermoere), as it can be used, for example, in the third kindergarten class to test the mental maturity of five-six-year-olds.

a. Infrastructure (= materials used).

A number of geometric figures complicated’ (not just transparent) to a child of that age are presented. This is the interpretation or interpretation material. Similar to a kind of “initial chaos” (*ETM--harm* 179).

b. Suprastructure (= indication effort).

Look closely at the child being tested, while he is at it: he is entering an intellectual “crisis” (*ETM--harm* 178). It is going through a fork in the road, amidst the disorder that the figures presented mean to it. Downwards (it understands nothing). Upwards (it suddenly sees through the structure): in/through those chaotic figures it discovers a geometrical figure understandable for its age.

It is then said, “The child must ‘structure’ “: in the maze of parts of the presented figure, suddenly, the requested figure emerges before his mind.

First, as Descartes teaches us (*ETM--harm* 189/190), it analyzes (splits up). At the same time or certainly at the end of the succeeding test, it synthesizes the fragments of the splintered figure, which was presented, into the sought-after figure (structure).

Thus the child establishes order twice out of chaos.

Sample 25.-- Harmology: assimilism (concordism)/ identivism/ different(ial)ism (disconcordism). (195/201)

We said it: the comparatist(s) looks both at similarity/ coherence and at difference/ gap.-- But there are emphases:

- a. the assimilist(s), resp. concordist(s) seeks as many similarities and coherences as possible, -- unity in the unmistakable multiplicity and diversity;
- b. the identivist(s) neutrally tries to realize the balance between the two;
- c. the different(ial)ist(s) seeks as many differences and gaps as possible, -- the multitude and the contradictions.

The three attitudes, however, do nothing but compare,-- but with different emphases.

1.-- Assimilism. A model.

Bibl. st.: Daniel Audétat, *Lausanne, capitale de la science politique (Le futur Institut international de politique comparée pourrait établir son siège à Lausanne)*, (Lausanne, capital of political science (The future International Institute of Comparative Politics could establish its headquarters in Lausanne), in: *Journal de Genève*, 14.02.19B7.

The institution, of which the proposer speaks, exists only as a draft. Nevertheless, in the course of 1986+ it brought together researchers from more than thirty countries - universities - from all over the world, in a provisional committee. The initiative comes from the French professor Jean Blondel (professor at the European University Institute in Florence): he wants to elucidate, on a planetary scale, the political activities and the structures that lie behind them,-- “on the basis of the comparative method”. -- Yet we watch carefully.

a. Until now, political science (political science) has been fueled by regional, yes, ethnocentric and “local thinking” studies. Consequence: disparate fragments serve as flawed material for comparative political science.

b. J. Blondel: such studies must be raised to a higher, supra-regional level; we realize - he says - “that we are all part of the same world.”

Conclusion: he understands “comparative politikology” to be the search for “common characteristics” inherent to any politics, within the framework of the multicultural that characterizes our world.

Behind which is a high ethical concern: reaching consensus on a planetary scale.

Note.-- As a thinker, who tries to defend such a concordist position in a philosophical way, it is mentioned *Jürgen Habermas* (1929/ ...), Frankfurter Schule, second generation.

His works, including *Theorie des kommunikativen Handelns*, I (*Handlungsrationalität und Gesellschaftliche Rationalisierung*), II (*Zur Kritik der funktionalistischen Vernunft*), (Theory of Communicative Action, I (Rationality of Action and Social Rationalization), II (On the Critique of Functionalist Reason)), Frankf.a.M., 1981, as well as *Der philosophische Diskurs der Moderne* (12 *Vorlesungen*), (The Philosophical Discourse of Modernity (12 lectures)), Frankf.a.M., 1985, seek to place the notion of “interaction” (“Interaktion”) at the center of our multiculture.

Interaction, i.e. (learning) to live together, to cooperate, on the basis of consensus, rapport; Whereby disputes, in a Modern-rational way, are considered to be reconcilable.

Habermas stands, after all, in the great German tradition of thought of Kant and Hegel, but with as a corrective the Anglo-Saxon Language Analysis (which, among other things, places logical analysis at its center), with an updated Marxism (the Frankfurt School is Marxist, Neomarxist) providing background.

Modernity, after all, is in his eyes not only negative (‘negative Dialektik’), but also positive: Let us purge the unifying Modern thought and action, yet immediately carry it through.”

2.-- Differentism.-- A model.

Consider, e.g., what is called “differential science. For example, differential psychology studies the differences and gaps between distinguishable psychés,-- e.g., the soul life and behavior of child, adolescent, adolescent(s), adult, third age. The emphasis here is not on the similarities and correlations -- the commonalities -- but on what distinguishes and separates.

Variology.

‘Varius’ in Latin means “different, distinguishable, separable”. Variology is the analysis of what shows difference/gap.

Bibl. st.: *H.-J. Hampel, Variabilität und Disziplinierung des Denkens*, (Variability and discipline of thought,), Munich/Basel, 1967, 82/104 (*Variologische Denksysteme*).

The little chapter in this book exposes how thinkers emphasize “variation,” opposites, diachronic and synchronic (*ETM--harm 112vv.: theory of opposites*) and color their whole thinking structure according to it.

Postmodernism.

We already met Postmodernism, *ETM 41*. Now a new trait: fragmentarianism.

1. ‘Postmodernity’ is the ascertainable fact that, in terms of life constellations, we live in a multiculture, a multitude of very incoherent philosophies of life.

It is a repetition of what in the Bible is called “Babylonian confusion” or “Babylonian chaos” (*ETM--harm 179*) the Chaologists also see this, in their way, very clearly). Or it is a repetition of what a Herodotos experienced on his business trips (*ETM--harm 135v.*) (cfr. also *ETM--harm 147*, where the model of the American Peace Corps is discussed with its variants concerning reactions to it).-

Conclusion: ‘Postmodernity is first and foremost a situation, a set of factual data with which we are confronted.

2. “Postmodernism” is an attitude to life in response to that situation.

Without any sadness, the Postmodernist, besides the negative effect and of Postmodernity, also wants to see the positive possibilities:

a. to begin with, he learns to live with it;

b. further, he usually arrives at the equivalence axiom regarding cultures: in his view, one culture is not worth more than another. Thus, non-Biblical religions are equally valid with Biblical ones (Judaism/Christianity/Islam). Thus, Primitives are as much “people-with-culture” as the “cultured” Westerners.

c. Not only differences, but also disputes occur interculturally: instead of consensus, good understanding regarding basic positions, there is (a good dose of) dissensus regarding essentials (think of unborn life: one is for, the other against abortion). Thus, containment goes so far as to co-“contain” the otherness of the dissenter, of the “other.

Behold, briefly outlined, what Postmodernism is. We live in a “fragmentary” culture.

Lyotardism.

An acute form of Postmodernism represents *J.Fr. Lyotard* (1924/1998). Well known is his work *La condition postmoderne*, Paris, Minuit, 1979, with which he raised the issue of Postmodernity on a philosophical level.

Bibl. s.:

-- *Les Cahiers de Philosophie* (Lille), 5 (1988: printemps), *Jean-François Lyotard* (*Réécrire la modernité*); ((Rewriting modernity)).

-- *L. De Cauter, Postmodernism for children*, in: *Streven* 1987: Oct., 77/79.

1.-- *Small stories, yes; the one big or meta story, no.*

The term ‘story’ here means “a view of life and the world concerning cultural history”. Think of the myths of the Primitives, which depict the origin and course of the cosmos,--of sacred biblical history, of the belief in progress of the Moderns (Liberals, Marxists), who, on the basis of ‘reason’ and ‘professional science’ and ‘technology’ - big, comprehensive words - predict a better future.

Meta story.

The term “meta-” refers, among other things, to *Metalogicus*, a work not of logic but about logic and its proper value. Author of it: the medieval humanist *John of Salisbury* (1110/1180).

The term “meta-” also refers to linguistics: “meta-language” is “language over language. Compare this with what we, in speech, call direct and lateral (indirect) speech: “I, Maaike, say that in Saint-Tropez it is very hot, but luckily a cool mistral wind blows;

“Maaike says that in Saint-Tropez it is very hot, but fortunately a cool mistral wind blows.

Analogously, Lyotard introduces the term “*métarécit*,” *metaverhaal*:

(i) each of us, individually,-- each culture, individually has a story, a representation in the form of an understanding of the course of individual or group history;

(ii) meta-stories claim to be able to summarize those individual and group histories and even assess them according to its value.

Well, Lyotard claims -- multicultural Differentist -- that such a thing is impossible. No one can deny the individual and group differences and disputes: their conclusion is that they are not summarizable and not assessable, -- without doing violence to the facts anywhere. The facts are a maze, labyrinth, from which no one can get orderly wisdom. No “grand narrative” creates order out of that chaos.

2.-- *Language dispute. More to the point: language dispute.*

Lyotard takes as an example the separation between “I know that” (descriptive) and “I ought in conscience ... act” (normative, prescriptive).

This is the Postmodernist re-establishment of an old distinction, indeed of an old division, which we brought up at *ETM* 58, namely ‘being/ belonging’ (‘*Sein/ Sollen*’). According to Lyotard, an abyss gapes between e.g. professional descriptive and ethical prescriptive language.

In *Réécrire la modernité*, 45, he says:

a. there is the ‘tinkering’ (‘*bricolages*’, experiments-with-gambling) in current biogenetics, where one clones e.g. embryos to -‘fabricate’ singles ‘to size’;

b. there is, e.g., in France an “ethical committee” that assumes the right to make value judgments about it “in the name of morality.

To which Lyotard: “Can one let biotechnological experiments go their way without making a sound or must one ‘regulate’ (‘réguler’, regulate)--provide them with rules)?

If they are to be regulated, which regulation should be used, a preventive one (beforehand) or a curative one (afterwards)?

But there is more: what is this ‘right’ in the name of which such a commission intervenes? Where does it get its “authority” from? What can it invoke as the “subject of the standard of conduct” (i.e. who decides on the rule?)? This commission labels itself “ethical” (binding in conscience): indeed, it is not political or legal, but ethical. But is there a generally accepted ethics, in whose name such a commission can actually exercise its control over genetic testing (...)?” Thus Lyotard.

Explanation.

(1) *Language*

The biogeneticists speak the language of positive-scientific facts: they speak of the issue in terms of experimental facts, in their laboratories, about which, in passing, there is far-reaching consensus (any researcher can go over them and establish with-one that they are lawful).

(2) *(Meta)language.*

The ethicists speak about the issue in a different language, that of a generally acceptable ethic (morality), about which, in our multicultural with its differences and disputes concerning the foundations of morality, there is dissensus: how to speak in terms of “good” and “evil”, in such a situation of profound disagreement about what exactly is “good” and “evil”?

Lyotard: “Écoutez: il y a différend. Fichez nous la paix avec votre prétention à unifier la totalité des phanomènes de langage. Respectez la guerre qui les divise” (*Réécrire la modernité*, 47): “Listen: there is undoubtedly a difference of language. Leave us alone with your pretense that the totality of language wants to unify phenomena. Respect the war that divides them.

The meta-language of ethicists over the language of (biogenetic) professional scientists has no real premise, foundation, ‘foundation’. She is therefore not a meta-language.

Behold what Lyotard’s discordism, among others, advocates. “Facts are not norms.”

The parenting problem.

Given: a student is questioned and believes he earns 16 out of 20,-- according to his “standards. The prof, however, believes he earns 12 out of 20.

Asked: how to solve such a thing if there is Postmodern multiplicity of norms?

Or given: a teacher, primary, gives a rating - e.g., “very good” -; a parent of another child ‘disputes’ (‘contests’) this as “far too much compared to my child.”

Asked: if there is equivalence of norms - here: the norm of the teacher and the equivalent norm of the contesting parent - how to resolve this conflict - dissensus?

Note -- It may well happen that Habermas (*ETM--harm 195*), reviled by Postmodernists, with his premise that, in a dissensual, divided, “language dispute” living culture, certainly in it, interaction and understanding must be put forward as an objective, is more than right.

Nominalism.

Euripides of Salamis (-430/-406), the mystically inclined third great tragedian of the Ancient Greeks, struggled throughout his life with the dissensual world of thought and life of Protosophism (-450/-350), in which pragmatic power thinking predominated.

He has characterized, in immortally simple fashion, Nominalism: “If ‘good’ and ‘evil’ were the same everywhere, there would be no more dispute of opinion among men.

In fact, however, only the names (*note* in Latin: *nomina*), which are used, are the same everywhere, but what is indicated by these names differs from region to region.”

The view that our knowing and living through ‘good’ and ‘evil’ - the norms - does not go beyond the situation outlined by Euripides, has been called, since the mid-century Scholasticism ‘nominalism’ In itself, ‘objectively’ nothing is ‘good’ or ‘evil’. Only the ‘name’ (‘good’ or ‘evil’) creates the seemingly objective quality ‘good’ or ‘evil’. What this amounts to is multicultural conventionalism: one agrees, group by group, ‘conventio’ (Latin for ‘agreement’, ‘accord’) - to henceforth label something as ‘good’ or ‘evil’. Nothing more.

Decision.

Under that point of view, today’s Postmodernism - certainly that of a Lyotard - is an updated Middle Ages Nominalism.

Collection, system: mere names or more than names?

The postulates of the comparative method are collections and systems. And in the objective, ontological sense.

Bibl. st.: *D. Nauta, Logic and Model*, Bussum, De Haan, 1970, 258/259 (*The ‘universalia problem and the battle of foundations*).

According to Abraham Fraenkel, a Platonist, the collection theory looks like this:

a. Cantor (the formalizing revivalist) and Logicism view collections (i.e., classes of data that exhibit common properties) - *ETM--harm 90vv.* - as discoverable (*ETM 09*), findable, testable realities;

b.1. Intuitionism sees them as “entities” invented by the collection specialist;

b.2. Formalism sees them as invented but testable for its consistency (logical coherence).

Both of the latter propositions amount to a variant of Nominalism.

Paradoxical sets and paradoxical systems.

Thanks to the comparative method, Postmodernists discover paradoxical cases of collection and/ or system.

Reread *ETM--harm 172.--* A Lyotard e.g. compares constantly. But he specializes on differences and gaps (disputes).

Consequence: he uncovers sets, which exhibit as a characteristic what follows: their elements have as a ‘common property’ the fact that they exhibit as few common properties as possible.

The same with systems: he sees e.g. the multiculturalism of our days as a system that shows as little collective structure as possible and is therefore “non-system”. Or “a system of anti-systems”. Fragmentarism: a coherence (?) of loose fragments (!). -- Which amounts to meaning 2 and 3 of ‘Paradox’.

General Decision.

The harmology or order(s) doctrine thus comes to its end. Apart from similarities and coherences as “connections” between “being” - realities - we have established differences and gaps yes, disputes (conflicts; *ETM--harm 121*) as “connections” (in the analogous, partly identical, partly non-identical sense) between realities. Do we call these latter “paradoxical connections” in the sense just defined.

Question: can it now be said, without doing violence to reality, that the connections - the non-paradoxical and also, yes, stronger than the non-paradoxical, the paradoxical are merely ‘invented’ constructions of the human mind? We believe that after all that goes before, the answer is obvious.

Contents

8.2. Elements of harmology	125
Sample 18.-- Harmology: division theory (complementation). (125/139).....	125
Sample 19.-- Harmology: measuring comparison. (140/143).....	140
Sample 20.-- Harmology: differential learning. (144/153)	144
Sample 21.-- Harmology: quantitative change/ qualitative jump. (154/163).....	154
Sample 22.-- Harmology: ‘chaology’ (disorderly). (164/175).....	164
Sample 23. -- Harmology: crisis theory. (176/184)	176
Sample 24.-Harmology, comparative (comparative) method. (185/194).	185
Sample 25.-- Harmology: assimilism (concordism)/ identivism/ different(ial)ism (disconcordism). (195/201)	195