

C.7-1. Elements of ontology

Location

7. Courses from 1993 to 1996

7.1. Elements of Ontology, 1993-1994, (EO1-EO27, 309 p.)

7.2. Harmology 1993-1994 (HA1-HA33, 109p.)

7.3. Elements of Philosophy of Religion 1994-1995, (ER1-ER440, 514p.)

7.4. Elements of philosophical rhetoric, 1994-1995, (EWR1-EWR31, 37p.)

7.5. Elements of Philosophy of Culture, 1994-1995 (CF1-CF75, 212p.)

7.6. Elements of contemporary philosophy, 1995-1996 (HF1-HF7, 77p.)

Note: *This course has been spaced larger than the text of the original course. References in the older version of this text therefore do not correspond to the current 'Word' pagination. For this reason, the original pagination is displayed each time with the letters 'EO'. They stand for 'Elements Ontology' and are derived from the old page number.*

Introduction: *Engaging with the data as they present themselves provides us with a solid foundation. However, if we wish to understand the world as it essentially is, we attempt to transcend that data. Through sampling, we generalize and 'generalize'. This gives us a better insight into what is meant by the word 'ontology', by the collection and system of everything that exists in any event. The Ancient Greek term ontos (ὄντως) literally means 'real' or 'true' and derives from the Greek word on (to be). Our sustained and strictly logical thinking leads us to a 'theoria', and a growing insight into the totality of reality. Such a holistic viewpoint proceeds from the data and is capable of bringing what is asked to a good solution. We speak of 'Apocalypticism', of truth that is thus brought to light. That is, in many variations, the theme of this course.*

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EO1

Foreword. - (01/02)

A 'preface' comprises a few concepts by way of introduction.

The course.

The ancient Greeks, who proceeded as logically as possible, described an intellectual task as follows.

A. The given.

This is the subject or theme. -- In the theory of reality or ontology, that is "Anything that is in any way 'something'". The concept of 'something', understood as "not-nothing", denotes in our language everything that is real.

B. The requested (sought).

Here: whether there is 'something' and, if so, what that 'something' is. More everyday: to find out exactly what is meant by the term 'something' or 'reality'. To find out , thanks to research, 'historia' (Latin: inquisitio), what reality might be.

In more contemporary terms: 'being'; which attempts to bring all that is to (full) understanding. 'Seinsverständnis', to use the words of M. Heidegger.

In terms of conceptual logic: forming as clear and responsible an understanding as possible of what 'reality' is.

Note : The dichotomy or systechi “given/requested” originates from ancient Greek mathematics: first, define the given information as sharply as possible; then, regarding everything that becomes available as a result, describe the task (exactly what one will do with the given information or theme).

Elements.

Look at the title! This term – 'term' means “concept expressed in words” – comes from the oldest ancient Greek usage.

'Stoicheion', coinciding with 'archè', meant 'element' (principle, presupposition). After all, Latin translated it as 'elementum'. Is 'element':

a . an instance from a set (a schoolboy, for example, is an element from the set 'schoolboys'),

b. a component within a constitution or system (a city district, for example, is one part of the entire city). -- Within the 'totality' (whether collection or system), the Greeks called 'stoicheion' whatever was encompassed by it.

But there is more: 'stoicheion' becomes 'arche', preposition, when it is processed by proceeding in a reasoning-logical manner: a part of a city is an element that allows the city as a whole to be understood. Or conversely: the whole makes a part understandable.

EO2

Thus, “element and of ontology” means “all that one must presuppose regarding things – 'arche' – in order to understand ontology”.

Propedeutics

The ancient Greeks spoke of 'pro.paideia' or 'pro.paideuma', a 'paideia' for the specialized paideia or education.

“Elements of ontology”, in that narrower sense, then amounts to “introductory or even elementary (greatly simplified) instruction in ontology”.

Between dilettantism and specialization.

A 'dilettante', pursuing it as a hobby, knows "a little bit of everything," superficially. A 'specialist', as an expert, knows "everything about something," thoroughly explored.

Since this course is 'propedeutic', we choose the middle ground: it provides information, the truth on the subject, as a means of general education.

At Harvard University, the "Harvard Principle" is prioritized: it cultivates specialists, not generalists. Nevertheless, it first and foremost demands a general education in various (auxiliary) subjects. To what end? In MacLuhan's terms: to avoid narrow-mindedness (overly one-sided and limited specialized knowledge).

A good teacher, a good female teacher, for example

a. knows his/her trade well,

b. but, in our very complicated world, he, she is generally formed.

If this applies to the teaching profession, then in our highly specialized world, it applies to virtually all professions. Hence the term "continuing education".

Incidentally : one of the meanings of the ancient Greek word 'filosofia', which we translate as philosophy or 'philosophy', was "general education".

Neither fashion nor ideology, but method.

'Indoctrination' is one of the terms that became common since the period of contestation. This means: imposing a 'doctrine' or teaching.

Our course avoids 'fashion', because, even though there are fashions in philosophy, 'fashion' is a superficial wave of interest that comes ... and (quickly) goes.

'Ideology' is a thought construct detached from reality, often employed by its convinced adherents to control others. Because ideology is 'unreal' (not aligning with the data), it is unprovable.

We therefore uphold method. 'Method' is an approach or methodology substantiated by reasons or grounds. This is how we tackle the ontology—and through it—the reality it studies.

EO3

1. Existence and mode of being (essence). (03/09)

Parmenides of Elea.

The founder of the Eleatic school lived from around 540. He is considered the one who transformed 'metaphysics', another name for 'the study of reality', into ontology or the study of being.

Cl. Ramnoux, *Parménide et ses successeurs*, Paris, Rocher, 1979, 99/148 (Parménide), says what follows.

The opening fragment of Parmenides' didactic poem speaks of a journey—by horse-drawn chariot—and of an encounter with a goddess.

a . Some see in this a mere allegory, i.e. an elaborate comparison.

b . Others, however, interpret this as the depiction of an actual journey “into the other world”. Let us think of the Siberian shamans who undertook 'soul journeys' then and still do today, for healings, for example. Incidentally: this is characteristic of what is called 'apocalypse' or 'revelation literature'.

Ramnoux: both opinions contain an element of truth. For: compare Parmenides with his predecessor Hesiod of Askra (V3rd or VIIth century).

a. Hesiod encounters Muses, goddesses of inspiration, who proclaim either probable falsehoods or the true truth (this duality in behavior was very familiar to the ancient pagans).

b. Parmenides encounters an (inspiring) goddess who imparts both the 'doxa', the untruth presented as probable, and the 'aletheia', the revealed reality. Cf. oc, 103s..

Conclusion . -- Both Hesiod and Parmenides practice 'apocalupsis' (the ancient Greek word for 'revelation'). But where the former remains within the mythical revelation or apocalypse, the latter replaces the myth with a 'revelation of being' or ontology.

What is Parmenides claiming now?

J. Beaufret, *Le poème de Parménide*, Paris, PUF, 1955, 75/93 (Fragments).
-- 1 :28/30. -- “It is a necessity that you (= Parmenides) perceive 'panta' (everything): both the quiet heart of the beautifully rounded aletheia, the revealed being, and the 'doxa', the opinions of mortals in which no true faith is present”.

Furthermore: 2:2. -- “These are the two methods”. That is the system.

But there is more.

6:1. -- “It is necessary to say and to think that being is.” -- Later this is called “the principle of identity” (“What is (so), is (so)”). -- 8:21. -- “Being is itself ('tauton') and remains itself and it exists according to itself.” “Kath' heauto” in Greek.

EO4

The latter amounts to: 'being, this reality, exists according to itself, -- not according to us, for example! Not according to the 'doxa', the opinions of people! No: what is, exists as it is in itself, 'objectively', independent (insofar as it exists in itself, at least) of every other reality.

Note : Whoever doubts this, whoever denies it, does so in the name of that truth! For how can one claim that reality is accessible “only in a more subjective manner” if one does not first distinguish the subjective from the objective? Whoever doubts this places it first (consciously or often unconsciously).

The given and the requested.

After this introduction, we will address the theme of this sample.

Given . -- The distinction, prevalent since Plato of Athens (-427/-347), between factual existence ('existentia' in medieval Latin) and mode of being ('essentia') as a definition of what reality is in itself. Or put differently: as 'identity' (inherent nature) of 'being'.

Requested : Clarify, reveal, 'apocalypse' or 'alètheia' of that pair of concepts.

True science:

Let 'science' be defined here as “sound, if necessary provable knowledge”. Now, Plato, when he speaks of “true science”, calls it “theorètikè tou ontos”, correctly translated: “to thoroughly investigate what is”. For, 'theoria' since Puthagoras of Samos (-580/-500), means, not remaining on the surface, going deeper into something. For example, into the meaning of the Olympic Games of that time, which one can experience as a superficial spectator, as Pythagoras says, but which one can analyze more thoroughly. 'Theoria' is therefore not our current concept of 'theory' (which is too rationalistic-

intellectual and means thought construction). ' Probing' would be an excellent translation.

It is often translated as 'reflection' ('speculation'). In our current usage, this is “too unreal,” too far removed from the given, to be considered an accurate representation of the Pythagorean-Platonic meaning.

An application model ('instance').

In model theory, the “regulatory model/application model” pair applies. The regulatory model is the general rule, while the application model is the application.

So what is 'reality' or, in ancient Greek, 'being'?

EO5

J. Brockman, *Morphogenetic Fields* (A New Science), in: T. Maas, ed. *Contrary to Science* , Amsterdam, Contact, 1988, 40/50, examines the strictly scientific value – 'truthfulness to reality' – of Rupert Sheldrake, *A New Science of Life* , London, Blond and Briggs, 1981.

Sheldrake starts from a factual given, namely the brutal fact that established biology faces a series of unresolved problems. This indicates that its assumptions are not in accordance with the facts.

He broadens those presuppositions, using the concept of 'morphogenetic field' (together with the concept of 'form resonance'), in order to make the unresolved questions solvable, even if only partially.

To give an illustration: in 1920, William McDougall, a psychologist at Harvard University, established that rats from later generations learned faster (though not in the same way) in the same situations than those from earlier generations. Hypothesis: it was as if the first generations mysteriously paved the way and made it easier for the later ones, without the latter having any contact with the first—which could be determined according to the assumptions of the science of the time.

That mysterious manner in which that established fact occurs is called by Sheldrake the “morphogenetic field”: the later ones are already in the same morphogenetic field as the first ones, and thus they empathize with those first ones.

Actual value.

Naturally, we should bring up the entirety of the facts and hypotheses just discussed (= presuppositions to make those facts understandable).

'Criticism' is precisely, expressed in Platonic terms, testing something for "the true value".

Critics of Sheldrake:

a. he published before his hypothesis was rigorously proven (which in itself, if he published it as a pure hypothesis, is not yet a crime);

b. "His accusers are also of the opinion that he is reviving 'pseudosciences' – such as ESP (extra-sensory perception (paranormal perception)), clairvoyance (in ancient Greek: mantiek) and other parapsychological phenomena." (Oc, 50).

Note--

a. Hypotheses are rigorously proven when they are demonstrated as true (to the entire scientific community).

EO6

b. It is known that the modern rationalist (who accepts reason only insofar as it presupposes data visible and tangible to everyone) has the greatest difficulty in the world accepting paranormal phenomena as real, even if he cannot deny their factual nature—the truly perceptible reality. To such an extent, he gives preference to his presuppositions over the facts.

Conclusion . -- In the eyes of his critics, Sheldrake's thesis is 'unreal', - in the sense of "not reflecting reality". For:

a . the rigorous proof of reality has not (yet) been provided;

b . Paranormology (the study of paranormal phenomena) is not yet a science accepted by modern rationalists—it is, in their eyes (understand: viewed from their presuppositions), "a pseudoscience".

Meanwhile, this proves that Plato's distinction between true science and false, or at least uncertain, science still holds. Just like Parmenides' distinction between 'alêtheia' (reality revealed) and 'doxai' (opinions), which are merely probable.

"What is 'reality'?"

Let us stick with the same book, **Dwarsgebakken wetenschap**, 203/219. Rudy Rucker, a former mathematician who has since become a writer of

science fiction works (such as *Software*), writes an article titled: “What is reality?”.

He begins with the statement: “Only two things seem to be truly certain:

a. one exists and

b. one makes observations” (oc, 203). The rest comes down to a complicated theory on the matter.

Findings

a. Scientists use the word 'reality'. Usually without delving specifically into what can actually be assumed to be real. Just like that! Uninvestigated!

b. Some, like Rucker, address it but very superficially, losing themselves in reflections.

All this indicates that there is room for a separate 'science', namely ontology or the study of reality. For the central question of traditional ontology or 'metaphysics' remains relevant. Proof: the two preceding articles, for example. Ontology deals with the question: “By what right, ‘in the name of what’, do we use the term 'reality' both in everyday life and in the specialized sciences?”

Existence and nature of something.

Let us read, for example, D. van Dalen, **Philosophical Foundations of Mathematics **, Assen/Amsterdam, Van Gorcum, 1978. There, the author discusses sets—one of the basic concepts—elements—of more recent mathematics, since Georg Cantor.

EO7

Oc, 4: Van Dalen wants an answer to the question “Do sets exist?” as well as to the question “Nature of sets”. In other words:

a. Does such a thing as a collection exist?

b. What, then, is such a collection? Translated ontologically: is there such a thing as a collection, or rather: is a collection something, and what is it?

Incidentally : a mathematical entity ('something') exists as soon as a logically conclusive definition is found.

The situation is different with non-mathematical entities.

Let us read a seemingly sensational report in the New Zealand daily newspaper *The Dominion* , -- reproduced in Journal de Genève (Gazette de

Lausanne) 29/07/1993, 20. -- New Zealand Prime Minister Jim Bolger appears to be afflicted with a malevolent power (“un pouvoir maléfique”) that irresistibly strikes those his equals.

With the exception of British Prime Minister John Major, all prime ministers who met him lost their posts shortly thereafter. -- His latest victim, in the unintended sense, is Japanese Prime Minister Kiichi Miyazawa. This is according to The Donation, which recalls that, after their meeting with Jim Bolger, Michel Rocard and Edith Cresson, the Socialist Prime Minister of France, had to give up their posts as heads of government.

The Dominion continues: the Turk Turgut Ozal, the Vanuatu Walter Lini, the Canadian Brian Mulroney, the Australian Bob Hawke, the Polish Hanna Suchoka, but also George Bush, former President of the USA, and Russian Vice President Alexander Rutskoi are on the list of Jim Bolger's unwilling hunt!

Consequence: The Dominion wonders whether the invitation Jim Bolger has extended to Bill Clinton, the US President, to visit New Zealand sometime this coming September is truly appropriate.

The Dominion even underscores the fact that Jim Bolger's malevolent power extends beyond the realm of international politics: sport suffers as well! He attended the last Rugby World Cup: the result was that New Zealand failed to qualify for the final. That concludes the account.

Note : It is not the first time that, in the course of human destiny, something like “a malevolent faculty” has been established. Was it not said of one of the 19th-century popes in Rome that he possessed 'malocchio' (the evil eye), through which he brought about misfortune?

EO8

Moreover: that Pope was aware that it was primarily Roman circles—not rural people in Italy—who sensed this. Roman mothers, for example, did not want him to bless the children (to prevent misfortune)! This is no frivolous report; even scientifically trained people—including those who were studying “the evil eye”—took that 'rumor' concerning that Pope seriously at the time.

The question of reality.

In French, someone is called “monsieur ou madame porte-poisse” (“bringer of doom”). Such a thing is, if one is critical, for the time being nothing more

than a 'rumor', a rumor—something that is asserted and passed on. Ontologically, the question is: how real is such a rumor? How is that rumor real?—The question of existence and essence, in other words, 'Real' here in the sense of “representing reality”.

Content and scope of the concept of 'reality'.

To explain that pair of concepts, we begin with the expression “All that is” and “reality”. These are the two conceptual components of the complete expression “All that is reality”. -- Applications: “all that is a collection”; “all that is a bringer of misfortune”.

A.-- The content.

“... reality,-- so as collection or bringer of misfortune .-” The middle term indicates the content of the concept,-- that which one knows and thinks when one says “all that .- is”,--

B.-- the extent.

“All that ...is”. The extremes of the expression indicate the scope of the content, i.e. those things to which the conceptual content applies, -- to which a concept 'refers'.

Plato.

M. Heidegger, *Einführung in die Metaphysik*, Tübingen, 1953, 138, says the following. -- “(In the language of Plato) 'ousia' can mean two things.

1. 'Anwesen', presence, of something that is 'present' (note: is given, accessible, findable).

2. This presence in the 'what' (note: mode of being, what it is) of its essential form (“Im Was seines Aussehens”):

P. Fürstenau, *Heidegger (Das Gefüge seines Denkens)*, Frankf.aM, 1958, 118, adds: “Here lies the origin of the distinction between 'existentia', *Dasein*, and 'essentia', 'Wassein'. As stated: the medieval scholastics (800/1450) translated the systechie “factuality/way of being” (contained in the Platonic term 'ousia' ('being')) in this way.

EO9

The content and scope—or better, “the content-and-scope”—of the concept that concerns ontology can be outlined as follows.

A.-- The content.

This is existence and essence. Both sub-concepts are distinguishable but inseparable. For by exposing both aspects (sides) of something, one reveals its reality. One commits 'alètheia' or 'apokalupsis', revelation.

a. If something did not exist at all (no 'existence'), then one cannot say what (essence) it is.

b. Conversely: in order to exist (existence), something must exhibit a mode of being (essence).-- Nothing more can be said about the concept of 'being' or 'reality'. Anything added to it is a transgression of ontology.

B.-- The extent. This is 'panta' (eo 03), everything.

Why? Because everything that exhibits “existence and essence” applies to everything. To all factual and even all possible (= conceivable) data. Everything that both exists (in whatever way) and exhibits a mode of being forms, ipso facto (= by the fact itself), part of “all that is real”. And conversely: “all that is real” exhibits both factual existence and a mode of being.

Note: That something exists entails what it is. What something is entails that something exists. Note: this is ontological language and not everyday or even academic language. Why? Because, for example, a figment of the imagination—I think I am an antique bull statue (e.g.)—both actually exists (in my imagination)—for such a thing is 'not-nothing'—and is distinguishable by its own mode of being from the entire rest of reality. After all, everything that is distinguishable ('discriminable') from the entire rest has a completely distinct mode of being.

Application.

What is stated just above is the general rule. Is such a thing practically applicable? Yes! -- A brief example. -- We just saw that some people — rationalists—call paranormology “a pseudoscience.” The question—the critical question—arises:

“How rational (justified) is that assertion? That is the question of existence: is there rationality in that assertion at all? How is that assertion rational (justifiable)? That is the question of essence: if there is any rationality in it at all, by what is it distinguishable from the rest of all that exists? -- One can go on endlessly like this with ... everything.

EO10

2. From pre-ontological to ontological language use. (10/17)

By way of introduction.

What precedes teaches us that the conceptual content of 'being' or 'reality' encompasses both factual existence (existence) and mode of being (essence)—distinguished but not separated—that the scope of the concept includes 'panta', everything.

Note : A conceptual scope that truly encompasses everything is often called 'transcendental' (literally: exceeding all), while a non-encompassing scope is called 'categorical'.

Language usage.

Ontology is often misunderstood because people confuse non-ontological language use with ontological language use.

a. Let us take the concept of 'collection'. Everyday language knows this word very well: “I have a nice collection of stamps here.” But the strictly scientific theory of sets, specific to mathematics (especially since Georg Cantor (1845/1918) and the French Bourbaki group, * *Eléments de mathématique* * (1939+)), refines this everyday concept. With 'akribeia' (ancient Greek word for 'accuracy'), a definition is developed that is strictly scientific.

b. -- Likewise, in an analogous (partly similar, partly different) manner, ontology operates. It too purifies everyday or specialized scientific language use. We now give a few examples of this.

A.-- 'Being' and types of being.

Just now we were discussing transcendental and purely categorical scope.
-- Sometimes—often more than one might expect—even thinkers and intellectuals confuse transcendental with purely categorical scopes.

AI-- Diachronic.

For example, “Becoming is not being”. -- One might, for instance, hear it asserted that “the philosophy that works with the term 'being' is incapable of thinking about becoming, development, etc., accurately and realistically”. The stated 'reason' is: “Becoming is not being”.

Such assertions harbor a logical fallacy: they project colloquial language use onto the ontological! In terms of content, 'to become' possesses a mode of being of its own, distinguishable from the rest, and an existence of its own (its own essence and own existence). Initially, it possesses its own domain, namely all that becomes.

In other words: becoming is being-becoming! Becoming, just like evolving, is one type or kind of being that, besides this being-becoming, also includes all that is not encompassed.

EO11

A.II.-- synchronous.

Here we consider several types.

1.-- “A dream is not reality”.

One can hear this phrase regularly! But: an unrealistic or dream reality is not nothing. That such “insignificant something” can even—just ask experienced psychiatrists or therapists—come across very strongly as “more real than everyday reality.” 'Fantasms' sometimes control actual behavior much more than the so-called 'sensible' things of everyday life.

In other words: an oniric reality exhibits its own content (existence: in the mind/ mode of existence: distinguishable). Immediately, the dream refers to its own domain or scope within the total being or reality.

2.-- “Lustprinzip/ Realitätsprinzip”.

S. Freud, the father of psychoanalytic depth psychology, taught us—within his psychological therapeutic framework that is not the ontological—the conceptual pair “pleasure principle/reality principle”.

Freud starts from an everyday language couple—the ordinary person suffers from “the unease in (work) culture”: off to that same work every morning!—but he purifies it and elevates it to a depth-psychological system.

A hip man or woman “doesn’t like to work”, but, within our modern economic system, in which labor represents money and property, they soon experience the unpleasant consequences: one must eat and drink, wear clothes, and have a place to live—not without money!

Once again: the sense of pleasure that is work-shy is a reality of its own, which, just as the dream can determine behavior, -- the reality of the sense of pleasure. The unpleasant consequences are another 'reality'. Both domains are encompassed by 'being',

3.-- “A sign stands for reality”.

This brings us to either the semiology of Ferd. de Saussure (1857/1913) or the semiotics of Charles S. Peirce (1839/1914), i.e., the study of signs.

Again: a sign or symbol possesses a reality of its own, whereby it exhibits its own existence and its own mode of existence, -- distinguishable from the rest.

A map (metaphorically tasks) and a road marker (metonymically sign) exist “in themselves”, in reality. That to which they refer, whether metaphorically (based on similarity) or metonymically (based on coherence), is another reality that is analogous to it (partly identical, partly non-identical).

EO12

A language—natural, colloquial, or artificial—is a collection, or system, of signs, respectively, by agreement.

Let us consider a formula (a 'formula' is a set of signs) like Einstein's: $E = mc^2$ (Energy = mass x speed of light squared). These signs “E, m, c, ²”, which at first glance appear otherworldly and alien to reality, lie at the origin of the atomic bomb, for such a 'true-to-reality' formula grants power over nature (and, if necessary, over people).

Just as dreams and feelings of lust, however 'unreal', exert power, so too do the signs of a formula—unreal to outsiders.

Signs—in linguistic form, in formulaic form—are a type of reality of 'being'. Let us consider the formalized systems (mathematical, purely logistic): blackened paper, yet according to strict logical rules, is not nothing but reality, distinguishable from the rest. All this is applied ontology, for signs are 'beings', types of being.

Note : Science has moved “from the nominal to the real definition”.

A definition or essential description describes the content of the concept as accurately as possible. And immediately the scope of the concept, of course.

a. The literal or nominal definition describes within the system of a natural or artificial language: the other words of that language clarify a term. But one remains within the sign system that is the language.

b. The object or real definition describes only within the system of total reality, -- or outside the linguistic system, namely by virtue of direct or indirect contact with the 'reality' or 'thing' itself.

Admittedly, to capture the result of that tentative contact in words and thus, in a matter-of-fact, 'real' manner, to situate it within the existing linguistic system. So that the words reflect not only the other words of the language but also, and above all, the matter itself. -- That is true science, namely “theoretikè tou ontos” as Plato said (thoroughly entering into what is), - 'alètheia' (unveiling of what 'apocalupsis', drawing bare, of reality).

Note : Let us take a famous novel, namely Heliodorus of Ephesus, who lived in late antiquity, between 300 and 400, Aithiopika (The Adventures of Ethiopia).

EO13

It amounts to a long adventure story, the essence of which is a beautiful, typically ancient love story. The lovers, after all, relive an eros, a life of love, from a previous earthly existence (reincarnation).

The actors (heroes, actors) are Theagenes and Charikleia. For example, for a historian seeking “a factual definition” of what is being told, the question arises: “What is actually invented in the narrative (fictional) and what is actually a representation of verifiable facts in the lived world of the time (historical)?”

a . A good work of art is always, in a minimal and essential way, 'fiction' (imagined reality). In this, the 'narrativists' (who attempt to reduce every story, even the historical, to an imagined construction) are at least partially right,

b. But almost always, that same artwork reflects a non-imagined, 'historical' reality.

In other words: it is a 'mixed' (partly fictional, partly historical) story. – Regarding the representation of data present outside the text, the narrative realists are right. Mind you: we do not say “imagination/reality” but rather “imagined reality/historical reality”. Ontologically speaking, after all, an imagination is a type of non-nothing, 'something'.

Note -- Three types of modern rationalism. -- “Connubium mentis et rei”, marriage between mind (reason) and given. Thus Francis Bacon of Verulam (1561/1626), author of the famous foundational work of the modern rational method, namely *Novum organum* (1620). In a rationalist spirit, he defines 'science' as “mastery of nature by man”. Here is how Bacon defines rational behavior.

a . The empiricist rationalists resemble ants: they pile up factual material yet without concerning themselves with logical coherence.

b . The pure or a priori rationals, however, resemble the spider that spins webs from its own body—fine and even to a certain extent symmetrically connected, but without concerning itself with testability against the facts or usability in practice.

c . The experimental rationalists resemble the bee: it obtains the materials from flowers; it develops the form (nectar) itself. -- “Thus one can expect everything from the close connection of experience (empiricism) and reason (a prioriism)”.

EO14

Thus it becomes clear that – what Ch.S. Peirce calls “thought signs” – these concepts can be used in three ways. Specifically:

a . empirically rather neglectful,

b . a priori rather only presupposed or

c . presented in as balanced an experimentalist style as possible.

It immediately becomes apparent that the English father of the so-called “English, or rather Anglo-Saxon, empiricism” was actually an experimentalist.

Note-- “Positive thinking”

Three meanings, at the very least!

1.1. W.J. Schelling (1775/1854), a romantic thinker among the three great “German idealists” (Fichte, Schelling, Hegel), bases his final philosophy—he went through stages—not on 'fantasies' (as the so-called idealistic or a priori rationalist rationalists operate), but primarily on facts ascertainable by historical science—cultural history in the first place. He labels the prioritization of such “positive or definite ‘materials’” as “positive Philosophy,” in which religions (myths) are given a place.

1.2 . A. Comte (1798/1857), the father of “la philosophie positive” or 'positivism', prioritizes scientifically verifiable facts—from natural science and especially sociology (which he posited as a kind of basic science)—and not a priori 'ideas' (where 'ideas' is used not in the Platonic sense, but in the modern rationalist sense, for 'concepts' or notions).

Comte saw three capital stages in the course of cultural history: first religion (with, for example, myths), then 'metaphysics' (primarily with ideas), and finally (skilled) science, which posits the two previous stages as 'obsolete'. – This last is a premise that neither Comte nor the positivists ever truly managed to prove!

2. New Age. -- The “New Era” (French: *Nouvel Âge*) places “positive thinking” at the center, in its own way. Faced with a task, imagine (with an idea or concept) that it “turns out well.” That is the role of ideas (a kind of self-hypnosis, if you will). New Age thinkers call this “positive thinking.” In other words: our ideas or concepts determine our fate. They help decide the good or bad outcome of our activities.

In contrast to Schelling's or Comte's positive philosophy, New Age philosophy holds the view that verifiable facts are not only found in the past but, in the future,

EO15

4.-- “*Fairy tales are unreal*”.

The closed-mindedness of the classical modern rationalists towards all that is a fairy tale (myth, legend, etc.) is well known.

Nevertheless, fairy tales, legends, and most certainly myths (if understood from a religious-historical perspective) represent a reality.

The reason for the “rational unease” is the bizarre. The Spanish word 'bizarro', for example, taught us to recognize one type of being. Is 'bizarre' anything at all:

a . for everyday logic and its applications 'whimsical' (fantastic, impossible to follow, impossible to figure out and

b . is unsettling (uncanny, fear-, yes, terrifying). This amounts to one kind of 'wonderfulness'.

An atmosphere, a job, behavior, etc., can come across as 'bizarre'.

One small example.

Dr. E. Schertel, *Der Komplex der Flagellomanie* (in some alternative bookstores), 90f.-- "It seems very remarkable when one reads about Pierre Abélard (= Abailard)".

Note: Abelard lived from 1079 to 1143 and was one of the most remarkable Middle-century (scholastic) thinkers. —"Canon Fulbert entrusted his niece Heloise (1101/1164; abbess in later life) to him. For instruction. He was to supervise all her studies. Up to and including 'disciplining'.

Note : 'To discipline', in the early medieval cultural context, encompassed beating (with a reed stick, rod (brush-shaped stick), etc., whether or not accompanied by stripping). "This if she "did not show sufficient diligence".

Heloise was seventeen at the time and already nearly a celebrity for her intellect and her extensive knowledge. So much so that one wonders that, in such a case, physical punishments could still be considered a potential necessity or even merely a purpose. But the times of that time were in such a frenzy of scourging that one could hardly imagine a human existence without 'flagellatio', scourging.

For Abélard, the matter ended badly in any case: he replaced the flogging with coital elements. The result: the enraged Fulbert had him castrated.

Incidentally: such 'flagellant' relations between man and woman were, at the time, truly customary. They were considered "completely decent". So much so that even a saint like St. Elizabeth of Thuringia (= of Hungary: 1207/1231) hired the Grand Inquisitor Conrad of Marburg (a pious and learned priest) as her regular 'flagellator' and thus willingly exposed her 'backside' (rear end) to him without feeling offended by it, in her chastity or her sense of shame.

EO16

"Chaste' was then tantamount to 'acoital' (without coitus), and as long as this aspect was respected, everything else was permitted, even among saints." So much for Dr. Schertel.

Note -- We underlined 'men': 'men' means "we, in our twentieth century". Those who, after the scholastic Middle Ages, have passed through the Renaissance and Humanism, through Rationalism and Post-Rationalism. We inevitably have presuppositions. These function as a 'lens' through which to

view and (re)interpret “the facts”. It is not because it appears bizarre, like a myth or a medieval philosopher's life, that it contains no (historical) reality. Surely, ontologically, one ought to display such a degree of 'critical' spirit by now! In other words: 'bizarre' is not necessarily 'unreal'.

5.-- “God is being itself”.

Let us not forget: we are dealing with the distinction between (transcendental or all-encompassing) being and the (categorical) types or kinds of being. One can quite often hear the phrase “God is being itself”.

a. Creationist.

The creationist believes that God creates the rest, outside of God himself ('creatio', in Latin, means 'creation'). And indeed, as a common expression says, “out of nothing” (which means that God creates out of himself as infinite richness of reality or being).

'Nothing' here does not mean “the total or absolute nothing”. Nothing arises from that. God cannot even conjure up a something from that! 'Nothing' means, here, “nothing outside of God himself”.

This implies that saying that God is being itself is a metonymic expression: “God is being itself” because

- a** . he himself is the source of all possibility and
- b** . communicates his by creating.

b. Pantheistic.

The pantheist believes that God and creation—let's say, the universe outside of God (insofar as 'outside' God makes sense here)—exist in one another somewhere. For example, through 'ekroè' (Latin: 'emanatio', outflow). God, in that hypothesis, is fundamentally inseparable from the rest (insofar as 'rest' makes sense here, of course). At most, he is distinguishable from that 'rest'.

Ontological:

- a** . the general or all-encompassing being is something and
- b** . Divine being, however conceived, is merely one type or kind of (universal) being. Even though God is omnipresent.

EO17

B.-- To be and absolutely nothing.

Outside of being, there exists absolute nothing. This expression is actually a figure of speech... to express in a stylized way that outside of all that is, “there is absolutely nothing”—with the types of being, we remained within being. Now: what to say about that “absolute nothing”?

The absurd.

Another figure of speech is “the absurd”. Is 'absurd' or 'unreasonable' “anything that is impossible”, that is, that which cannot be from any point of view. The unthinkable.

There exists an all-encompassing domain of our intentional thinking. -- It is boundless. It encompasses everything.

Reality and unreality. All that is possible and impossible. All that is already thought and all that is yet unthought. All that is free from contradiction and all that is contradictory.

For nothing escapes our intentional thinking. Not even that which lies outside intentional thinking, for, by thinking it precisely intentionally, it is already intentionally thought.” (G. Jacoby, *Die Ansprüche der Logistiker auf die Logik und ihre Geschichtschreibung*, Stuttgart, Kohlhammer, 1962, 11).

The unthinkable can be thought intentionally.

Thinking of being and intentional thinking are, apparently, not the same. -- This is evident from “proof by contradiction”. -- Mathematicians, and logicians or logisticians in general, work with this regularly.

After all, in such a case only two possibilities are put forward: as a model and as a radical counter-model. Either... or... In Latin 'aut' (not 'vel').

In this way, one proves that one term or model is impossible (unthinkable), absolutely nothing. With the logical, strict consequence that the other term or counter-model is possible, indeed, necessary.

Applicative model.

As an example of this general rule, consider the following. -- Claiming that “ $2 + 2 = \text{not } 4$ ”; We perceive—think—that this is nonsense, -- absolute nonsense or absurdity. “ $2 + 2 = \text{not } 4$ ” logically coherent thinking, i.e., logically sensible thinking, is impossible. Yet, in our thinking, we intend that nonsense. And indeed as nonsense. Our intentional thinking encompasses both sense and nonsense, i.e., the conceivable and the unconceivable.

Decision.

The true extent of 'being' (and immediately of being-theory or ontology) is revealed—aletheia, revelation of what 'is'—not only in the logically coherent but also in the logically impossible.

EO18

3. Ontological doctrine of negation. (18/22)

A and not-A. Or: “A is not.” Or again: “There is nothing here.” And similar negations. -- The theme is always: being and nothing.

Bibl. st. : D. Mercier, *Logique* , Louvain/Paris, 1922-7, 107s.. -- The term 'nihil' (Latin for 'nothing') recurs in the term 'nihilism', i.e., the negation of all that is as a (higher) value. Thus—in other words—that all possible (higher) value becomes 'nihil'. This is the strongest negation, of course.

Note -- As stated just before this, EO 17: our purely intentional thinking can be this thinking, nihilism. For our intentional thinking also encompasses all that is nothing, all that is not - being(being). Even all that is pure nonsense or worthlessness or disintegration (multiplicity), but then as pure nonsense, worthlessness, multiplicity.

1 -- Bibl. st. : R. Regveld, *Heidegger et le problème du néant* , Dordrecht, 1987. -- Martin Heidegger (1889/1976, Nazi-aligned existential thinker) is known for his 'Fundamentalontologie', the “fundamental ontology”. This accuses “the entire Western tradition regarding metaphysics” (from Platen to Nietzsche) of having forgotten being (Seine) in favor of being ('Seiendes').

He attempted to establish a 'new' ontology of foundations. His language is therefore as radical a break as possible with the traditional language of ontologists. Not infrequently, he resorts to poetic language, indeed, to 'profound notions'. As a result, debate arises regarding the correct interpretation.

“Das Nichts nichtet”.

Nothing 'not'. Traditionally, people said: “Nothing is not”. If Heidegger means by this that, outside of being(the), nothing exists, indeed, absolute nothing, then everyone can understand this.

But when he introduces the expression “Nothing is the wholly other of being” (“das ganz Andere zum Sein”) or “Nothing is the totally other in relation

to being”, it must first be clarified exactly what he understands by this—innovative, mind you—as is substantial.

Sometimes one gets the impression that “the wholly other with respect to being” is something enterprising and most active—an active negation. Which can in no case be said of absolute nothingness. If such a thing means anything meaningful, then only when it is stated of relative nothingness that does not negate absolute being but rather some type of being—a categorical negation.

EO19

Dr. J. Grooten/ Dr. G. Steenbergen, ed., *Filosofisch lexicon* , Antwerp/Amsterdam, 1958, 250, states: “Satanism is the view that elevates the denial of all values to the sole value.” Oc, 201: “Nihilism is the doctrine that upholds non-being—in an absolute or at least in a relative sense.” In the realm of knowledge, “the truth” is thus denied. In the ethical realm, the validity of values and norms is denied.

Applied: in the political sphere, nihilism becomes the justification for any resistance to any form of communal life (anarchism, libertinism).-- “Nothingness”! This is: nihilism, a free choice of the will that affirms negative-intended thinking with thought, word, and deed 'not', denies and hollows out all that (value, norm,-- cognitive value, true communal life, etc.) is. In that sense, in “the other in relation to being (as cognitive value or truth, as (conscientious affirmation of) all that is valuable,-- as all that is valuable communal life, etc.)”, an active, enterprising power, simultaneously within all that is and yet against all that is.-- The German Nazis revealed this.

2.-- Bibl. st.: D. Vernant, *Introduction à la philosophie de la logique* , Bruxelles, 1966, 92ss..

Bertrand Russell (1872/1970), known for his anarcho-libertarian interpretation of human rights, as well as for his four marriages, argues in his * *Principles of Mathematics* *, London, 1937-2, that if one asserts that an object—'A'—exhibits “no being whatsoever”, this entails “an obvious inconsistency” (internal contradiction or contradiction).

“The expression “A is not”, for example, must always be either false or meaningless. Russell gives a proof by contradiction: “Assuming that A were nothing (which is the antimodel of A), then the sentence “A is not” could not even be uttered. For “A is not” implies that there is 1. A term 'A', 2. of which every being is negated.

Conclusion . -- “A is”. -- Vernant comments: it is not possible to speak of a given 'A' and say something about it unless that given represents “a minimum of reality”.

Note : Russell's reasoning posits a convention: as soon as one writes down the symbol 'A' (a blackened piece of paper), there is already a sign. That sign is, as a sign, something. To say of that sign that it “does not exist” is to deny it as a sign. As a sign that has already been drawn on paper!

EO20

Note : What is said of “A is not”, if 'A' means absolute nothingness or even absolute nothingness insofar as it is actively willed (in the wake of negative-intentional thinking)?

Then the expression “A is not” is valid insofar as it concerns absolute nothingness, and “A is not” is perhaps valid, namely insofar as no active nihilism exists.

Naturally, with that interpretation of “A is not,” we find ourselves outside the purely semiotic or sign language of logicians and mathematicians—in full ontology.

So much for absolute nothingness and what can be associated with it. Let us now turn to relative nothingness (which is categorical).

The transcendental or all-encompassing – absolute – being can never be denied: as soon as there is being, being must be affirmed (“What is (so), is (so)”).

The relative or categorical being can possibly be denied. -- That the transcendental being can never be denied is evident, incidentally—even from the fact that absolute nihilism can indeed be clung to and 'honored' by the will—but never, insofar as that will is a fact, denied: “What nihilism is, is nihilism”.

1.-- The purely negative nothing.

“Nihil negativum” in scholastic, medieval language. -- The purely negative nothing denies (a mere description of) a given.

Appl. model. -- Someone opens the door of a room out of curiosity. He/she sees 'nothing'. Unless it's the walls, of course. No chairs, no cupboards, -- certainly no people. This is expressed in 'negations' (negative judgments). -- He/she summarizes: "There is nothing in that room". This is a relative or relative nothing.

Essentially a figure of speech in which the restriction or reservation is concealed: "In that room, there is nothing regarding furniture or persons (= restrictive judgment)".

Strictly ontologically, however, there is indeed 'something'. a. material space to live in, b. space to store, c. air with bacteria and such to breathe in. Ontologically, that 'empty' room is full of all kinds of realities!

"Races do not exist".

An issue of the academic journal *Eos*, in the course of 1992, states the following: "One of the arguments against racism is undoubtedly that the concept of 'race' is—biologically speaking—a completely meaningless concept for humans."

EO21.

Eos demonstrates that the genetic differences between the 'races' themselves are too small to keep alive the classical classification of humans into 'races'—which do not exist biologically. *Eos* demonstrates even more: the genetic differences within the same 'race' are—in many cases—greater than those between the 'races' themselves.

Which amounts to a scientific reason to scrap the concept itself, 'race', from our vocabulary as quickly as possible.

Ontologically expressed: the concept of 'race', regarding humans, is 'nothing'. Unreal, therefore no representation of reality.

Note: The concept of 'race' originates from pre-scientific language. As far as humans are concerned (note the restrictive or preservative nature), this concept has therefore been purified to such an extent that it is rejected! It has been—to use Platon's words—introduced as a lemma (a concept yet to be defined) and, after analysis, discarded ('falsified,' as one would say, following Karl Popper (1902/1994) * *Logik der Forschung* * (1934)).

God creates absolutely and relatively.

Cf. EO 16 (Creationism). -- In the creationist hypothesis, God creates 'absolutely' with regard to creation (the actual universe with all its possibilities) as a totality. -- But he also creates relatively.

Vladimir Soloviev (1853/1900: Russia's greatest thinker) explains this as follows.

He interprets the hypothesis of evolution (the development of life forms one from another), put forward by Darwin and others, in a radically Biblical way. After the creation of matter-without-life, God introduces, at a given moment, the realization of an idea (understand: objective fundamental pattern) 'life' (existing in God's spirit from all eternity). Immediately, life arises within a purely inorganic biotope.

Likewise, when he, within the world of living (plant and animal) beings, realizes the idea of 'man' (present in his mind from all eternity).

Conclusion : -- Within the totality of creation, God introduces life (plant, animal) and human existence by means of relative creation. -- God's 'creativity' establishes, renews, -- re-establishes. In that creationist perspective, our creativity is a 'participation' in God's creative power. -- Where there was once 'nothing', creativity establishes 'something'.

EO21

2.-- The nothingness expressing deprivation or lack.

“Nihil privativum”, in Scholastic Latin. -- Being, reality, which normally should or ought to be there, is denied as absent. Here, a value judgment is pronounced, at least implicitly.

Applicable model

Someone has died. Relatives open a room where—so it seems—father/grandfather left behind securities, money, jewelry, and the like. -- They find nothing! Disappointment!

“Life—that is absolutely nothing.”

One can hear the frustrated person utter this little phrase. - 'Three times' is a figure of speech for “all and nothing”. The axiological or value-theory conclusion of life is expressed therein, -- In the New Age mentality (EO.14), such thinking that underscores the insignificant, indeed, exaggerates, is a kind of “negative thinking” that makes the future even heavier.

Physical and ethical evil.

A natural disaster is an example of physical evil. Sin, cynicism towards others, for example, are examples of ethical evil. -- 'Physical' (from 'fysis', Latin: natura) is "all that is situated in nature itself". 'Ethical' (from 'èthos', attitude of mind) or 'moral' (from the Latin 'mores', morals) is "all that finds its origin in the will itself". Confronted with natural or moral evil, we respond by stating that a good or value does not exist. Regarding good, there is nothing (that was expected).

The three time ecstasies.

Bibl. st. : B. Kuznetsov/ C. Fawcett / RS Cohen, ed., *Reason and Being* , Dordrecht, 1986. -- "The past is no more; the future is not yet here; the now is a kind of zero boundary between the two." -- This statement reduces the three temporal ecstasies (Heideggerian term) to 'nothing'.

Note :-- When viewed closely, considering the reality present within it, the 'now' that we experience from moment to moment is more than merely a 'zero limit'. Projected onto Cartesian coordinates, the 'now' does indeed look somewhat like a zero limit. But that is merely an analogy (partly the same, partly different). However, as a figure of speech for exaggeration (in which frustration certainly resonates), it is not bad.

God recreates.

The Bible—through St. Paul—says that, following the Fall (ethical and physical evil), God acts in a recreating manner. Where there was once lack—nothing that was not expected—there He establishes something.

EO23

4. The ontology of the laws of being (23/28)

1. A law is, in this context, a judgment that applies to all (possible) cases. Without restriction! Without reservation. Everywhere and always. Unconditionally. -- Is there at least a single law that applies to all that is (so)?

2. Theory of Judgment. -- After the theory of concepts (EO 8v.), a section on the theory of judgment.

Concepts, expressible in terms, are fragments of reality insofar as they exist in our mind. Except, of course, for the concept of 'being', for that encompasses all possible "fragments of reality". 'Being' is, after all, transcendental or all-encompassing, whereas concepts that do not express being as such are 'categorical'.

The identity structure of every judgment.

The term 'identitief' means "anything related to individuality or identity". We will explain this using examples.

1.-- Judgments in which the verb 'to be' is incorporated.

a. "The truth is the truth".

a.1. Subject and predicate (model-theoretically: original (= subject) and model (= predicate)) are seemingly the same. As mere conceptual content, yes! But not as a function or role played.

The 'proposition' (= judgment, statement, assertion) comprises something that requires explanation (information) from an 'original'. That is the subject of every judgment.

That same proposition encompasses something that provides enlightenment or information, i.e., a 'model'. That is the predicate in every judgment.

a.2. Here it is the same concept twice, namely 'truth'.

In terms of content, one learns nothing new regarding the subject as an isolated reality within being. But what one does learn is the fact that, if there is truth, there is truth. The original, in this case, is the identity of 'truth' as reality.

Counter-model : "Truth is not truth"! Whoever consciously utters that lies. Is dishonest with the reality that is, for example, the truth. That lie immediately testifies to a lack—a absence (EO 22)—of the reverence that should have been there. In other words: ontology is inseparable from ethics or conscience.

Logically speaking, from an identity perspective, it is said that in the aforementioned sense there is a question of total identity or total identity. Truth, after all, coincides wholly with truth. Which is also known as 'tautology'.

EO24

b . "That statement is partially true".

a. Here, subject and predicate are distinguishable. – "That statement" and "is partially true" stand opposite each other as original (which requires explanation or information) and model (which provides information).

b . Identical, they are a small example of analogy, partial identity, or partial identity. After all, is 'analogous' anything that is partly identical, partly non-identical, or different.

Incidentally : the saying contains a restriction or reservation: it does not say “is true” but rather “is partially true”. This nuance or elaboration easily escapes people working without meticulousness or precision.

c . “Claiming something like that is lying”.

“To claim such a thing” stands for “this from speech” and “is lying” stands for “is untrue”. In ontology, it is primarily about the content of the concept—not about symbols or signs representing possible realities (as in abstract or literary mathematics, or as in symbolic logic or logistics).

'Untrue' is a negation. With this, in terms of identity, we are faced with a case of total non-identity or total difference.

In this case: that assertion is unequivocally (unrestricted, unconditional, reservation-free) false.

Identification decision.

“Totally identical/ partially identical (analogous)/ totally non-identical” is a differential that goes from “entirely yes” to “entirely no”. With exactly one middle term “partly yes partly no”.

2.-- Judging without (explicit) 'being'.

For example, “Jan walks”. The subject, the original that asks for information, is explained by the predicate, the model that provides information, from exactly one perspective, namely 'walking': “Jan walks”. There is much more to say about Jan than that, but, within the limits (restrictions) of the sentence in question, one restricts oneself to a part.

Thus, in terms of identity, there is an analogy: the reality 'Jan' is only partially identifiable with the reality 'walking'. Both terms can be used in many sentences that encompass other concepts.

Incidentally : a number of traditional ontologists—not without serious reason—translate by way of explanation: “Jan is walking”. Simply to insinuate that the verb 'to be'—contrary to appearances—is implicitly implied when one allows other verbs 'to be' to function within the predicate.

Parmenides' teachings.

See above EO 03.-- “It is a necessity to say and to think that being is” (6:1).-For the identity of reality is at stake: “Being is itself and remains itself and it exists according to itself” (8:21). -- “Kath 'heauto'”, according to itself (and not according to something else, diom according to us). Or: 'objective'.

A being axiom (in three formulations).

'Axiom', in ancient Greek, is “anything that, by its intrinsic value, compels conclusions”. -- Translated: '(basic) premise'. -- We explain.

1. The Identity or Identity Act.

'Secrecy' is “the fact that something coincides with itself”. -- Following Parmenides of Elea, Platon says (Dialogue of the Sophistes 254d): “Auto d' heautoi tauton”. The stranger, into whose mouth Platon puts this expression, says thereby: “Something, insofar as it is confronted with itself, is the same (= coincides)”.

With G. Jacoby, *Die Ansprüche der Logistiker auf die Logik und ihre Geschichtschreibung*, Stuttgart, Kohlhammer, 1962, one can say: “Every reality as reality coincides with itself - is completely identical with itself”.

The traditional formulation of the principle of identity reads: “All that is, is” (judgment of existence) or “All that is so, is so” (judgment of essence). Combined: “All that is (so), is (so)”. For essence and existence are distinguishable but in no case separable. Cf. EO 09.

Note-- Tautology.

The term 'tautology' has more than exactly one meaning.

a.1 . “I am happy and satisfied”. -- This is a figure of speech: an emphatic repetition (think of “I am happy, happy!”).

a.2 . “The man was tired. The man was tired, because He was tired”. This is a 'superfluous' or 'redundant' figure of speech. One falls into tedious repetition (instead of underlining repetition, for example).

b . In logistics (mathematically constructed logic), a 'tautology' is a law: “A statement that is true in all cases (regardless of the truthfulness of the components).

For example: “p and q ---> p” (semantically translated: “If p and q are (false) then p (taken separately) is also (false)”).

Ontologically understood, the law of identity is a 'tautology'.

“A is A” -- Note: the first 'A' is the subject (original); the second 'A' is the predicate (model). -- It is one application of our law!

EO26

The reason for this law can be expressed as follows: the total identity of the concept (and the reality designated by it) 'his(the)' – the original – can only be spoken of in terms of 'his(the)': 'his(the)' cannot be explained (clarified) with anything other than 'his(the)'.

When a Heidegger says “Das Sein - sein lassen”, then that sentence must be interpreted in a sense such as that. -- When the positivist Comte says “Facts are facts”, then he applies, on a definite (= positive) level—the domain of specialized sciences—what the ontological law of identity states.

Note -- We just saw that honesty and respect are prerequisites for affirming all that is.

This implies that ontology is the foundation—the 'founding'—of ethics (morality). Without reverence for all that is, insofar as it exists—without the honest acknowledgment thereof, morality is inconceivable. In other words, there is more to affirming all that is insofar as it exists than mere critical detachment.

The one who affirms immediately acknowledges that the axiom of identity is “his/hers.” It involves effort or commitment—at least when that affirmation is sincere and honest.

Note : Ontology not only 'founds' ethics. It also grounds logic.

Every logic or logistics incorporates the law of identity into its axioms. Without which it cannot even function!

Imagine that, in the course of logical theories or praxis, 'a' were suddenly identical, totally identical with 'not-a'! No reasoning whatsoever, the core of logic and logistics, would be possible anymore.

2.-- The law of absurdity or contradiction.

We already saw it, EO 17 (Absolute Nothing): our intentional thinking—our consciousness-intentionality—encompasses both model (absolute being) and counter-model (absolute nothing).

The absurd (senseless, impossible, unthinkable) can still be intended as absurd or illogical. -- The identity of 'being' has a counter-identity that does not exist!

Parmenides of Elea already attempted to express it as follows: “It is or it is absolutely not” (8:11); “It is or it is not” (8:16).

The wording.

“All that is, is and cannot at the same time and from the same point of view not be” (judgment of existence). -- “All that is so, is so and cannot at the same time and from the same point of view not be so” (judgment of essence).

In one: “To be and to be like that can never, simultaneously and from the same perspective, not be and not be like that”.

EO 27.

The primal or first dilemma.

“Is Jan there or isn’t he?” Speaking like this is formulating a dilemma (two and only two possibilities). One immediately sees that that little sentence is an application of what was just expressed as the law of contradiction.

More generally: “Model or counter-model”, understood in the contradictory sense.

“White-and-not-white”.

Two house painters stand in front of a 'white' wall. They examine its whiteness attentively. One says: “Well, that wall is white-and-not-white.” This is apparently a figure of speech to represent the mixed character of 'white-at-first-sight': “The wall, upon closer inspection (= restriction, reservation), is (at first sight) white and (upon closer inspection) not white.” In short: “white-and-not-white.” As in not pure white. That has nothing to do with the principle of contradiction.

Note : The nihilist can, of course, pretend that the law of contradiction does not concern him or her! But then they acknowledge the principle logically-epistemologically (turned towards reality, insofar as it is honestly and respectfully affirmed), while with the will, dishonestly and irreverently, they

disregard the law. That is invariably the fundamental freedom of the human mind.

Note : Logical (logistic) and mathematical systems are conceivable that accept (explicitly state) the axiom of identity but not the axiom of contradiction.

In that case, they effectively apply it without explicitly stating it in the axioms at the beginning.

Note : Marxists, based on 'dialectical' (working with opposites) thinking, regularly speak of “interpersonal contradictions”. In doing so, they prove that the axiom of contradiction is something more than merely alien to life.

An application model.

The European monetary system went through a crisis during the summer of 1993. -- Specialists claim that the core of it was “a contradiction.” Specifically: between the German and the French economies.

Germany, under pressure from the financial burdens of the reunification of West and former East Germany, wants to make up the budgetary deficit by keeping interest rates high. France, on the other hand, notwithstanding a fundamentally sound economy, needs lowered interest rates (which are being kept artificially high).

LO28

This is to stimulate his economy (in recession) and immediately to combat unemployment.

Conclusion -- Within the same economic (monetary) system, there is therefore at least a limited 'contradiction'. -- In that well-defined sense, the Marxists are right: something like an economic (and immediately political) 'contradiction' really exists.

3.-- The law of the primal dilemma (excluded middle).

The basic dilemma states: there is only a choice between model (being) and counter-model (non-being). Now, a dilemma ('dis' (twice) + lemma) that would include a third (or more) choice (hypothesis) destroys itself. After all, it is simply “either or”.

The wording: “Either something is (so) or it is not (so): there is no further possibility”. This is usually called: “the law of the excluded middle”.

We decide.

With this final chapter on the basic judgments (axioms) that govern being (and non-being), the foundation of ontology has been laid. Since, in our interpretation which is the classical one, philosophy is essentially ontology, the pedestal for what follows has hereby been laid for three years.

That this is the case is evident from what follows.

O. Willmann, *Abriss der Philosophie*, Wien, 1959-5, 453, quotes Aristotle (Metaph. 10:2; De intrerpret. 3, in fine).

'Einai', being, is not a 'semeion' (essential characteristic) of any separate given.

Consequence : when one says of something (particular) that it is 'un' (being), then this is a 'psilon', an empty term, for with it one says nothing about that something that applies solely to that something. Only in conjunction with another term does 'einai' (being) acquire meaning.

Applicable model

a. If I say: “That girl there is”, then, with regard to that specific girl, this does imply that she is there, but with that I know nothing special that characterizes her (makes her distinguishable) from the rest. One can say anything of something “that it is” (as long as it is something).

b. But when I say: “That girl over there is -- Mieke and she is about to get married,” only then do I convey something special (categorically) that 'semeion', a defining characteristic, is hers and hers alone. Only then do I share genuine information concerning Mieke.

Conclusion : 'To be' is therefore a categorically empty term.

LO29

5. Names: ontology, metaphysics. (29)

Let us pause for a moment to consider the names of the profession whose foundations we are now beginning to understand.

1.-- First philosophy.

Aristotle of Stageira (-384/-322), Plato's pupil, called what we now call ontology or metaphysics “first philosophy”. His definition: studying “being as being”! This is: fathoming reality insofar as it is reality. -- Not this or that being, not one or more kinds of reality! No: all that is being without further ado.

Since reality is the fundamental concept that makes all other concepts possible, it invariably takes precedence. Even when one is not thinking of it.

The study of reality as reality is, fundamentally, the presupposition of all possible forms of knowledge and study. For—so reasoned Aristotle—what is a scientist worth if his understanding of reality were simply confused, indeed, sometimes thoroughly wrong?

That is why he also called that “first philosophy” 'wisdom' (i insight into human and divine things, di into all things), for the deities know 'everything' ('panta') and humans share in that divine knowledge.

2.1.-- *Metaphysics.*

Andronikos of Rhodes (between -100 and 0), a Peripatetic or Aristotelian thinker, arranged the works of Aristotle in a specific order.

First, what were then called the 'physical' (philosophical) works. Then, due to their difficulty, the ontological. Title: “meta to fusika”, “after the physical”. -- This name, which initially indicated a pure order, became, through a wordplay—'meta', in ancient Greek, can also mean 'above'—the name for the works that not only reached out after the physical (visible and tangible, etc.) but reached beyond it.

Since 'everything' reaches above all that is not-everything, one can call the ontology so. -- In Latin: 'trans.physica', which reaches above the 'physica'.

2.2.-- *Ontology.*

This one is the best of the three! But, as still happens, it came late. Johan Clauberg (1622/1665), a Cartesian rationalist with Platonic influences, was the first to introduce that name.

He represents it best. How? By mentioning the term 'on(t)', which, in ancient Greek, means 'being'.

6. Transcendental ontology. (30/35)

One could also speak of “general ontology,” but since 'general' here means “radically general” or 'transcendental,' the term “transcendental ontology” is the best.

Now that the basic concepts (existence/essence) and the basic judgments (being is being) have been clarified, we will delve deeper into the all-encompassing aspect.

In doing so, we note once again how religion paved the way.

1.-- 'Panta' (all).

All beings. All things (in ontology, the term 'thing' is the same as 'something'. With perhaps an emphasis on conceivability (by some)).

a.-- 'Panta' in Homer.

It is suspected that Homer—perhaps in Ionia (Asia Minor)—lived between 900 and 700. His name is “the blind one”. Yet, at least as a poet, he behaved like a seer. 'Mantis', the one who sees—much more thoroughly and much more than the sightless fellow man who is not so gifted—is—with the cooperation of the deity—capable of 'a.lêheia', snatching from oblivion or 'revealing' all that is ('truth'),—of 'apokalupsis', revelation. Thanks to his “expanded consciousness” ('mnêmosune' or also 'anamnesis').

Iliad 2:485. -- “Tell me now, Muses—Mousai—who dwell in the Olympian dwellings, for you are goddesses. Steadfastly present. You know panta, everything. We, however, hear only a 'kleos', an untested rumor, and know nothing (...).” So much for the text.

a. Muses, as goddesses, those higher and highly gifted beings, are characterized by 'parousia', omnipresence. 'Pareste', the text literally says.

b . Precisely through that parousia, presence with reality, they possess an informed “expanded consciousness” and “know everything”.

Prayer.

The fallibilism or sense of fallibility of archaic mankind—we hear only kleos, untested rumor—turns toward the deity, who is omniscient, and turns to itself.

The “blind seer” (i.e. blind as a mortal but seer as enlightened by the Muses) therefore prays from the very beginning of “a good work” (i.e. a solid work). An archaic poet does not merely compose “beautiful verses” (like modern poets). In making those verses, he is at work as a seer.

LO31

b. Ontology as a theory concerning all that is.

(understand: anything that is 'something' in any case), it speaks, in substance, with regard to the object, of precisely the same 'panta', everything that a poet like Homer spoke of. For as a method, ontology—insofar as it has truly remained 'ontology', as with a Parmenides, for example—exactly the same method, namely that the ontologist 'sees' beings as beings. He reveals what he 'sees'.

He commits—so to speak—'a.làtheia', truth concerning beings. He brings beings out of their hiddenness ('lethè' is 'forgotten', 'oblivion'). Just as the poetic seer exposes the destinies of men and deities, of the universe.

And yet: the difference is striking. We just said “the fortunes of people and deities, of the universe”. Poetry, in the archaic-sacred ('sacred' means 'consecrated') sense, is primarily focused on fate. Fate is all that happens to us. All that happens to people. All that happens to deities. All that happens to the immeasurable natural framework in which people and deities situate themselves. Fate is the history that we – people, deities, universe – go through. Fate is a time-bound entity.

The ontology of a Parmenides is first and foremost “applied logic”. Logic is the theory of thought. Instead of composing poetry, the ontologist 'thinks'. He thinks about people, the deities, the cosmos.

Result : abstract concepts to represent people, deities, all things that constitute the 'fysis', Latin: natura, nature as the totality of all that exists. Result: in Parmenides, the poetic form, the pure form, remains, but the content is not an epic, a powerfully appealing story, as in Homer, but a treatise, a 'theory'.

Abstract-logical thinking was born immediately—and forever in the West!

'Panta', all destinies. Yes! But the ontologist sees them as 'panta', all beings. As all that is given ... for the thinking mind. Which tracks down the similarities and the connections. Which, in other words, first and foremost

seeks logical connections (similarities, connections). And translates them not into a (powerful) story but into an 'exposition' (theory).

We say: 'translates'. Yes, for the powerful unfolding of the events freezes into the solidified framework of thought in which the events must play out.

A question arises: where are the vicissitudes now?

LO32

2.-- “All that was, is, and will be”.

No: the vicissitudes were already cast beforehand by the poets into an abstract-logical form.

J.P. Vernant, * *Mythe et pensée chez les Grecs* *, I, Paris, 1971, 82, says: “The same terms serve, in the works of Homer (Iliad, Odyssey), to represent the prophetic ability of Calchas, the seer, and, in the works of Hesiod of Askra—*Works and Days*, *Theogonia*—to represent the role of Mnemosune; Remembrance”.

Incidentally : the best translation of 'Gedenken' (Remembering) would be 'expansion of consciousness'. Expanded consciousness of the one who sees more and differently than the ordinary mortal. Gedenken is also immediately the goddess-cause of all that constitutes some form of expanded consciousness in humans—mortals, that is. Such as, for example, a premonition that comes true. Such as the intuitive connections between mother and child. Such as the sometimes extremely true words of a—don't be surprised—card reader who—sometimes—provides extremely accurate information—God knows how.

In other words: she causes what is Remembrance. Thus, she is not only an 'Urheberin' (cause-maker, as Nathan Söderblom once said), but also a 'Funktionsgöttin' (User), a goddess who exercises a 'function' regarding some domain or other (here: expanding the everyday awareness of mortals).

Vernant: “Remembering knows – and expresses in songs – all that was, all that is, and all that will be.”

Read Homer, Iliad 1:70 and Hesiod, Theogonia 32 and 38, and you will see it stated very emphatically.

Mnemosune, a term that corresponds to 'anamnesis', Latin: *reminiscentia*, orderly memory, thus possesses a knowledge of “being-in-the-time-dimensions”, namely past being, present being, future being.

Here we explore the science of fate. Knowing fate comes down to knowing being as being past—no longer being—, as being present—being now for a moment—and as being future—not yet being. 'Time' is like a kind of flowing 'being'. Time flows on. That is: being flows on!

Mnemosune was considered the leader of the Muses. -- Muses and Memorizers are a group of inspirers of 'enlightenment-bestowing' goddesses. “*Urheberinnen des Gedenkens*” (Primeval goddesses of remembrance), to use the words of the religious scholar Söderblom.

As a result, Homer, Hesiod, and others receive inspiration from the principal goddess and/or from her Muses.

EO33

The result is: the poet/seer experiences—carried by, encompassed by, guided by the goddesses—with the goddesses, a direct perception—'theoria', penetrating perception—of all that was before (“*ta pro t' eonta*”), all that is now (“*ta nun t'eonta*”), all that will be (“*ta t' essomena*”). Immediately we have the truly ancient Greek terms.

Vernant: “The poet knows the past because he possesses the ability to be present in the past himself as an eyewitness.” (Oc, 83). This is because the goddesses 'animate' him (carry/encompass/guide) who are themselves 'parousia', presence.

As far as the past is concerned, remembering—one of the meanings of 'Remembering'—seeing, and knowing are fundamentally the same. As far as the present is concerned: realizing, seeing, and knowing from a distance. As for the future: foreseeing and predicting in advance, seeing (into the future), and knowing (already in advance).

That is Remembrance and its Muses: expanded consciousness. A consciousness that is so 'pante'—all events, all beings unfolding in time— all that was before, all that is now, all that will be, as if an eyewitness is 'nearby'—parousia, anamnesis—that poetry began precisely in an archaic-sacred culture. Thus, too, began ontology, but instead of being a description of fate (narrative), it became the science of fate (expounding, treatising).

So that our fear—namely, that the flowing temporal flow of epic literature would be lost in the solidifying discourse on being—is actually unfounded,—if at least we remain at the very origin of Western thought, namely, where the narrative of fate develops into the science of fate.

In this course, we aim to keep those two together. So that the theory never lets go of the event. But also so that the event never lets go of its corresponding theory. A fate without an understanding that makes that fate transparent is a dull fate. A concept that does not represent a fate is an empty concept. Fate and the concept of fate go hand in hand. That is truly living ontology. It is ontologically implemented science of fate.

The necessary preparatory work.

People who have lost touch with all that is expanded consciousness often believe that living an 'inspired' life absolves one of all effort. The poet would simply have to let himself be “carried, embraced, governed” by some goddess or other! (= naive).

EO34

In archaic-sacred civilizations, neither seers nor poets proceed in this manner! Vernant is also explicit. “To be an eyewitness to the past, direct revelation, divine giftedness—all those characteristics exhibited by the inspiration of the Muses and of Mnemosune, Remembrance—do not preclude the poet from having prepared rigorously for them: being a seer is learned, practiced.”

It is evident that engaging in ontology is learned and practiced. That has always been true philosophy.

True to tradition, update.

This includes the relationship “teacher, pupil.” The term – common among rhetoricians or teachers of rhetoric – 'paraphrasis', recitation, comes in handy here. In ancient Greek, this can encompass two meanings:

- a.** to say in other terms (to use one's own terms), explaining what others say (commentary, interpretation);
- b.** to twist the meaning of what others say.

In model-theoretical terms: an original (what others claim) is formulated in terms of an (other) model (what one claims oneself).

Vernant, pc, 83: when the poet—while he 'sings' (thus edifies the poem)—improvises, this does not exclude the fact that he does so on the basis of an accurate representation of a poetic tradition that has been handed down from generation to generation.”

We call this “actualizing in accordance with tradition”. In this context, ‘actualizing’ means interpreting (interpreting) everything that has been handed down within the actual or present situation—however, in such a way that one remains within the basic premises of the tradition. One does rephrase, if necessary with one’s own, indeed, new words, but one respects what has been established regarding ‘principia’, or presuppositions.

It is immediately evident that the ontologist follows an analogous, partly similar, partly different, path: he speaks the language of tradition, but adapted to and fitted into a new—e.g., our postmodern—timeframe. We call these “ontological paraphrases”.

Note -- Reference is made to:

- C. Rehdantz, Hrsg., *Demosthenes (Eight Philippische Reason)*, I, Leipzig, Teutner, 1865-2, 109/133 (Rhetorischer und stylistischer Index);
- E.Amon/ Y. Bomati, *Vocabulaire du commentaire de texte*, Paris, 1993 ;
- id., *Vocabulaire pour la dissertation* , Paris, 1992.

EO35

The 'great' (transcendental) story.

The total content of every expansion of consciousness is—what we might call, with the postmodernist François Lyotard (1924/1998)—the all-encompassing or grand narrative. -- specifically: the beginning of cosmic history (the history of deities and of men) is the stake—'archè', understood here as “the all-controlling origin”—of an unfolding 'being', in which we are situated with our destinies. Towards a future.

1.-- Homer, 2: 484ff..

“And now tell me, Muses, who dwell in the divine dwellings of Mount Olumpos—for you are goddesses, omnipresent in everything, while we hear only rumor and know nothing—tell me therefore who the guides, the leaders of the Danaans were.”

2.-- Hesiod, *Theogonia*.

1/5. “Let us begin by singing of the Helikoniadic Muses (inhabiting Mount Helikon), who dwell on Helikon, the great and divine mountain. Often – around the spring with the somber water and the altar of the primordial son of Kronos (the supreme god Zeus) – they dance with their beautiful feet (...)”.

22/23. -- “It is they who once taught Hesiod a beautiful song when he was tending sheep at the foot of Mount Helicon”.

27/32. -- “(...) “We can tell imagined things that seem entirely real. But we can also, if we wish, proclaim true things.” Thus spoke the truth-speaking daughters of the great Zeus (the Muses), here and now. As a scepter, they offered me, Hesiod, a beautiful branch, torn from a laurel in bloom.

Thereupon they gave me a song inspired by the deities, so that I might glorify “ta t' essomena pro t' eonta”, all that will be and all that was before.

Decision . -- All beings, 'panta', “ta pro t' eonta, ta nun eonta, ta t' essomena”, all that was, is, will be.

That is, in fact, totality in its synchronic and its diachronic dimensions. -
- When philosophy cultivates the pretension of being able to think everything, this is a paraphrase of poetic-mantic speech. The goddesses stand at the origin of the transcendental or all-encompassing aspect of philosophizing as Western thought, especially since Parmenides, has understood it. Diachronically, this means that one can construct a 'grand' narrative within which all 'small' stories—our vicissitudes, for example—find their place. Truly a grand pretension!

EO36

7. Modal ontology (36/43)

Actually, the term “modal ontology” is incorrect: “ontology regarding modalities” would be a correct term.

By way of introduction.

The term 'modality' exhibits ambiguity.

a. Phenomenological

(e.g. in Hegel's sense) 'modality' means the form or shape in which something can appear: whoever describes the 'forms' or modes of appearance

of human reason in the course of cultural history mentions the various 'modalities' of that reason.

b1. Grammatical.

The 'form' into which the utterance of a predicate can be cast within a sentence or judgment (statement). For example: a. "It is raining". b. "It might be raining". The first sentence is modalityless; the second exhibits the modality 'potentialis' (possibility), expressed in the term 'maybe'.

b2. Legal.

A legally valid act may exhibit a modality, i.e., some reservation. In the grammatical and legal sense, a reservation or restriction is at work. A statement (grammar) or a judgment (legal science) does not apply unconditionally or 'absolutely' (completely) but "subject to reservation or restriction". Thus: a marriage contract applies "subject to a condition" (an additional agreement), i.e., conditionally, not without further ado.

Reread EO 23 in this connection. -- A law applies without restriction! Simply put. Without any condition. -- So that, in the doctrine of judgment, a modality is present in a statement when the predicate of the subject is stated with reservation.

Ontology of modalities.

The list follows immediately: necessary - non-necessary (subject to, possible) - not necessarily. "Non-necessary" is also called 'incidental' or 'contingent'.

Models.

- a** . It is necessary that a is a (due to the total identity of a with itself).
- b** . It is possible that a is equal to b (due to partial identity),
- c** . It is necessary that a and not-a do not coincide. Or rewritten: "It is impossible that a and not-a coincide": One can also rewrite: "It is absurd that ...".

Library st.:

- G. Jacoby, *Die Ansprüche der Logistiker auf die Logik und ihre Geschichtschreibung*, Stuttgart, 1962;
- O. Willmann, *Abriss der Philosophie*, Wien, 1959-5, 73 (Modalität), 76/80.

EO37

Logical modalities.

Here we understand 'logic' as 'theory of reasoning', i.e., the theory of inference. -- From a Platonic perspective, there are two main types:

a. deduction or 'sunthesis' and **b.** reduction or 'analusis'.

Let us take the schema of both according to Jevons-Lukasiewicz.

A. Deductive reasoning.

If A, then B. Well, A. Therefore B.

Appl. model.-- If all girls are beautiful, then so are this and that girl. Well, all girls are beautiful. Therefore, this and that girl are beautiful. -- The conclusion B necessarily follows from the preceding clauses "If A, then b" and "Well, A".

Set theory: if all (universal set), then some (particular set). Or: from generic to specific (in the old language).

B.-- Reductive reasoning.

If A, then B. Well, B. So A.

Appl. model .-- If all girls are beautiful, then this girl and that girl. Well, this girl is beautiful. So all girls are beautiful.

The conclusion A does not necessarily follow from the preceding clauses "If A, then B" and "Well, B". In other words: just because two girls are beautiful does not necessarily mean that all girls are beautiful!

Incidentally : this schema is the schema of induction or generalization. -
- One sees the ontological modalities emerging in the very heart of logic as a theory of reasoning.

Note .-- The threefoldness of I. Kant (1724/1804; top figure of German Aufklärung).

a. Assertive judgments.

"It is raining." One neutrally states that something—raining—is a fact ('assertio' is a pure assertion).

b1. Apodictic judgments. -

"After rain, the landscape becomes wet." Even if the necessity is not expressed literally but understood by it, as in this sentence, there is still (here: a given of nature) necessity ('apodeixis' is proof (strength)).

b2. Problematic judgments.

“Perhaps it will rain.” -- In Kant's language, 'problematic' (from 'problèma', the question) means a possible fact.

Conclusion : Fact, necessary fact, possible fact. One recognizes, to some extent, the age-old ontological 'tropoi' (Greek) or 'modi' (Latin), the modalities.

Possibility . -- **Bibl. st.:** John Cohen, *Chance, Skill and Luck (The Psychology of Guessing and Gambling)*, Utrecht/Antwerp, 1965, 165v.;

EO38

-- Ton Maas, *Dwarsgebakken wetenschap* , Amsterdam, 1988, 121 (Gestocastiseerde wereld).

Incidentally : 'stochastic' (from the ancient Greek 'stochastikos', meaning 'based on conjecture') is anything determined by chance and therefore knowable only by conjecture.

In this context: “at random” in English means “at haphazard” or “based on pure chance”, whereas “randomize” means “arrange arbitrarily into a group”. Indeed: a world or universe in which “chance” governs the phenomena is a world of the modality of “possibility”. The incalculable, the unpredictable entails positing a multitude of possibilities or “stochastic variables or factors”.

The term 'probably'.

J. Cohen, **Kans, kunde en geluk** , mentions a fascinating experiment.-- An interpretation experiment, namely, carried out by ten-year-old girls.

Given : “What does the sentence “It will probably rain” mean?”

Requested : the correct interpretation, especially of the word 'probably'.

It is clear, immediately: the girls had to map the given sentence against the background of the phrase “It will rain” (an unconstrained statement).

Results . -- Here are some answers.

Girl 1. -- “The word 'probably' means that it could or might rain.” Or: that it is very likely, or that it will not rain.”

One establishes the tentative nature of this girl: 'maybe' is less likely than 'probable'; “very plausible” is too likely.

Girl 2. -- “It is very likely that it will rain. I suppose that it will rain (...). I am not sure that it will rain (...). I don't know whether it will rain or not. I believe that it will rain.” Again: searching—fumbling for an accurate linguistic rendering of the term 'probably'.

Girl 3.-- “It might rain. I think it will rain. I am sure that it will rain. I doubt whether it will rain.” -- How tentative! “I am sure” and “I doubt” at the same time!

So far: 1 is objectively minded (the phenomenon of 'raining' is mentioned); 2 and 3 are more subjective: “I, I, I...”

Now girl 4. -- “It could rain heavily. There could be thunder and lightning. It would be fun. You will probably enjoy it very much. He will probably come to get you.”

EO39

Here all object-orientation is gone -- pure subjective experience!

Conclusion . -- The four types of interpretation or explanation of the reservation-clause present a differential or spectrum ranging from objective through semi-subjective to purely subjective. Immediately, we see three types of 'reality' (in the sense of “being attuned to reality”).

Note : The trial organizers may have forgotten to point out that the task involves ambiguity.

a . What does the sentence itself mean?

b . What do you personally think regarding that sentence?

Those two aspects of the question overlap, but are certainly distinguishable or discriminable!

The ones - 1 - understand: “What do the words mean?”; the others - 2, 3 and certainly 4 - understand: “What do you think of it?”.

'Rumores', rumors.

It is perhaps known that the ancient historian Cornelius Tacitus (55/119; *Annales*) attached great importance to what in contemporary Latin was called 'rumor' (pl.: *rumores*), rumor—all that is said in the squares and in the homes about people, facts.

That is still the case today: a visual impression created by a TV reporter about, for example, a businessman or a politician can be decisive for opinion formation! Especially when one considers how unscrupulous or sold to vested interests journalists can be! Well, very many people who form such a visual impression—while watching TV, for instance—rarely react according to the objective type (girl 1), but rather react according to their own subjective or very subjective wishful thinking (girls 2, 3, and 4). The latter forget that rumors belong to the category of “modity of possibility.” The visual impression created, for example, is possibly true. In other words: “The visual impression or ‘rumor’ is true—subject to further verification regarding the veracity of the source.”

Modal ontology is therefore not just a theoretical case of nothingness that is relevant every day.

Contingentism

Richard Rorty (1931/2007) was a successful American philosopher in recent years. His * *Philosophy of the Mirror of Nature* * (1979), a bestseller, made him a sought-after speaker—alongside J. Derrida (1930/2004, deconstructionist) and Stephen Toulmin (1922/2009; **The Uses of Arguments* * (1958)). As a “liberal ironist,” he does not take his own ‘theorizing’ very seriously: he is willing to provide explanations to other fellow citizens—liberals—but not to impose theories on them.—An unpretentious thinker!

EO40

**Contingency, Irony and Solidarity* * appeared under his hand . For him, solidarity or togetherness applies, but in such a way that every singular little subject can wrap itself in its own little nest—with Nietzschean, Biblical (God-believing), Sartrean, Heideggerian, or whatever else is ideal for its eyes. As long as one does not impose one's own, all-too-individual opinion on one's fellow man—in our world of endlessly many interpretations regarding life and the cosmos, in other words, in our postmodern world. Typically American.

' **Contingentism** ' is the title of his most individualistic viewpoint: 'contingent' or “merely possible; -- accidental. -- The philosophers of the past are all merely contingent, non-binding makers of thought products for each of us, taken individually. Not that those thought products have remained without — sometimes profound — after-effect ('reception' or 'reception,' say the rhetoricians of today); quite the contrary. But their general validity, their universality, can be “dismantled” into merely accidental, highly subjective constructions.

The “grand narratives”—let us think of the Biblical view regarding beginning, middle (Christ), and end (the return of Jesus)—of the modernist idea of progress—often make little impression on most contemporaries today, if they hear anything of them at all. Everyone settles into their own worldview and philosophy of life. And lives in society in this way, as much solidarity as possible.

So that 'contingentism' or 'random thinking' stands for prioritizing an endless multitude of subjects with individual viewpoints that are due to or attributable to chance.

Once again: one of the possible applications of the modality 'possibility'. Contingentism: an endless series of possible highly individual subjects-with-their-own-individual-thought-products.

Which is fundamentally a very accurate representation of what planet Earth is showing now—in this post-biblical and postmodern era.

See: -- R. Rorty, *Contingency, Irony and Solidarity*, Kampen, Kok - Agora/Deurne, Denis, 1992;

-- id., *Solidarity or Objectivity (Three Philosophical Essays)*, Meppel - Amsterdam, Boom/ Deurne, Denis, 1990.

This philosophy is indeed one of the possible philosophies. Not the only possible one!

EO41

Impossibility.

Bibl. st.: Charles Lahr, SJ, *Logique*, Paris, 1933- 27, 495. -- We already encountered the impossible, the absurd, or the nonsensical in EO 26 (Law of Nonsense). We will now examine this in more detail from the perspective of modality.

1.1-- Round square.

The proposition we defend is: nominally, according to pure word sound (pronounceable terms), this is possible; but in reality or factually, insofar as the realities indicated by the terms are thought of in themselves, this is absolutely not possible. In other words, it is impossible.

C. Lahr, nourished by the French Cartesian tradition, proves this as follows.

a. Analysis.-- Note: 'analysis' here is to be understood (not in the Platonic sense of “reductive reasoning” but) in the Cartesian sense as the division of a totality into separate elements (what Platon would rather call 'stoicheiosis' (elementatio) or factor analysis).

1. Surface.

If one starts from 'surface', then one establishes that in 'round' and 'square', both are a type of surface. “In that sense”—note the restriction or reservation—they go together perfectly. They are 'possible' and 'conceivable'.

1.1. Geometric shape of lines.

A round line cannot possibly coincide with the four lines of a square. Such a coincidence is perfectly inconceivable—impossible, absurd, illogical.

1.2 . The length of the lines from the center.

In the case of a circle – round – these, as rays, are all of equal length, whereas in the case of the square they differ in length.

Consequence: they cannot possibly coincide and – as an entity or 'being' – they are unthinkable.

b. Synthesis.

Again (not in the Platonic sense of deductive reasoning but) in the Cartesian sense of a summary view of the analysis or division into factors: objectively speaking—not literally—the total analysis in the terms “round square” shows not one reality or being, but at least two things that are impossible to coexist.

Note : In the language of Bertrand Russell—in 1905—: “It is untrue that there exists one and only one x that is simultaneously round and square.” Such a formulation says nothing, at least explicitly, about the modality of impossibility—it is necessarily true—but it is implicitly present within it. Which must be evident from the reasoning.

EO42

1.2.-- “Two plus two is five”.

Nominally possible, factually or realistically inconceivable. -- One can indeed conceive of the individual elements—two + two and five—side by side,

but as a sum or totality such that those two elements coincide, they are inconceivable.

2.-- *Non-felt pain.*

Here, one can proceed from an experience-based definition of both the concept of 'pain' and the concept of 'unfelt'. It is part of the definition or the very essence of pain that one feels it! Again: the unfelt and pain can be thought of side by side (apart), but not together.

Note -- 'Harmology' is the study of order. This is the theory concerning relations (proportions), including structures.

From a harmonyological perspective, the unthinkable or impossible in the above-mentioned cases is the application of the concept of a system.

For example, the numbers 'two', (two + two) 'four', and 'five'. The numbers form a single coherent system in which each individual element exhibits one and indeed a single identity (total identity with itself), such that, within that system, the other numbers are included in the thought but differ fundamentally from it in terms of identity. Now, if one element of a system—here: one number, e.g., “two + two = four”—loses its identity and is confused with, for example, 'five', then all the others (the complement or other part of the dichotomy) immediately lose their identity as well.

It is the same with the words of a language system: if a word loses its identity (meaning), all other words of that language are jeopardized. Synonyms prove this, but in pairs. Or at least collectively (for together they share a single meaning (identity)).

Harmony

Werner Jaeger, at Harvard at the time, argued that especially from the Paleophythagoreans (-550/-300), the concept of 'harmonia', literally: (ordered and therefore beautiful) combination—which entails non-contradictional combination—was one of the basic concepts—categories—of ancient Greek life and thought, especially regarding art (let us think of the magnificent architecture and sculpture).

The absurd does not fit in there, unless as an element within a harmonious whole.

So that, finally, the term 'impossible' is a matter of harmology (and thus of harmony understood in the ancient Greek sense).

Note .-- Logistic modalities.

There is a fundamental difference between traditional classical logic or theory of thought (which we represent here) and the more recent (although already foreshadowed in Stoic-ancient theory of thought) logistic or formalized, mathematical-symbolic logic. The latter 'calculates'.

a. 'Classic' logistics

This is called dual-valued, because it 'accounts' with only two 'values' regarding propositions (= judgments), namely true and false judgments (realis and irrealis in grammar). Such a logistics—which regularly calls itself 'logic'—is therefore called 'dual-valued'. The ancient Stoics (in the wake of Zenon of Kition (-338/-264)) developed such a logistics.

b. Modal logistics

Besides true and false sentences, this also contains sentences that may/impossible/necessarily contain true or false expressions.

Aristotle of Stageira (-384/-322; Platon's most brilliant student) already knew this. In grammar this occurs as the potentialis and the irrealis.

Note . -- In traditional logic, the terms 'true' and 'false' are not a logical but an epistemological given, for they do not concern the derivation of subsequent clauses from antecedents, but rather the degree of representation in the judgment of the reality intended by that judgment (something that traditional logic leaves out of consideration).

Note : G. Jacoby observes that—for example, in Platonizing anthologies—modalities are discussed, but not in a transcendental sense, but in a categorical one.

a. God “is necessary” (a necessary being).

p. God's 'ideas' (these are his concepts concerning the realities (to be created)) are “non-necessary”, -- possible.

b2. The factual world – Biblically speaking: creation – is, as realized ideas, 'factual'.

Fate analysis

Fate analysis is the theory concerning fate.

It is clear that there is a modal aspect to the analysis of fate. Is one not told that fate is “an inescapable and therefore necessary evil”? Platon knows, besides the 'nous' (Latin: intellectus), the mind, what he calls 'ananke', fate. This is all that, in the universe, is opaque to our human mind but is to be “accepted” as an inescapable necessity. 'Fate', but in the heavy, impenetrable sense.

EO44

8. The Transcendentals. (44/72)

Library st.:

- EW Beth, *The Philosophy of Mathematics from Parmenides to Bolzano*, Antw./ Nijmegen, 1944 (11/28 (The Pre-Socratics), 29/56 (Plato));
- O. Willmann, *Die wichtigsten philosophischen Fachausdrücke in historical Anordnung*, Kempten/Munich, 1909, 61f.;
- id., *Abriss der Philosophie (Philosophische Propädeutik)*, Wien, Herder, 1959-5, 382/388 (Die Transzendentalien);
- id., *Geschichte des Idealismus, III (Der Idealismus der Neuzeit)*, Braunschweig, 1907-2, 1036.

The later medieval scholastics recognized a series of 'transcendental' or—like being—all-encompassing concepts: besides 'ens' (being), there are, according to them, 'unum', the one, -- 'verum', the true, -- 'bonum', the good (valuable).

We stick to this limited list, because it apparently suffices.

As O. Willmann asserts: the transcendentals are the series of concepts formed by the joining, indeed, merging, of the Paleopythagorean (and Eleatic) presuppositions of the One and the True, and the Platonic (already Socratic) presuppositions of Being and the Good (valuable).

The microsocratic (little socratic) Euclid of Megara (-450/-380)—one of the rare intellectual contemporaries of the condemned Socrates who assisted him, along with others, rare ones, in his final, tragic moments—first drew up the list of transcendentals: being, that is, all that is real in the broadest sense of the word; truth, that is, revealed or exposed reality ('a.letheia', apokalupsis); goodness, that is, being insofar as it is susceptible to value judgments and thus as valuable, appraised, estimable; unity, that is, being insofar as it consists of punctual units and inclusive, encompassing units or relationships (think of the four, which constitutes the encompassing unity or relationship of four separate or punctual units).

Euclid—according to Willmann—thus paved the way for the 'synthesis' or list of transcendentals as, following in Socrates' footsteps, Platon gradually conceived of them.

Beth, oc, 36, dwells, in the context of unity, on Plato's stoicheosis or factorial analysis, as Platonic philosophy of language understood it.

That is broadly understood to be what transcendentals.

EO45

9. The transcendental unity. (45/48)

Let us begin with a current overview of the situation.

A. Our categorical concepts.

a. The singular concept.

This coincides with the 'punctual' (reducible to nothing smaller) unit.

Like this: the actress Marilyn Monroe. As an actress, she is singular, unique, individual. Individuology deals with such 'units'.

b.1. The particular concept.

Marilyn Monroe is one member—element, collection—of the particular (specific, kind) collection of actresses that make up the American actresses.

In ancient medieval terms: the American actresses are one type of actress who unequivocally belong to the lineage (the universal collection) of actresses.

b.2. The universal (general) concept.

Anything that is an actress (without further qualification) constitutes—in ancient medieval terms—the lineage (genus) of actresses. We now say, especially since G. Cantor, “universal collection”.

B.-- Our transcendental or all-encompassing concepts.

The concept of 'pante', everything (EO 30),-- in the diachronic form: “all that was, is, will be” (EO 32),-- in short: being(the), is all-encompassing.

That is an exceptional form or modality of generality or universality. It concerns a generality and totality that radically encompasses everything that was, is; will be, that never was, is, will be but could be (all that is possible).

In other words: a radical generality and wholeness. Not a categorical one. Behold the pedestal. Let us now look at how the ancients began to realize this.

The Paleopythagorean theory of unity (henology).

“To them”, unum, the one (in the punctual and in the comprehensive sense). That is the basic concept.

Note: the henology of the Paleo-Pythagoreans is, in fact, a harmology or theory of aggregation. Ancient Greeks who practiced arithmetic, for example, assumed that “to them”, the (punctual) unit, our '1', was not a 'number' (understand: a multitude of punctual units brought into a unity). However, 'numbers' were constructed from that unit: only the number 2 was a 'number', i.e., a set and system of two units. A number, in the ancient Greek sense, is therefore a (comprehensive) unit of (punctual) units.

If one remembers that well, one will understand the ancient Greek concepts regarding “the true and the one” much better.

EO46

Combinatorics.

'Combining' is linking and unlinking things in pairs, -- into 'configurations', which are forms of joining together - and even joining together. --- When ancient Greek children learned to count, this was done using, for example, pebbles. Two pebbles, in a row, form a line, however imaginary. That is the configuration of the line on-the-ground-of-two-pebbles. Three pebbles make a small triangle out of, for example (we say “for example”, because one can also 'combine' in this way so that they lie on a line-on-the-ground-of-three-pebbles). Four pebbles make a square out of.

Just keep on 'combining' like that. So that combinatorics is actually 'configuration science'.

Note : This is perhaps—perhaps—to be understood as meaning that, among the ancient Greeks, a pebble—a punctual unit—did not constitute a 'number (form)' or 'configuration' because they were too occupied with combining—that is: working with more than exactly one pebble (punctual unit). Two pebbles are capable of combining. That is, then, the underlying basis of the “first number”, understand: “the first combination”.

Similarity (set) / coherence (system).

'Unity' is connection. Connection is either similarity ("totum logicum", a whole arising from purely comparative thinking - so the medievalists said) or

coherence ("totum physicum", a connection situated in 'fusus', nature itself - so said the same medieval scholastics).

This is – still – the quintessential premise of set theory and systems theory.

Further explanation.

When combining, the ancient Greeks looked at the (comprehensive) unity (= connection) of (punctual) units.

A. The encompassing unit can be similarity: after all, a set relies on “a common property” (= similarity, spread over a series of instances).

B. The encompassing unit can be coherence: a system rests on a single, remarkable “common property” (= similarity), namely the fact that its parts – however different – belong to the same whole (totality).

Collectively, therefore, instances—elements—form a set by similarity, and parts—subsystems, if necessary—form a system (if necessary: a supersystem) by cohesion.

The Paleopythagoreans, for example, possessed and manipulated this so-called recent insight perfectly.

EO47

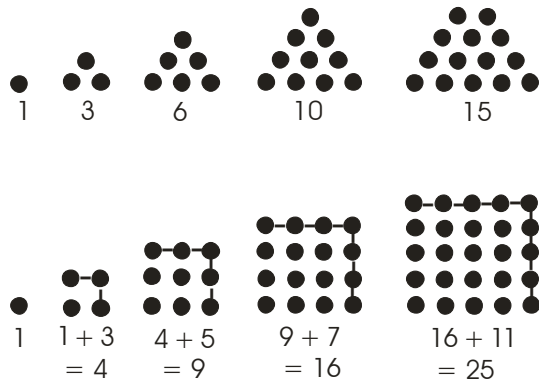
The true and the one.

For Paleo-Pythagoreans, therefore, 'Being' was always “unity/unities”; whoever drew that bare—a.lêtheia, to bring out of concealment,—apo.kalupsis, literally: to bring out of obscurity, to reveal—brought the truth concerning reality to light. The true unity—that is what the Paleo-Pythagoreans were actually seeking. Understand: the revealed, drawn bare unity/unities.

Applicable model

A part of paleopythagoreanism can be summarized as 'arithmo. logie' (the science of configuration, combinatorics; Latin: numero.logie). Translating this as 'theory of numbers' is therefore very misleading, because 'arithmos', bringing together and joining together, means configuration.

This is how we understand the so-called 'triangular numbers' and 'square numbers', where our isolated



geometry and our equally isolated number science (arithmetic) were still combined. Look closely: the 'numbers' 1, 3, 6, 10, 15 (triangular numbers) are the original, -- just as the numbers 1, 4, 9, 16, 25 are. The models (in which the numbers are 'mapped') are the configurations. -- Talk about model theory!

Appl. model.-- The 'choreia'.

This word is difficult to translate. Choreia encompasses – combines – ... dance types governed by numerical forms or configurations, instrumental music (which combines sounds), song (poetic combination of words and ideas),-- within the cosmic framework of the celestial bodies (astrological aspect) with their combinations (relative positions).

That is the basis of the Paleopythagorean quadripartite - the Middle Ages called it 'quadrivium' -: numerical mathematics, space mathematics, music (understand: choreiology), astronomy. Please note: this quadruple is a combination!

Applicable model

Unity/ units. Units/ unity. -- The immortal soul, the center of Paleo-Pythagoreanism (as, later, of Platonism), is interpreted as an 'arithmos', an (encompassing) unity of (separable, distinguishable) units (facultys, for example). -- Again: the soul is together—yes, infusion!

EO48

Applicable model

All that is beautiful, kalon. -- According to the Paleo-Pythagoreans, beauty, that which compels awe and wonder as the non-everyday, was a matter of “unity-in-multiplicity (of punctual units).”

Beauty, in the sense just defined, was, moreover, a general Greek concern. Did they not know the term 'kalokaigathia', that which is beautiful and good (valuable)? Something could not be good, sound, and worthy from all viewpoints without simultaneously being beautiful.

'Harmonia'

The summarizing word is: 'harmonia', coming together and joining together.

A testimony.

O. Willmann, *Geschichte des Idealismus*, I, 272. Willmann was an expert on Pythagoreanism. Here is what he writes: "The (punctual) unity—later also called 'monas', monad, to distinguish it from 'them'—is there for every 'number' (plural of units),—is, however, not yet a 'number' itself, but is indeed in all numbers and their preposition".

In all this, the twofold meaning of the term 'hen', the one, proved very useful (...): the one as a punctual unity is 'element' ('stoicheion'), but in the sense of 'henosis', unification, it is the connection that makes every 'number' into a 'number'. For everything that is 'number' is time and again something that is 'one', -- in the sense of "unity-in-a-multiplicity".

Thus the terms are to be understood: "hen archa panton", the one, preposition of all things; -- "to hen stoicheion kai archa panton". The one element and preposition of everything (cf. Aristotle, *Metaph.* 14:4, 17).

At once, in the archaic Greek sense, "the One" (and the true) was divine and even a model (image) of the deity. Willmann expresses this as follows: "So too is the deity (as Pythagoreanism conceived it) for the things: it is thoroughly distinct from those things and yet it is in the things. Thus it is the prefiguration ('archa', (arche) of them".

The One and the True.

In ancient Greek, 'true' at a certain point means not only 'exposed' but also 'ideal'. For the Pythagoreans, unity-in-multiplicity-of-unities is not only what is actually exposed, revealable, but also what is 'desirable' and 'ideal'. That dual meaning has remained to this day.

EO49

10. The transcendental 'goodness'. (49/58)

Library st.:

- O. Willmann, *Geschichte des Idealismus*, I, 447; 451;
- G. J. de Vries, *Plato's image of man*, in: *Tijdschr.v. Phil.* 15 (1953): 3, 426/438;

-- EW Beth, *The philosophy of mathematics from Parmenides to Bolzano*, Antw./Nijmegen, 1944, 29/56 (Plato), -- vrl. 30 (Anamnèsis/stoicheiosis), 36 (Filebos 18b/d (Theuth), 42 (Stoicheiosis), 44 (Stoicheiosis).

Sketch of Plato's philosophizing. (49/52)

We write 'philosophizing' – not 'philosophy' – because Platon evolved throughout his life. Hence the fact that no closed system can be found in his dialogues. After all, 'dialoguing' was a decisive element in his thinking: Athenian democracy stood or fell, since Herodotus of Halicarnassus (-484/-425; *Historiai*, di onderzoek), particularly visible in the structure of the exposition itself, on dialogue. First, all possible opinions must be allowed to be raised – in free discussion – before one takes a position and thus defends a 'thesis' (position; Latin: *propositio*) on rational grounds.

For this reason, too, Plato advises his students—after hearing his teaching—to talk freely with one another, indeed, to debate about what he presented. Which he himself expresses as follows in the Seventh Letter:

“(...) As a result of repeated discussion of this subject as well as as a result of intimate cohabitation, the intended idea suddenly springs forth in the soul—let us think of the aha moment—like a light ignited from a spark of fire—and then makes its own way further.” (Platon, *Der siebente Brief* (An die Verwandten und Freunde des Dion zu Syrakus), Calw, Gerd Catje, 1948, 35).

In other words: just as in Paleo-Pythagoreanism, so too in Platonism the soul, in the archaic-ancient sense of 'principle of life', takes center stage. But not individualistically, but rather dialogically: through repeated discussion and simultaneous intimate coexistence—that is the ancient friendship that also becomes a 'thought society'—the soul arrives at the correct insight.

So much for the method of *theoria*, or the fathoming of a theme. It is virtually the pure continuation of the Pythagorean 'hetaireia' or intellectual society. Let us not forget that, in ancient Greek, 'hetaireia' meant 'living together erotically with someone' (prostitute, courtesan). Such was the collective intellectual search—right up to and including eros.

EO50

Outline of the main content

Although virtually impossible to summarize, Plato's philosophizing is nevertheless 'compressible' into the following threefold structure.

“The soul consists of a big monster, a smaller lion, and a small human.”
(GJ de Vries, ac, 432).

Let us explain this. The human soul, individual and immortal (in which Platon closely followed popular religion), exhibits three basic aspects:

The big monster

('diaiata', the soul and dwelling as well as eating and drinking, nocturnal life (bed, dream life), eros (sexual life), labor (economic life),

The smaller lion

(the noble sense of honor, which reflects the pride of the lion),

The little person

(the spirit in man, -- which encompasses thinking and reasoning, mind and will).

It will be immediately noted that Platon harbors no lofty thoughts of the average man! Which is entirely true: under the guidance of his distinguished teacher Socrates, he had come to know the flaws and lower 'soul-inclinations' of his contemporaries so well that this is reflected in the structuring of his philosophy. Let us therefore remember very well the basic threefold structure: great monster, lesser lion, small man. A perfect differential! From great through lesser to small!

This tripartite structure is reflected in the rest of his 'system'.

Platon sometimes divides peoples into three types, according to the degree to which they exhibit one of the three soul tendencies—monster/lion/man (ethnological psychology).

But above all, his sociology or social theory reflects the triad: in his ideal or utopian 'state,' which he himself very explicitly states is hardly achievable (Platon was anything but naive), he envisions laborers (= monster), protectors (lion), and thinkers (man). He was so committed to speaking and writing not 'katagoric' (degrading-naturalistic) but 'anagoric' (elevating-idealistic). In that sense, he was a thoroughly educational and even educational thinker.

That he wanted to work in an educational capacity is evident from his ethics (moral theory). Three types of 'virtues' (which make man a “virtuous being”) govern his ethics:

a. prudence ((sofrosunè') which does not eradicate the monster) in our deeper soul - that which, according to him, merely purifies that true senselessness and elevates it to a higher plane;

EO51

b. manliness or composed courage ('andreia') which likewise purifies and elevates the “proud lion within us”;

c. wisdom ('sophia') that brings the little man within us to full development.-- These three together - united - and in union or harmonia, as with the Paleophythagoreans - form the 'dikaiosune', Lat. iustitia, - usually translated as 'justice', -- better translated as “conscientious living”.

Cosmic dimension.

It would not be Platon, or even an ancient Greek, if man and his coexistence were not situated in the cosmos.

As O. Willmann, oc, 447, says: the basic threefoldness—monster, lion, man—reflects “body/soul/spirit”. But one must understand these terms correctly, i.e., Platonically.

'Body' is that which situates us in the material reality called 'cosmos'. Taken in itself, this term has no pejorative meaning, for Plato has the greatest respect for the body (one need only think of his ideas on body care, such as gymnastics and dance). 'Body' is that which makes us in solidarity with the all-encompassing reality that is experienced first and foremost as matter—matter ('hulè'), with its qualities and... unfortunately, its voids.

Hence a well-defined suspicion towards it. 'Soul' is that which situates us in the purely spiritual, immaterial world (around and primarily the world of 'ideas' or cosmic models of reality). A part is mortal, a part is immortal.

'Spirit' – 'nous', Latin: intellectus – is that which allows us to grasp being and thus our ontological capacity. It makes our soul a typically human soul, transcending all animal souls. Thanks to our spirit, we grasp what Platon calls 'ananke', absurd and therefore fate difficult or even impossible to grasp with the spirit: it is its counterpart! -- Which gives us a true noology.

Willmann, oc, 447, emphasizes that the tripartite nature “monster/ lion/ man” situates us within the tripartite nature “matter/ life/ idea”. Which is therefore purely 'cosmic'.

In other words: man is a microcosm, the world-in-miniature, -- model and image of the macrocosm, the actual universe-on-the-largest scale. Plato, along with other Greeks, immediately distinguishes three well-defined 'layers' (levels of being): material being, living being (being animated), and ideal or purely immaterial being.

So much for a 'Gesamtschau' or "summary view" of what Platon upheld as the basic structure of his established philosophy.

EO52

An ancient legacy: 'stoicheiosis' (52/55)

Library st.:

-- EW Beth, *The Philosophy of Mathematics from Parmenides to Bolzano*, Antw./ Nijmegen, 1944, 30, 34v., 36v., 42, 44;

-- PT van Dorp, *Aristotle on two workings of memory* in: Tijdschrift v. Filos. 54 (1992): 3 (Sept.), Fri. 478/ 491 (Platon's Menon).

-- Let us briefly reread EO 47v. (The True and the One), for Plato's doctrine on the matter is a further, 'dialectical' elaboration of it. Which we will now briefly outline.

1.-- PT van Dorp's opinion.

Aristotle, in a booklet on memory, following in the footsteps of his teacher Plato, asserts that human memory exhibits two degrees.

Grade 1. Mnème, memoria.

In the *Dialogue with Menon*, Platon asserts, through Socrates, that Menon does indeed possess 'mnèmè', memoria, a less developed memory. After all, his insights rest entirely on what he has heard and remembered. Thus, he knows what is said about many themes. He even accumulates this knowledge into a kind of all-encompassing, encyclopedic insight.

But, strictly speaking, this type of memory is a 'memory of trivia', consisting of loose data—without ordered coherence—without comparisons—i.e., without connection or unity. Which amounts to a loose multitude without unity.

Grade 2. Anamnesis, reminiscencia.

This is, in its initial form, the thoroughly developed memory found only in Menon, the young, knowledgeable aristocrat. First of all, this 'memory'—actually: expanded consciousness (EO 30)—rests on "one's own, not someone

else's investigation." Not on hearsay and memorization. Then: instead of merely isolated, juxtaposed data, this expanded consciousness works out an ordering of the isolated data such that the connections (similarities, coherences) are revealed (alètheia, apokalupsis).

The all-encompassing unity in the multiplicity of punctual units thus becomes clear. But that is precisely stoicheiosis. After all: such an expanded consciousness or 'remembering' tests what is thus known ('true', 'revealed', 'exposed') against the perceptible and observable reality. That is then the second, 'developed' and 'mature' form of memory.

EO53

Incidentally : Van Dorp calls the first, less developed sense of reality—for that is what 'memory' is in ancient Greek—an 'animal' or animal memory. That is—in our interpretation—the awareness of things, characteristic of the (large) monster—dwelling—and—food, nocturnal (bed) life, sex, labor—and the (smaller) lion—sense of honor.

2.-- *EW Beth's opinion.*

Where van Dorp speaks of anamnesis, expanded awareness, and associates it with stoicheiosis, factor analysis, Beth is engaged in factor analysis (as a mathematician) while simultaneously considering anamnesis, expanded thinking.

Neither of them manages to clearly think of both—stoicheiosis (factor analysis: the one in the many) and anamnesis (expanded awareness: the one in the many)—together.

Beth also discusses the Menon Dialogue, of course. Everyone possesses a capacity for learning in the soul, the center of paleopythagoreanism and Platonism.

Task: to detach this capacity to learn, indeed, to delve thoroughly into reality, from dull perception and the equally dull recall of perception. Instead of “all that becomes,” there then comes “all that is.” Ontological capacity! Even more: “and indeed particularly the good” (oc, 32).-- But more on that later.

Method: dialogue, with questions and answers. What Plato calls “hè dialektikè technè” or, better, “hè dialektikè epistèmè”, dialectics (as skill,

technè, yes, as science, episteme). -- This is how the 'theoria', the fathoming, works.

As a model of 'anamnesis', deeper consciousness, Platon presents a slave in the *Menon Dialogue* who solves a difficult mathematical problem.

Incidentally : even a slave counts in Platon's eyes as possessing anamnestic memory! If one knew how aristocratically Platon thought!

The (mathematical) knowledge, science, of the slave arises thanks to anamnesis, “by means of stoicheiosis”. Listen to Beth’s definition: stoicheiosis is “a constructive construction from certain primordial elements” (oc, 30). Or again: “the explanation of things by means of a decomposition thereof into primordial constituents or 'elements'” (oc, 35).

That is – in our usage – “The one in the many”. The all-encompassing unity in the punctual units!

EO54

The linguistics of the time as a model.

Beth, oc, 36, 47. -- Platon maintains—in which he resembles the more recent structuralists somewhat—that the 'true' philosopher proceeds as “a linguist” (Beth, oc, 47.). In the *Philebos Dialogue* (18b/d), Platon sets out the method. It is perfect stoicheiosis or factor analysis. -- We provide the text.

A.-- Incidentally:

Thoth or Theuth was, among the ancient Egyptians, the god or at least the divine—understand: paranormally gifted—being that invented hieroglyphic writing. As such, Thoth or Theuth is an 'Urheber' (N. Söderblom), a cause.

“When someone—whether a god or at least a divine being—according to an Egyptian story his name was Theuth—observed that sound was infinitely varied, he was the first to realize that the vowels in that infinity were not one but many and, furthermore, that there were other sounds which, although not vowels, nevertheless exhibited a certain sound value and that a certain number of these could also be found. He distinguished a third kind of letters which we now call 'consonants'.

Then he divided the consonants until he distinguished each one individually, -- in the same way the vowels and the semi-vowels until he knew

the number of those as well. -- He called each one individually and all of them together 'letters'.

B.-- But he realized that none of us could learn a single letter separately—without all the others. He saw that this fact reveals a connection that makes all letters one. That was the reason why he assigned to them a science which he called “hè grammatikè”, grammar, letter theory. So much for Plato's *Philebeus* .

Whoever has all the foregoing “in mind” ('anamnesis') immediately realizes that 'stoicheiosis', factor analysis, is at work here, and in a pure manner at that! “Each individually” (punctual unit). “All collectively” (comprehensive unit). “All ... one” (punctual units ... one comprehensive connection). “A connection”.

The terms used speak for themselves, -- without comment. -- “One ... separate / all others” (complementation or dichotomy, inherent to every system). Either all or none! That is the concept of the system, -- pure. One sees immediately that Platon is being imitated, especially by the Pythagoreans.

EO55

Beth, oc, 47.-

1. The true philosopher proceeds in the same manner as the linguist. Before examining language (as a whole), he fathoms the words, for a language is 'built up' of words.

But words consist—are constructed—of syllables, and thus these must first be fathomed. -- The syllables are in turn analyzed (into that from which they are composed) into the elements of the sounds recorded in writing. These form the starting point for linguistic fathomedness.

2. True natural philosophers proceed in the same way when they fathom the cosmos, the 'fusus', Latin: natura, nature. In the first place, they establish to what end the universe can be analyzed. In this regard, reference can be made to predecessors of Plato.

Anaxagoras of Klazomenai (-499/428; a modern-sounding natural philosopher) prioritized 'homoiomereia', homoiomerien. 'Homoiomereia' meant “similarity of the parts of a whole” (common property). Anaxagoras prioritized elements formed by similar parts.

Leucippus of Miletus (-490/60...) and his pupil Democritus of Abdera (-460/-370), both known as 'atomists', put forward 'atoma', indivisible particles of a material nature. Hence our concept of the 'atom' to this day.

Diodorus Kronos of Iasos (+/- -300; Megarian dialectician) put forward a kind of smallest dust particles.

Plato defended this thesis in his speech at the end of his life, entitled “ *On the Good* ”. This startled—according to Aristotle, who had heard it—many listeners, or because—before discussing “all that, from a human standpoint, is called 'good'”—he began with mathematical problems. In that speech, Plato must have frequently mentioned Pythagoras and the Paleo-Pythagoreans as his predecessors.

Well, what we mentioned in the previous paragraph regarding the true philosopher and the true natural philosopher—their stoicheosis—formed the beginning of that discourse “On the Good”.

That speech sought the presuppositions of the fact that true philosophers and true 'fusikoi', physicists, natural thinkers, proceed stochastically, paying attention to the all-encompassing One within the many punctual units that constitute—build up—that all-encompassing One. Naturally, a very difficult theme, which we do not wish to dwell on now. We are only interested in factor analysis as a method.

EO56

Being and Good. (56/58)

Remarkable: Plato, to speak of the good, begins with elemental analysis! With the many in the one and the one in the many!

But an age-old saying sets us on our way: “bonum ex integra causa, malum e quocumque defectu”. Whatever is perfect, that exhibits all its elements, is good. Whatever lacks even one element is not good.

In other words: value (fullness), 'goodness', stands or falls with integrity, 'wholeness' (as is often said nowadays). Every defect violates the (total) value! – Let us reread EO 22 (The nothingness expressing robbery or lack).

The good.

E. De Strycker, SJ ., *Concise History of Ancient Philosophy* , Antwerp, 1967, 113.

“God is the measure of all things.” So it is stated in the *Laws* (a text by Plato).

Now we know that, for Platon, the ideas are the highest norm or rule of conduct. And primarily the idea of “the good”. Should we then regard this idea as “Platon’s god”?

Indeed: if the term 'god' refers to the reality that is pure perfection, 'goodness', worthiness, then “the good” is “the deity of Platon”.

In other words: not a personally conceived god(ity), but perfection-without-further-qualification is the idea of “the good”.

All ideas, all objective embodiments of all realities that we can experience, are somewhere 'divine'. But the idea of “the good” is divine without further ado. Why? Because everything that is in any way a 'good' and therefore valuable—however poor or flawed—is so because the idea of “the good” is present within it while still reaching above it. Although reaching above all realities—like the One (EO 48)—yet “the good without further ado” is intimately present in all realities—like the One (EO 48).

“The good” is therefore being insofar as it is open to appreciation.

Let us take an application.

A speech. If it is expertly constructed and soundly delivered, the protosophists call it 'good'. Why? Because it achieves the stated goal.

But for Socrates (and Plato), this is merely a first degree of 'goodness' or worthiness. If, moreover, it is also conscientious—'just' (in ancient terms)—only then does it lack no element and is 'perfect', 'whole'. And thus simply good as a discourse (insofar as this is possible in the material world, of course).

EO57

In this reasoning regarding the value (and worthiness) of, for example, a speech, one senses the struggle waged by Socrates of Athens (469/399) against the sophists or 'teachers of wisdom' of the time.

a. They most certainly trained experts, - thanks to the imparting of 'techne', skill.

b. However, in many cases, they neglected the formation of 'righteousness' (conscience).

For them, 'good' was therefore “anything that expertise entails”. Socrates derived a surprising deduction from this.

Abstract model : if A (expert), then B (good); well, A (expert); therefore B (good).

Application : if someone is skilled, then he/she is good; well, the thief is skilled (in taking another's possessions); therefore, he/she is good! The thief—according to Socrates—would, under that premise, be an epitome of 'goodness', of worthiness! Well, no one with even a minimal ethical commitment and an equally minimal civic spirit will accept that conclusion. For it points to the unacceptability of the premise, namely that whatever is skilled is ipso facto also (morally and socially) good.

Conclusion : pure expertise without conscience is insufficient; an element is missing.

Incidentally : the reverse is also true! A poorly put together and badly delivered speech—no matter how ethically superior—is not good, because it lacks an element, namely expertise.

Well then, in expertise and conscientiousness “the good outright” is present, but it does not coincide with it, for it reaches higher and is more universal as the basis of all that is of any value.

Incidentally : rhetorically, Socrates' and Plato's stance is powerful. Why? Because they, in turn, attacked the Sophists—who expertly targeted people by their “weak spot”—by their conscience-neglecting expertise, further driving the degeneration of the society of that time.

In Socrates' case, that stance ended tragically: Socrates was sentenced to death on the basis of false accusations and, although he could have fled (which his accusers had counted on), he allowed himself to be poisoned and died an exemplary death in the service of “the good simply”.

EO58

We do not immediately know what “the good (simply put)” actually is. We do not grasp that highest and all-encompassing idea (understand: foundation of reality) directly. We do, however, through models: for example, the value of

a speech, which allows us to sense the original, the idea of “the good simply put,” in a single type of it; or, for example, good conduct, which allows us to grasp the original, the good simply put, as a model.

This allows us to sense the 'desmos', the connection, or the 'sumplokè', the interwovenness, of the good things that are immediately perceptible, and the all-encompassing idea of “the good”, which shines through “in those more or less good things”. “The good” is the indirect light that illuminates the value of whatever participates in it. Light that cannot be grasped except indirectly—via models of it. This is called 'light metaphysics'.

Being is good.

The Sophists, in sometimes brilliant feats of expertise, conjured up a false reality for the (naive) people.

Plato continued Socrates from the perspective of ontology. An unexpert reason that presents itself as expert is an illusory reality. An unconscientious discourse that presents itself as 'good' is an illusory reality.

In both cases, there is “more nothing - mè on - than something - on or ontos on -”.

Socrates fiercely combated the illusory realities that the Sophists conjured up for the 'gullible' people—in their 'technai', areas of expertise, in all kinds of cultural fields. Especially regarding the power of the word. The trivium, grammar, rhetoric, dialectics (in the Sophist sense of 'the art of reasoning'), stems from the Sophists.

Instead, Socrates compelled his audience to “consider all that is truly real and not apparent real”. Instead of the superficial 'technai', skills, Platon, following in Socrates' footsteps, founded the “theoretike tou ontos”, the fathoming of being, ontology.

Pythagoras had already prioritized 'theoria', the fathoming: whoever attends the Olympic Games can do so superficially (out of greed or curiosity). He can also do so thoroughly, down to the 'foundations' or “elements/presuppositions”. That is 'theoria': as an observer (spy), attempting to grasp not the apparent reality but the true reality. This coincides with “the good”.

EO59

Sample 11. -- Transcendental ontology: subsections (59/72)

From the foregoing, it is apparent that ontology is one science but exhibits various aspects.

Being is the basic concept. Uncovering, by means of observational inquiry (what Platon calls 'theoria'), of being is 'truth' concerning that being. Uncovering the either comprehensive or punctual unity in being is 'truth' concerning the One. Uncovering the good in all that is is the 'truth' concerning all that is valuable in being.

Truth, unity, and goodness demand a separate chapter within general or transcendental ontology. More on that now.

Being and spirit.

Note that we simultaneously define the concept of “human spirit.” For what is that other than “the capacity to grasp being, truth, unity, and value”? 'Spirit' is therefore intellect and reason (reasoning capacity), but also disposition and will (capacity for value). Let no one, therefore, confuse 'spirit' with acting merely intellectually and rationally. The human soul, in which the spirit is rooted, is more than mere intellect and reason.

A.-- General ontology. (59/62)

The object is: all that is (so). This is: all that exhibits existence and essence. “How existing is it?” and “How is it existing”. Or: “How real is it?” and “How is it real?”

Responding to this observantly encompasses—as we shall demonstrate further—and analysis, reductive reasoning (“What does the given presuppose?”), and synthesis, deductive reasoning (“What inferences follow from the given?”).

By what? By coming to know the existence and essence of something—the given—by tracing its presuppositions (reduction, analysis) and inferences (deduction, synthesis).

However, a separate chapter on that, titled: “The hypothetical method”.

The essence form or 'form' for short.

'Something' (Greek: ti; Latin: aliquid) is 'reality' (Greek: pragma; Latin: res) because it briefly exhibits essential form or form. For thereby it is both situated within the totality of being and distinguishable from the rest within that same whole of being.

Unseparated, yet distinct. -- We will explain that now.

EO60

The being form.

In ancient Greek: 'eidos' or 'idea'. Literally: the existence of something, i.e., the being of something insofar as it tells our mind something (suggests a concept).

Actual existence and mode of being are summarized in the term '(essential) form'. We explain this because the term 'form' easily gives rise to confusion.

1.-- The spatial mathematical form.

Let us take a cube. It exhibits a geometric configuration or 'form'. If it is empty, one can place content inside it. Or: the cube can be made of metal or wood. In those cases, a system or pair reveals itself: "form/content", or "form/substance". That which is inside and that of which it consists is content or substance.

The 'form' is the arrangement of the parts.

2.-- The ontological (being) form.

'Eidos; 'idea', -- lat.: forma. -- That is the summary of existence and essence, being and mode of existence, of something (the given).

Thus, a (metal) cube has an essential form that encompasses both the geometric shape and the (metal) material of which it is composed.

Thus, the ontological form of a milk-filled cube encompasses both its geometric form and its volume (milk).

The regulating and steering role of the being form.

The being form is practically always contained within a 'kinesis', Latin: motus, a process (change, movement). It is precisely within this that two characteristics emerge.

1. The essential form is normative, regulating.

The processes (behaviors) of, for example, a cube filled with milk depend on or are governed by the physical form as a precondition: if the cube (which is open) tilts, the milk flows out! If the cube is closed, the physical form changes (and, upon tilting, the milk no longer flows out). If it is filled with solid matter, it is allowed to tilt (because the physical form has changed!).

In ancient terms: the essential form is 'metron', Latin: mensura, measure, of processes and behaviors. Or norm, rule of conduct. -- Expressed differently: everything behaves according to its own nature.

2.-- *The being form is cybernetic, steering-oriented.*

The oldest Greek thinkers thought 'cybernetically'; Aristotle summarizes: a constitution, for example—so he says—places three basic concepts at the forefront:

a . 'telos' (lat.: finis), teleology;

b.1 . 'par.ek.basis', deviation,

b.2 . 'ep,an.orthosis' or 'rhuthmosis', corrective or feedback.

That is teleology (theory of goal orientation).

EO61

All archaic and ancient cultures know that cybernetic schema. So does Biblical Revelation.

a. *The paradisiacal objective.*

The thinking of the early Bible, still clinging to the mythical stage, tells us that Adam and Eve, the primordial couple, lived “in a paradise.”

This is: an ideal state, although on the way to further salvation history.

B1. *The Fall.*

The deviation occurs through sin, i.e., the disregard of the paradisiacal purposefulness. The Fall, within the framework of 'tôledôt' or the history of descent as the Biblical writers understand it, leads to “original sin”; i.e., the deviation that is transmitted through procreation to “the offspring”.

b2. *The redemption.*

However, immediately after the “first sin,” God—Yahweh, the Triune Godhead—holds a redeemer in the offing. That is the feedback or the corrective.

This is how the Bible thinks. This is how the Church Fathers think. This is how theologians faithful to tradition think. They think strategically. The essential form is not our human understanding. -- 'Ousia', essential form, - that is the unity of actual existence and mode of being. So with Plato.

Heidegger translates this as 'Seiendheit', literally: 'beingness'. The property by which something is what it is. Our concepts are 'reflections' of that essential form. This is called “the mirror man” (R. Rorty).

Applicable model

“Mieke is a teacher.” -- It subordinates the original, is 'ousia', -- in scholastic Latin “obiectum materiale” (“material object”). This is 'Mieke' as she is. Objective. In itself.

The predicate, the model, is a single aspect of Mieke's 'ousia' or form of being. A sample (with inductive, digeneralizing, and generalizing value). Nothing more.

In other words: the abstract concept of 'teacher'—in our minds—is indeed applicable to Mieke, yet Mieke's total reality—her 'ousia' or essential form—far transcends the reality indicated by that single abstract concept.

In scholastic language, the model is called “obiectum formale”, the formal object, -- this is: that which is exposed in the material object or total reality and fixed in a single abstract concept.

In other words: it is true that we are 'mirror people', because our mind (in its concepts) reflects reality. But those reflections are usually merely aspects, samples. Unless in our transcendental concepts (but those are then too general).

EO62

Note: We recall Aristotle's text: “'Being', einai, is not a characteristic, 'sêmeion', of anything (categorical). Immediately: if one says 'being', on (note: of something categorical), then this is an empty word, 'psilon', for it means nothing (note: categorical). Only in conjunction with another term (note: of a categorical nature) does 'being' (note: categorical) acquire meaning, and without such a thing, 'being' gives no thought content (note: of a categorical nature)” (Ar., De interpret. 3, in fine).

For example: “Mieke is a being, a reality”. That sentence does mean that Mieke “exists”, but it says 'nothing' (categorical, i.e., what applies solely to Mieke) and is therefore – categorically speaking – 'empty'. The juggling with 'being' and 'being' and the other transcendentals – one, good, – true – must take this into due account: for this very reason, a 'real' (corresponding to reality) ontology and philosophy require information other than merely ontological, namely categorical information.

Otherwise, she is talking “air” and “empty air”. Nowadays, such information comes a. from everyday knowledge, b. from specialized sciences, c. from surveys, for example.

In other words: transcendentals are an omnipresent light that illuminates things but is not those things themselves.

B.-- General ontology (62/72).

The other transcendentals form sub-chapters of the general ontology. A word about that.

B.1.-- Aletheiology (truth ontology). (62/64)

The doctrine of truth has already often been discussed indirectly: 'a.lètheia', (// apokalupsis) means “being revealed”. The uncovering and the uncovering of what is.

Regarding being as transcendental reality and beings as categorical realities within the all-encompassing being: it is the 'ousia', existence/essence, that is exposed and offers 'truth'.

To say that being and truth are interchangeable (convertible) therefore means that reality is revealable (insofar as it is hidden, of course—which is never entirely the case) and thus accessible to our truth-attuned mind (at least in principle).

Traditional ontologists also call that accessibility 'intelligibility' (comprehensibility, meaningfulness). Others speak of the 'rationality' of all that exists. That term is good provided it is not interpreted in a one-sidedly modern way.

EO63

'Rational' here means “(reality) susceptible to revelation”. Not that brutal grip on reality of, for example, specialized sciences that many a modern thinker advocates.

The axiom of (necessary and) sufficient reason or grounds.

The fact that archaic thinkers already sought the 'arche', preposition, so early—let us think of Anaximander of Miletus—or put forward some 'stoicheion', element (that plays the role of 'arche') or some 'hypothesis', assumption, betrays the fact that the principle of sufficient reason was the light that illuminated their search.

This informative principle states: being has a (necessary and) sufficient reason or ground (explanation, premise, hypothesis),-- either within itself or outside itself”.

That is the basis of the hypothetical method, which plays such a decisive role in Platon.

a. Deductive (sunthesis).

Schema (Jevons/ Lukasiewicz).-- If A (presupposition, reason, or basis), then B (comprehensibly sensible, 'true'; not absurd).-- Well then, A. Therefore B.

Example : If all water boils at 100°C, then this water here and now. Well, all water boils at 100°C (Law, -- law of nature). So this water here and now boils at 100°C.

b. Reductive (analysis).

Schema (Jevons/ Lukasiewicz). -- If A (reason or basis), then B (sensible). Well, B. Therefore A.

Example . -- If all water boils at 100°C, then this water here and now. Well, this water here and now boils at 100°C (sample, established fact). Therefore, all water boils at 100°C.

Note -- It is evident that stoicheosis or factor analysis forms the background and presupposition here: from all (elements) one concludes towards exactly one (deduction), and from exactly one (element) one concludes towards all (reduction, specifically as induction or generalization). In the reduction, one concludes from the application towards the general rule (at least, this is how one provisionally thinks (as a lemma)): if one instance of water boils at 100°C, why not all water? For, if that hypothesis holds true, then this one instance becomes comprehensible, sensible, understandable, and explainable.

In this way one reveals oneself, in this way truth concerning reality is exposed. Thus, one sees from the examples that the principle of sufficient reason or ground is one—and indeed a very important—aspect of ontological truth.

EO64

The “argumentum ex absurdo”.

Proof by contradiction, i.e. the utterly incomprehensible (EO) 26), has its root in the truth of being: all that is, is revealable, 'true'; all that is (absolutely) nothing, is not revealable (and is immediately an absolute illusion), 'false'.

Epistemology.

'Episteme', Latin: scientia, science.

a. In the broad sense: everything that is knowledge is the object of epistemology or epistemology.

b. In the narrower sense: everything that is strictly scientific knowledge ('cognition') is the object of epistemology, -- better: philosophy of science.

Note .--Others introduce the term 'gnoseology' for epistemology in the broad sense: 'gnosis', in ancient Greek, is knowledge.

In modern Kantian circles, it sounds like 'kriteriology', the doctrine of 'criteria', means of distinction, regarding certain knowledge. Or as 'criticism of knowledge', critical or sifting—testing—inquiry into the value of knowledge—one of the many forms of 'criticism' that is so 'in'.

'Truth' as “agreement with”.

Logical truth is the fact that a judgment corresponds to the reality intended by it. That is then “a true or reality-corresponding judgment”.

But there are also other correspondences. -- These are—instead of passive truths (as in logical truth)—active correspondences or truths.

Thus: the ethical truth which means that a person's practical life or behavior corresponds with the presuppositions he or she upholds.

Thus: the artistic truth, which means that a work (artwork) corresponds to the design that its creator has in his mind.

Thus: the theological truth which means that what God creates corresponds to his ideas on the matter.

Incidentally : Nikolai Gogol, Ukrainian writer (1809/1852), described the caricatures of God's ideas, visible and tangible in the daily lives of people and their sometimes appalling flaws and sins. With much humor, irony, and even sarcasm, Gogol looked on—laughing because a caricature provokes laughter—weeping because such a caricature is terrible. What is called the "tragic laughter" of Nikolai Gogol.

With this, we touch upon types of ontological truth and immediately the foundations of epistemology (logic), ethics, art theory, theology) as applications of the theory concerning ontological truth.

EO65

B.2. Harmology (relation ontology) (65/68).

The doctrine of unity has already been discussed several times (when it concerned Stoicheiosis). Now, a brief explanation.

'Harmotto' meant "I join together or join together". 'Harmology' is therefore "theory of joining and joining together" – the study of order. This is invariably accompanied by punctual, irreducible units that were brought into a comprehensive unity. Or vice versa. Let us consider the paleopythagorean concept of number-form (EO 47).

The combining, the pairwise arrangement of elements one after the other is essential.

In this regard, viewed subjectively, 'mnèmosune', remembering (EO 30, 32) or 'anamnèsis', Latin: reminiscencia, orderly awareness or remembering (EO 52) is a condition of possibility. Proceeding in an orderly manner inevitably entails an expanded consciousness.

Identity.

Reread EO 23. -- Something is totally identical with itself (reflexive identity). Something is partially identical with something else. 'Partially identical' is also called 'analogous'. Something is totally non-identical with something (fundamentally) different. -- Behold the differential or fan. -- Ordering is at work in it. And thus also combining, -- responding in pairs (to something and something else). For example, to the subject and the predicate in a sentence, within the same consolidating gaze.

Comparative method.

'Compare' here means "to view side by side". For sometimes the term 'compare' is used in the sense of "to equate with something else". Comparing, here, is taken in the very broad sense of 'combine', to view together.

Similarity and coherence: connection.

For this, we refer to EO 46 (Similarity (set)/ coherence (system)). -- When one 'combines' more than one given element, comparing them with one another, two main types of (encompassing) unity or relationship quickly stand out: they show similarity, at least partially (and difference); they show

coherence, at least partially (and break, gap).-- In this way, one can organize data.

Theory of relations.

A comprehensive unit is a relationship. Or a 'connection'. Similarity is one type; coherence is a second type. -- In logistics, the study of relationships is called 'relational logistics'.

EO66

When it is said “Being and the One are interchangeable (convertible),” this means that reality consists of an (endless) number of punctual units, conflatable into encompassing units. Or again: all that exists is one gigantic network of relations—of similarities (sets) and of connections (systems).

This is also the condition of possibility of set and systems theory, the study of “totum logicum” and “totum physicum”.

Digression.

Let us briefly discuss a few prominent comprehensive units or relationships.

Bible st.: J. Royce, *The Principles of Logic*, New York, 1912-1; 1961-2, left 72ff..

The basic relationship is called “encompassment” ('implication'). Thus: dancing and singing encompasses a. dancing and singing simultaneously and b. dancing and singing alternately (“dancing and/or singing”). One can also reverse the expression: “Dancing and singing simultaneously or alternately is characteristic of dancing and singing”.

We immediately have the “logical sum” before us: “(simultaneously or alternately) singing and/or dancing”. The “logical product” is then “singing and dancing simultaneously”.

The negates or negations.

a. “Either sing or dance” (in Latin 'aut') is mutual contradiction. Like x and non-x.

b . “Neither singing nor dancing” (doing neither of the two) is a contradiction with “singing and/or dancing”. Just as x and y are opposed to o.

Note : One sees that J. Royce combines, brings together, and integrates like the ancient practitioners of stoicheosis.

Digression.

Bibl. st.: H. van Praag, *Meten en vergelijken*, Teleac, de Haan, 1968.

Addition is a one-to-one-unambiguous relationship or bijection. “For every slap I received from him, I had returned one to him”.

Topological ordering (interarrangement)

It is situating something between two other pieces of information. “I situated z between x and y.” This encompasses the concept of 'interval' or 'space'.

Incidentally : in mathematical topology, this is a fundamental insight. One kneads a pliable ball of clay without allowing it to exhibit fractures (i.e., within the interval of maximum elongability).

Order is the arranging of one element after another, -- naturally in time. Sequence can be serial or cyclical (= revolving, like the constantly recurring order of the weekdays).

EO67

Digression.

The theory of interpretation is one of the many applications of the relation to clarity.

We have already seen one type, namely the unambiguous relationship or 'addition'. But there is the “multi-ambiguous relationship” and the “unambiguous relationship”. Thus, Alkmaion of Kroton (-520/-450; pupil of Pythagoras) already recognized that the 'symptoms' (signs) of an ailment are susceptible to more than one interpretation (which entails “unambiguity”).

The ability to summarize a multitude of data is a sign of “multiplicity of meaning”. So much for a few “summarizing units” or 'relationships' that are frequently encountered.

The couple “element/preposition”.

This pair forms a basic pair. The foundation of proceeding logically. 'Logic' here in the traditional sense of “the study of conditional sentences” or 'implications', derivations. “If A, then B”. In other words, the study of hypothetical sentences.

1.-- Stoicheion.

a. 'Stoicheion', Latin: elementum, meant “All that, as an example of a set or as part of a system, helps to co-found a totality (set, system)”.

Like this: all parts of a linear object. Like this: every letter of the Greek alphabet. Even the needle of a sundial.

b. 'Stoicheiosis', Latin: elementatio, analysis of factors, is “the building up – bringing together – and fitting together – of a totality from specimens or parts, or, conversely, breaking down a totality into its specimens or parts”.

Example: especially in later antiquity, a 'stoicheiomaticos' was an astrologer. Whoever drew up horoscopes constructed a coherent picture of fate from the elements of the cosmos—ta stoicheia tou kosmou, elementa mundi—, the celestial bodies (with their deities: astrotheology).

By the way : S. Paul still knew that meaning (in Gal. 4:3; 4:9; Col. 2:8; 2:20).

By the way : the Paleopythagorean 'arithmos' (EO 47) is one type of stoicheiosis.

Moreover: philosophizing is, in fact, stoicheiosis: integrating a view of life and the world. -- Systematic philosophy, even today, are applications of such a 'worldview' (M. Heidegger), for it attempts to find the general concept of 'being' in all possible sub-areas of total reality (which then becomes particular or categorical ontology).

EO68

Note : What the ancients call 'elementation' or factor analysis, R. Descartes (1596/1650; father of typically modern, highly scientifically influenced thought) calls “analysis and synthesis”: he divides an all too vaguely conceived totality—collection, system—into its specimens, its parts—in order to rebuild the totality upon them—to assemble and integrate it. Which then yields a “clearly and distinctly grasped” totality.

Descartes' 'analysis' (division) is not a denial of the totality or 'Gestalt': it is, rather, a distrust of an image of that totality that is too vague—which only comes into its full justice through that 'analysis'.

2.-- Arche.

'Arche', lat.: principium, 'principle; i.e. that which should be put first.

Actually, 'arche' is “all that governs something (determines, defines immediately: “all that governs something so that this something becomes incomprehensibly 'true' only if one presupposes that governing element””.

Result : 'archè' is presupposition.

Thus: the beginning of something (the preposition of the “methodos gennetikè”, the genetic method, which investigates, reveals, something in its course).

Like this: the origin.

Like this: the rulers of a country. Without the beginning, the origin, the rulers, that which is governed by it is incomprehensible.

The principle of (necessary and) sufficient 'archè'.

Let us reread EO 63 (The axiom of (necessary and) sufficient reason or ground).

Both schemata of Jevons-Lukasiewicz begin by stating the principle of sufficient reason: “If A, then B”. This is followed by the twofold application:

a. deductive (sunthesis), where the sufficient reason is known (Well then, A. Therefore B);

b. reductive (analysis), in which the sufficient reason is sought (Well, B. Therefore A).

In other words: the archè is central both forward (deductive) and backward (reductive). And immediately the immortal principle of sufficient 'ground'.

This is how the coupling is understood: “stoicheion te kai arche”, elementum et principium, element and presupposition. -- That which is 'reason' or 'ground' is an element of reasoning. That element of reasoning can now be a punctual unit – element – but also a comprehensive unit – totality.

Conclusion . -- Element, premise, assumption: three terms concerning the encompass (implication) (“if, then”).

EO69

B3.-- Axiology (ontology of goodness). (69/72)

The good—value—has already been discussed: Socrates in particular, and following in his footsteps, Platon, spoke of it as a matter of principle. -- Now, a brief contextualization.

'Axia', Latin: valor, value.-- “The good”, in ontological usage, means “being insofar as it represents value (fullness) and is immediately “a good””. To say

that “being and good are interchangeable (convertible)” means that “all that exists is susceptible to value judgments”. What exists is valuable. What is nothing lacks value-fullness.

Plato, in his *Nomoi* (Laws), says: “Man owes gratitude—note: appreciation—for three possessions: the deities, his soul, his body”.

GJ de Vries, **Plato's Image of Man **, in: **Tijdschr.v.Phil.** 15 (1953): 3, 430ff., states: “Hence the soul, just as it must take care of itself (*Phaedo* 115b), ought to satisfy the desire that it take care of all that is inanimate (*Phaedrus* 246b)”. Thus, for example, a premature 'liberation' of the soul from the body by suicide is impermissible (ac, 431).

In other words: one should not attribute radical dualism (soul/body) to Platon. Nor absolute contempt for the body. Rather, a hierarchy.

Platon, in his psychology or science of the soul, distinguishes—as we have seen—three 'parts' (aspects). Reread EO 50: the great monster, the lesser lion, the small man. To begin with, this classification is, in Platon's eyes, an incomplete classification: other 'parts' or aspects of the soul can be found, are possible. But also: Platon is engaging in value psychology here—not with a view to radical elimination, but with a view to correct situating.

Because of the big monster, our soul is focused on values such as:

- a.** diaita, dwelling and sustenance (which is very valuable in Plato's eyes),
- b .** night's rest (he gives advice regarding a 'good' sleep),
- c.** sexuality (eros and reproduction, -- family life),
- d.** economic goods (thanks to labor).

Due to the smaller lion, our soul is focused on
our own honor (with all that entails).

Through the little man, our soul is directed towards
all that is immaterial, indeed, the transcendental being.

EO70

This is a multiple list of 'goods', i.e., valuable realities. One sees it: neither what the great monster nor what the lesser lion 'values' is excluded, even though the center of gravity of the 'true' (ideal) human being is situated in the small man. -- Cf. de Vries, ac, 431/433.

Healthcare.

It is no secret that the Paleo-Pythagoreans already emphasized a somewhat higher level (anagogic thinking). Nevertheless, care for all things bodily (health) is an integral part of the Paleo-Pythagorean sense of values.

Bibl. st.: O. Willmann, *Gesch.d.Idealismus* I, 302. -- Willmann says: Pythagorean medicine placed a deep reverence for the thoroughly 'sacred' (the holy) that health encompasses. Thus, promoting one's health was called "to sofotaton ton par hemin", that which, among all human things, bears pre-eminent witness to 'wisdom'.

This term summarizes the ideal of the archaic and ancient man (something like being general and well-formed).

a . Wisdom involves taking care of your health and, if necessary, restoring it.

b . Wisdom is even an 'element' and 'prerequisite' of health, for the 'sophrosophy', the health of the soul, which is its 'wisdom' or general and sound formation, ensures physical health.

Incidentally : Plato speaks in the same vein, who, moreover, the older he grew, the more he appreciated Pythagorean 'wisdom'.

Medicine.

Conclusions. -- Following in the footsteps of archaic, sacred medicine, Pythagorean medicine attempted to tackle ailments primarily through the soul. For the soul is so one with the body that, if that soul is 'healthy', then the body will inevitably also exhibit 'health'.

This is how one understands the role that choreia (ED 47), the comprehensive unity of dance, instrumental music, and song (poetry) within a cosmic framework—Platon would also recommend this—plays in Pythagorean medicine. In this way, music—correctly chosen music, that is—led to the control of states of mind and the alleviation of bodily pains.

Magic .

As a thinker raised in a rationalist environment, Willmann has difficulty with the use of magic by the Paleophythagoreans. – The human soul is a 'divine' (understand: paranormally gifted) entity that brings the body, which then shares in that divinity ('daimonion'), to life – under the guidance of an accompanying 'daimon' (angel). This permits 'incantations'.

Note : This is not the place to discuss occult methods in detail (of which Paleo-Pythagorean exorcism is one type): we do, however, note in passing that the structure “body ('daimonion', the occultly gifted)/ soul ('daimon', (the occultly gifted)/ ('daimon' (the occultly gifted guide)” is a constantly recurring structure or encompassing unity. With the difference that, in the Biblical world, the Triune Godhead governs all of this.

The concern for cleanliness.

A 'good' (value) that is repeatedly emphasized is “all that is beautiful”. In the ancient Greek sense, this is: “all that, because it is not commonplace, compels awe and wonder”. This can be physical beauty. It can also be technical or skillful beauty (a beautifully built ship, for example). Among the Pythagoreans and Platonists, it is above all ethically beautiful behavior: do our common people not still say today of unscrupulous conduct, “That is not beautiful,” or “That was really ugly of her”? In our vernacular usage, 'beautiful' still carries the connotation of 'conscientious' ('righteous' in ancient usage).

O. Willmann, *Gesch.d.Idealismus*, I, 301: “The idea that music, ie the skill of the muses (EO 30; 32 (Mnèmosunè)), is in the highest sense, philosophy itself, - idea that Platon repeatedly expresses, was already found among the Pythagoreans.”

You heard that right: philosophy, defined by Pythagoras as 'filosofia', love of wisdom, would thus be, in Pythagorean and Platonic eyes, musical!

That is quite different from the so-called 'rationalism' or 'detachment from reality' usually attributed to Pythagoreanism and Platonism by unqualified individuals!

'Philosophy', that is fallibilism! 'Fallibilism' is “awareness of fallibility”. Religious thinkers such as the Pythagoreans and Platonists were acutely aware that an earthly mortal “cannot possess wisdom”. Only deities and 'daimones', gifted lesser deities, possess—think of the Muses—wisdom, that is, the general and sound education that might bring them home in full reality. A mortal can at most 'participate' in this. Nothing more.

Chorea was the means par excellence to establish contact with the Muses—contacts that the thinking 'philosopher' so urgently needs.

The Paleophythagoreans trained themselves in sharp logical thinking. Thus, they practiced the skill of defining.

“Preferably, the maxima (peaks) of properties constitute the object of reflection: “What bears witness to the highest wisdom? The number -form harmony (note: one usually translates by 'number')”. “What bears witness to the highest wisdom in human things? Medicine. “What is the most beautiful? Harmony”. “What is the strongest? Insight”. “What is the best? The 'eu.daimonia' (happiness, -- literally: to possess good daimonia or paranormal or divine life force)!”. - “What is the most revealed ('true')? The depravity of men!”. (O. Willmann, *Gesch.d. Idealismus*, I, 283).

It is clear: 'harmonia' is first and foremost togetherness and union, then, especially since the Paleo-Pythagoreans, beauty, that is, everything that, by its non-ordinary nature, inspires awe and wonder. But that is the object of stoicheiosis, analysis of factors,—supported by the Pythagorean 'henology' or doctrine of unity (which, in the punctual units, observes the encompassing unity and, in the encompassing unity, reveals the punctual units).

Conclusion. -- Just as Pythagorean (and Platonic) philosophy is no longer conceivable without simultaneously promoting health (in the holistic, comprehensive sense: physical and spiritual), so too is it inconceivable without being museous—throughout beauty-loving. This through religious ceremonies in which the Muses were invoked—as inspiratrices, as givers of higher, 'daimonic', or even highly divine energies. -- That structure or comprehensive unity is true 'philosophy'.

The concern for the ethically good.

This theme was already developed higher up (EO 56ff.), -- in a Platonic sense. -- only this remains: 'kalokaigathia', i.e., the all-encompassing unity of the beautiful and the good. “To kalon”, Latin: pulchrum, the beautiful. “To agathon”, Latin: bonum, the good. Both joined together: the fact that the beautiful and the good are one. That is the ancient Greek term 'kalo.kai.agathia', condensed into 'kalokaigathia'.

On this anagogical (directed towards the higher) note, we can conclude the chapter on the transcendentals with a clear conscience. May our current

postmodernists, with their emphasis on the degrading, the 'katagorical', learn something from the Pythagoreans and Platonists!

EO73

11. The hypothetical method. (73/80)

Bibl. st.: E. De Strycker, SJ, *Concise History of Ancient Philosophy*, Antwerp, 1967, 103v. (The Hypothetical Method).

'Hypothesis', the laying of a foundation -- foundation -- in logical usage: presupposition (condition). The grammatical form: if, then. Such conditional sentences constitute the core of traditional theory of thought or logic and its applications (methods).

But it applies ontology before logic deals with it.

Plato derived the hypothetical method from the (applied logic and methodology of) experts of the time. -- In Platonic dialectical usage, a 'hypothesis' or 'assumption' is "anything that is posited (without proof) between conversational partners and from which something else can be derived (deduced):

And this is twofold: either the hypothesis is known as an axiom or a known and accepted premise (deduction, 'sunthesis'), or the hypothesis is sought—from some given fact—(reduction, 'analysis').

In the case of searching for the correct hypothesis(es), Platon uses—as the first—a 'lemma' or "provisional assumption" (nowadays called a 'working hypothesis'),—until it becomes clear whether this provisional hypothesis turns out to be valid or not.

Appl. model.

a. Confirmation: pregnancy. b. This 'fainomenon' (phenomenon, appearance that manifests) or "that which is immediately given" becomes transparent, understandable, 'true' (revealed), if one presupposes that sexual intercourse took place. That is then the 'hypothesis' or 'explanation' (explanation that makes understandable).

This is a small example of 'analysis' or "reductive reasoning".

Conversely: a. sexual intercourse; b. pregnancy. The 'phenomenon' or ascertainable fact is deducible from the 'cause'. That is then 'synthesis' or "deductive reasoning".

From specialized mathematics to ontology.

The usual method of mathematicians at the time was 'synthesis', deduction.

A number of basic concepts were put forward (one/many; -- point, line, plane, body, etc.) as well as a number of basic judgments (axioms, postulates). Without proofs, i.e., without deduction from already given presuppositions. But from this, a whole series of surprising derivations or 'deductions' were derived, -- called 'theoremata' or theorems in mathematics.

EO74

Today it is called, and still is: "the axiomatic-deductive method". What is initially 'hidden', veiled, in a very limited number of basic concepts and basic judgments, is systematically 'revealed', 'exposed', and thus – in the ancient sense – 'true' (alèthes) in the propositions that flow from it – strictly logically.

Plato, as an ontologist, recognized that the presupposed concepts and judgments of mathematics were themselves susceptible to 'analysis' or reduction. Specifically: what are the (broader) presuppositions of those basic concepts and basic judgments? The mathematical 'hypotheses', presuppositions, such as "one/many" and "line, plane," etc., are in some way 'realities,' 'onta,' or beings! Among many other beings or realities! What, then, if one first tackles that basic concept (with the basic judgments, such as "All that is (so), is (so)" (EO 23/28 (Laws of Being)))? Not to mention the pair "one/many" and "encompassing unity of punctual units" (EO 47/48: The True and the One).

Certainly, the transcendental or all-encompassing concepts (with their judgments) are prepositions of the fundamental mathematical concepts.

Maw: "if transcendental concepts and judgments, then merely mathematical concepts and judgments – understandable, stripped bare in their essence or being and thus, ancient, 'true'". At least a part of the truth regarding the basic concepts and judgments of mathematics becomes clear in this way. Understandable.

This very abstract proposition becomes very concrete when one phrases the question differently, namely: “What kind of realities are mathematical realities?” Even today, this is fiercely debated among scholars. If one is unclear regarding all that is real, then one is immediately unclear regarding the answer to the question of the correct kind of realities that mathematical entities are!

Decision.

Platon's ontology was a foundational inquiry or presuppositional analysis of mathematics, by applying his reductive method to the mathematical foundations themselves.

From all knowledge to ontological knowledge.

Not only mathematics but all kinds of knowledge—technical matters and ordinary popular insights—were subjected to reduction by Plato, following in Socrates' footsteps.

EO75

Let us briefly reread EO 56 (A Speech): there we see Socrates employing “the all-encompassing unity in the punctual unities” (when he states that a speech lacking conscience as an element is not (completely) good) and “reality” (when he brands a speech that conjures up illusory realities as unreal) as ontological presuppositions. In this case: of a speech. That is foundational research or presuppositional analysis of a speech.

Incidentally : the presuppositions or axioms of the Sophists are immediately subjected to scrutiny. That is to say: not simply accepted willingly, but examined. One would now call them “critically treated.” 'Criticism' presupposes norms, for it is a 'value judgment' or 'evaluation': how can one make value assessments if one possesses no presuppositions 'in the name of which' one judges, condemns? In other words: one exercises a reduction or analysis.

Categorical ontology.

'Categories' are fundamental concepts. Well, Platon's analysis of, for example, the (foundations of) mathematics or of the (premises of the) Sophists and their discourses is outright “categorical ontology” of those objects of analysis. –

“In the name of” a transcendental ontology. Thus, he placed the basic concepts of 'one' and 'good' (not to mention 'being') at the forefront for critical evaluation.

Testing something on its true value or its true unity is 'criticism': this invariably takes place “in the name of” preconceived concepts and judgments.

In other words: the more critically someone proceeds, the more he employs preconceived 'hypotheses', axiomatic things! Which he/she assumes to be fixed—consciously or often unconsciously—and solid.

Categorical ontology is thus 'critique' of some category or domain of reality, -- “in the name of the transcendentals”. That is why we paused to consider those transcendentals. They are the basis of our reduction or analysis, -- “if being, one, true, good, then fundamental concepts for critique”.

Immediately, one can judge things “in the name of being (reality), unity (similarity/coherence), truth (revelation), goodness (value)”, and indeed with a sound starting point.

The method is clear: first get to know the category (domain) well – mathematics, rhetoric, sophistry –; then fall back on the transcendentals.

EO76

Platonic Theories. (76/80).

As has been noted on several occasions, 'theoria', fathoming, is delving deeper into something through observation.

1. The intention,

In Platon's case, it is: to get to know existence (actual existence) and essence (way of being) thoroughly, or at least as thoroughly as possible. Or, in more modern terms: to expose the ontological status (the place something occupies in reality).

2. The remedy.

The hypothetical method. Delving deeper into something—the theme—through observation.

- a.** analysis, reduction, towards the presuppositions,
- b.** synthesis, deduction, towards the conclusions.

Applying this hypothetical schema to something entails discerning its existence and essence (EO 09) more closely. For one analyzes—reductively or deductively—what reality or, possibly, apparent reality can be found in that something. Immediately, what unity, goodness, or apparent unity, apparent goodness is present in that something.

By seeking to discern existence and essence, one engages in transcendental or general ontology. By seeking to discern the existence and essence of something, one engages in categorical or particular ontology.

Practical.

Let us take the thief.

a. Foundational analysis.

Scheme (Jevons-Lukasiewicz). -- If A (preposition), then B (understandable).-- Well, B. Therefore A.

In that case, 'A' is a lemma, a provisionally introduced preposition. Hence the name “lemmatic-analytical method”, which is attributed to Plato as the first.

What are the premises of stealing? It stems from the axiom that everything that is possessed—belonging to others, mind you—can and, above all, may be taken away through outwitting.

Another hypothesis: provided that one takes into account the retaliation of the injured party (and the fending off of it). Furthermore: expertise both in depriving and in fending off retaliation. Furthermore: at least “bracketing” conscience (in ancient Greek: 'epoche', Latin: suspensio). Or further: either consciously suppressing the conscience or unconsciously repressing it (which in ancient Greek is 'para.frosune', thinking beside reality). This is: fleeing ethical reality.

EO77

“Not wanting to have known”.

'Para.frosune', thinking apart from reality, thus exhibits two main types. The 'will' can be unconscious: in that case, psychologists today speak of 'repression'; the 'will' can also be conscious: then it is 'suppression'. In many cases, it is impossible to determine ("to expose") whether it is conscious or unconscious.

A little story.

Stories can be magnificent 'phenomenologies', descriptions of beings ('fainomenon'), that which reveals itself immediately and is therefore 'true', revealed, from the very beginning + 'legein' (to articulate, represent, describe). We see this from archaic myths to the most recent jokes. -- So what follows.

Blinded.

A young man realized that being married is not without its problems. To show his sincere love for his wife, he blurted it out one evening: "Honey, guess what I did for you today." "Probably pulled another stupid stunt for the umpteenth time!" -- "No! No! I took out life insurance." To which she replied: "I've always known you're a mean fellow. Just think: that's insuring his own life now!"

S. Kierkegaard (1813/1855; founder of existential or life- and commitment-oriented thinking) spent his entire life attempting to instill in the Danish Christians—who, Biblically speaking, were pagans—the realization that they did not realize that, instead of true Christians, they were in fact pagans. His entire rhetoric—method of persuasion—was aimed at this. Hence are his so-called 'aesthetic' works.

Everyone among us experiences how difficult it is for prejudices to fade away: the woman from just now was so convinced of her own opinion regarding her husband that she—without reflecting on what he says—condemned him a priori. This time with a tragic irony: life insurance is precisely not a selfish act! So unreal was she—estranged from the reality that was her husband! Perhaps quite a few sophists, in the time of Socrates, were equally alienated from the true nature of their value-free, indeed, cynical expertises—technai. This led them to silence "the voice of conscience" in order to acquire 'power' and 'prestige' (the lesser lion of Platon's (psychology)).

And, as educators, 'sophistai', to impart that acquisition to others. Which entails a type of antiphrasis, speaking against better judgment.

EO78

Practical: Let us take the thief again.

b. inference analysis.

Scheme (Jevons-Lukasiewicz). -- If A (preposition) then B (understandable). Well, A. Therefore B.

No 'lemma' or 'prolepsis', or provisional preposition, is needed here, because the preposition is known rather than requested (sought).

What has been sought, however, are the conclusions. What conclusions can be derived or deduced from the stealing? Again: the method is 'theoria', an observational engagement with the existence and essence of stealing. Again: the science of fate, for in this way one exposes the fortunes of an individual or a society.

Ethical, that is, when one looks at the intimate conscience. But also 'political', that is, when one looks at the (consequences for the) fellow man in – the same – society. This was a primary concern for all ancient Greek thinkers.

Note : Up until the 1950s, this 'ethical-political' viewpoint predominated. From those years onwards, this was replaced by what has since been called “the human sciences”. The latter, however, aim to be 'value-free'. That is to say: they adhere strictly to definite or positive facts, -- without any value judgment (certainly of any religious or moral (ethical) value judgment).

A diagram of a narrative nature.

A deduction of the consequences of stealing can make use of the “sign (VT)/continuation (VV)” scheme. Here:

- a.** there is first a sign (a fact that leads to what follows), namely stealing;
- b.** there is then a follow-up (the facts or events to which the stealing relates, for example).

The thief, for example, no longer has inner peace: not for a moment is he or she absolutely certain of the success of the theft (which is always a gamble) nor of the reactions of the victims.

Fellow human beings have no peace anymore: not for a moment is one certain that a thief is not striking somewhere. One person distrusts another.

A general atmosphere is immediately established: the more successful theft is, the more people with a weak conscience are encouraged to do the same. Others extend its unscrupulousness to other domains of culture: possessions, yes, but why not tarnish one's good reputation, for example?

That is once again categorical ontology, in which the category 'stealing' is further ontologically illuminated in a deductive manner.

An update.

The analysis of inferences is found in “the pragmatic maxim” (rule of Ch. S. Peirce (1839/1914; founder of pragmatism)).

Bible st.: Cl. Oehler, Einl., *Charles S. Peirce, Ueber die Klarheit unserer Gedanken* (How to Make Our Ideas Clear), Frankf.aM, 1968, 62/63ff.

Here, translated, is the maxim: “Delve deeper into the 'effects', the consequences, which – conceivably ('conceivably') – can have practical significance. In this way, we arrive at the insight that the object of our thought exhibits such consequences. If we proceed in this manner, then our understanding of those consequences is the entirety of our understanding of the object.”

The text is, as is often the case with Peirce, difficult to articulate. He means: devising an action, an experiment in which the object of our thought—the given—is involved, is the path to its (experimental) understanding.

Applicable model

What do we mean when we call something 'hard'? Apparently this: that many other substances—if acted upon (action, experiment)—leave no scratches on them. -- “The entire concept of this property—hardness—(as is the case for all other properties) lies in the thought of the effects. There is absolutely no distinction between a hard and a soft object, as long as those objects have not been tested.” (Oc 66/67).

Peirce: it is claimed that such a pragmatic definition betrays “a skeptical (doubtful) and materialistic principle.” Yet it is merely the application of the logical principle that Jesus recommended: “By their fruits you will know them.” Yes, it is very closely intertwined with the tenets of the Gospel. (Oc, 62/63).

As before: Platon examines the consequences, individual (ethical) and social (political), of stealing. In doing so, the object of his thought, stealing, becomes clear(er): he creates a clear (...) understanding, insight - theory - of that object.

Peirce proceeds in a similar 'pragmatic' manner. -- Both examine the deductions arising from introducing a provisional concept of something into life.

Actually, this is a 'historical' method: the concept of 'democracy', for example, only becomes truly clear when it is introduced as a de facto regime—that democracy!

EO80

Platon's "historical dialectics".

Let us reread EO 49 (Platon's Philosophizing). There, the method was outlined: engaging with a theme through dialogue, thinking together intimately. This is called “proceeding dialectically”.

Following in the footsteps of the Eleatics (Parmenides), logic plays the leading role. This leads some who do not know Platon well to believe that motion ('kinesis'), coming-and-going, and history (the totality of destinies) play no role in his thought, unless a ridiculous one. His method, they argue, dwells merely in the 'trans-temporal'.

We cite WC Salmon, *Logic*, Prentice-Hall, Englewood Cliffs, NJ, 1963, 30/32 (Reductio ad absurdum). -- State 1 is cited.

1.-- Definition.

“Well spoken, Cephalos,” I replied. “But as for ‘righteousness’ (living conscientiously): what is that?” -- “To tell the truth and pay your debts,” you say. Nothing more than that? Are there no exceptions even in that?

2.A.-- “If no exceptions, then what (as consequences)?” - “Suppose a friend, of sound mind, gave me weapons for safekeeping. At a certain moment, not of sound mind, he asks for them back. Is it a duty to return them? No one will maintain that such a thing is my duty or that, if I do so, I am acting conscientiously. -- Likewise, I will be supported (when I assert) that I must, in conscience, tell the truth to someone who is not of sound mind.”

2.B.-- Defining well means, if necessary, defining restrictively (with reservations). “In that you are absolutely right,” he replied. -- “But, if this is so, then ‘telling the truth and paying your debts’ is not a good definition of justice.”

It is clear: the unforeseen, indeed, unforeseeable vicissitudes that make up history, play—logically—the role of presuppositions from which deductions are derived.

a. If in the right mind, then there is an obligation to return it. If not in the right mind, then there is no obligation to return it.

b. Coincidences thus play an integrating role in dialectics—dialogue between thinkers on a logically rigorous basis. This is therefore called “historical dialectics,” reasoning together, logically rigorously, taking into account more than merely abstract data and presuppositions.—Which severely limits the number of 'absolute' statements.

EO81

12. The dieretic-synagogical method. (81/92).

Bible st.: E. De Strycker, *Bekorte gesch.vdfil.* , 104v.-- 'Diairesis', lat.: divisio, division.

Classifying within a comprehensive unit (here: a generic or sexual concept) is a typically Platonic activity. After all, the species—'eodè', Latin: species—are encompassed by the 'genè', Latin: genera, genera.

To clarify: the genera represent the universal collections; the species the particular collections. 'Sunagogè' summary—also 'sunopsis'—is the opposite line of thought.

The classification proceeds from the more general concept to the less general; the summary proceeds from the less general concept to the more general.

Stoicheiosis.

Let us reread EO 52ff.-- It is clear: the division and its inverse, the summary are applications of the stechiotic method which proceeds from the comprehensive unit to the punctual units and vice versa. -- Ordering concepts is one type of ordering action.

Commonplaces.

Bible st.: O. Willmann, *Abriss d. Phil.* , 132.

'Topos', Latin: locus (common)place. -- A commonplace is a main viewpoint that summarizes a multitude of things (a comprehensive unity).

' **Topics** ' is the theory concerning 'topoi', loci, commonplaces.-- Which we are now undertaking both for the logic of concepts (categoremes) and for ontology (categories).

Schema .-- A 'schema' is a comprehensive unit of commonplaces.

There are countless such schematics.

Consider the psychoanalytic schema “conscious/ subconscious/ unconscious”. Or: “Pleasure Principle/Reality Principle”. Such sets of concepts—schemata—serve as 'paradeigmata', paradigms (Kuhn), or textbook examples for psychoanalysts when dealing with human problems. Someone enters and tells their story (anamnesis). Meanwhile, the schemata emerge in the mind of the attentively listening analyst and illuminate what is being told—revealing what the reality is in/behind the words of the story ('truth').

That is the value, the use value, of commonplaces (in the form of a schema).-- The question arises: do such commonplaces also exist for logic and ontology?

EO82

A.-- The category. (82/84).

Library st.:

- O. Willmann, *Gesch.d.Id.*, III, 1037 (Universals);
- id., *Abriss d. Phil.*, 121ff. (Die Definition);
- D. Mercier, *Logique* , Louvain/Paris, 1922-7, 99/104 (Les prédicables ou catégorèmes).

'Katègoroumena', Latin: praedicabilia, also: “quinque voces”, that which can be revealed or made public about something. Thus, since Porfurius of Turus (233/305; Neoplatonist), known for his Eisagoge (Latin: Quinque voces) as an introduction to Aristotle's logical works, there are five main viewpoints.

1.-- Genos', Latin: genus, lineage (universal collection or class). For example, “living being”.

2 -- 'Eidos; lat.: species, kind (particular collection or class).. For example 'plant', because it is a kind or type of “living being”.

Incidentally : a third main viewpoint immediately emerges, namely that which makes the plant distinguishable (discriminal) from all living things outside the plant (such as the fact that it roots in the earth or something else, germinates, lives, and eventually dies). That which constitutes the difference is called by the ancients “eidopoios diafora”, Latin: differentia specifica, specific or distinct difference.

The last two 'voces' of the five.

1. 'Idion', Latin: proprium, property. But note: according to Mercier, it is the essential or naturally necessary property in question. For example, in the case of "living being": being alive.

2. 'Sumbebèkos', lat.: accidens, accidental property. For example, the fact that a plant can be found in South Africa is purely accidental.

Porfurios' tree diagram.

That stoicheiosis is involved with the categoremes is evident from what follows:

a. something (ousia, substantia); **b.1** . inorganic something; **b.2**. living something; **b.3** . plant something; **b.4** . animal something; **b.5** . human something.

It is observed that the transcendental or all-encompassing concept of 'something' is spread across five 'categories' or types of being. This is based on specific or particular differences.

Thus the encompassing unity is revealed in the five punctual – categorical – units. The basis: similarity and non-similarity. Which points to the concept of set (or the concept of 'class' such that one can classify things into 'classes'). This is how one orders things. Yes, one can define them (genus x specific difference = species).

EO83

Definition . -- Defining something—giving it its essence—is a quasi-daily necessity. Expressing oneself clearly, for example, entails being able to determine the matters in question with crystal clarity.

Based on the first three categories, we have a practical, 'operational' formula: genus x specific difference = species.

Application.

Bibl. st .: F. De Wachter, ed., *On the Use and Disadvantage of Postmodernism* , Kapellen, Rickmans, 1993.

For three decades, there has been much discussion about 'modern' and 'postmodern' (literally post-modern). -- The cited book attempts to bring order to the tangle of ideas. Let us draw inspiration from one of the main concepts to 'define' what postmodernism might be.

A.-- Genus (comprehensive collection or class).

Let us begin with a model (people nowadays also like to say 'metaphor').

a. We are all on the train that travels at high speed, purposefully—mechanically—through the landscape. That is the modern, technically mechanical substrate or substructure.

b. Meanwhile, we sit carefree, enjoying the fleeting series of landscapes. Enjoying the impressions (a kind of impressionism). Not working like the train driver. But aesthetically absorbed in all that there is to experience. That is the postmodern-avant-garde superstructure.

Incidentally : we do say 'avant-garde', because a modern avant-garde of artists—think of Guys and Baudelaire, of the last century—experienced that duality of “train/aesthetic pleasure”.

Another model:

a. there is the modern metropolis; **b.** we stroll within it, enjoying—not working—involved but aesthetically detached—around. -- The duality: site/enjoying strolling! Typical of the postmodern.

Fragmentation.

The similarities and connections—the links or encompassing units—fade for the strolling or train-traveling enjoyer: there are so many landscapes, there are so many views of life and the world side by side, following one another! One does not have the time to “delve deeper into” them (Platonic theory). Unity-in-multiplicity becomes multiplicity-in-unity! That is certainly not the ideal. But let us adhere to Nietzsche's “Froggy Science”—so as not to perish under the tragic gravity of life of traditional humanity. Lightly enjoying the welfare state!

EO84

Specific difference/kind (encompassed set or class).

The actual gender is 'culture', spread across two types, modern and postmodern.

a. The Paleophythagorean model.

To define, to outline something so that all instances of it and only those instances are indicated by it, was an exercise of the Paleo-Pythagoreans, according to O. Willmann, *Gesch.d.Ideal.* I, 283.

For example: “What is a calm? An air mass at rest. -- What is a smooth sea? A sea without waves.

Pay attention to the structure (comprehensive unit):

1. gender: air mass, sea;

2. specific difference: in a resting state, without giving birth. Together: the species, eidos or kind.-- One sees it: methodically! In an orderly manner!

b. Application.

“What is postmodern? The modern (train, big city), aesthetically airy and lived through.” Both models in fact cover a definition without its external form. -- This is how one understands what De Cauter says in the aforementioned book: “Postmodernity is: **1.** modernity **2.** in its final state.

Conclusion . -- 'Modern' and 'postmodern' are indeed different but also overlap. Seeking a definition of this is bringing 'modern' and 'postmodern' together, indeed, merging them, just as ancient Stoicism taught us.

Note : The book mentioned attempts to realize this central idea, just defined by means of models (metaphors and actual definitions), regarding architecture, indeed, art in general, bodily experiences, New Social Movements (= NSB), multiculturalism, the polycentrism of cultures across the globe, and philosophies of life and the world of all kinds.

Genetically summarized.

The “methodos gennètikè” (genetic method) views the phenomenon diachronically, -- in its course ('process').

One might argue that the rare experience of “strolling through the big city” or “enjoying the train” has gradually become commonplace. As Luc Anckaert states in: Streven 60 (1993): Oct., 857: “Modern avant-garde culture is becoming an everyday experience in our time.” That, too, is a definition, but a historical, diachronic one—paying attention to the cultural evolution from purely modern to postmodern. For that is what the definition ultimately boils down to: the postmodern is a type of modernity. Whether that signifies its end (De Cauter), we leave open here and now.

EO85

B.-- The categories. (85/86).

Bible st.: O. Willmann, *Abriss d. Phil.* , 394/ 400 (Die Kategorien).

Since at least Aristotle, if not before him, the fundamental ontological concepts, as they are in circulation in traditional ontology, have been called 'categories'. -- 'Katègoria', Latin: praedicamentum, fundamental concept.

Both 'katègoroumenon' and 'katègoria' derive from 'katègoreo', meaning I reveal (referring to the court: accuse, already exposing). 'Categorie' is therefore, just like the categoremata, a main viewpoint that makes something revealable regarding something.

As O. Willmann, *Abriss d. Phil.*, 394, states: in Aristotle, the concept of 'category' is situated in linguistic theory—particularly in the theory of judgment.

Cohesion

The background now—in contrast to that of the category, which relied on similarity—is coherence. The thing being considered is considered as a system. Together, indeed, integration within that system and outside of it based on coherence.

The list of Archytas of Tarentum (= Archytas of Tarentum; -445/-395; paleopythagorean).-- This scientist and statesman has a list attributed to him that can be found with certainty in Aristotle.

A.-- Thing (something) / relationship.

a. 'Hupostasis' lat. 'substantia', independent thing, -- in the broadest sense of “anything that is in itself considerable”

b. “Pros ti”, Latin: relatio, relationship. -- Thing and relationship are the basic systems or basic pair of opposites.

Incidentally : a relationship is something that exists between at least two things; substances, entities. A coming together, indeed, a merging of at least two entities.

Incidentally : 'su.stoichia', opposite pair, is a typical Pythagorean term.-
- Thing and relation are the basis. The rest of the list is 'complement'.

B.-- Some pairs of concepts.

1. Magnitude (quantity) / nature (quality).

“Poson/ poion”, lat.: quantitas/ qualitas.

a. Quantity: “two miles from here”;

b. quality: “a sunny landscape” (two miles/ sunny).

Note the hidden quantities and qualities: “Dagig (quantity) zag hij zijn vrouwtje graag (quality) where “gaarne zien” is a quality of a person.-- “Duiven met de macht (quantity) vliegen door het luchtruimte (where “met de macht” means “many in number”).

EO86

2. Place/ time.

“Pou/ pote” (lat.: locus/ tempus). -- “On the beach lay a beautiful pearl” (on the beach). “Yesterday it rained” (yesterday). “Little Johnny arrived there on time” (there/ on time).

Note : Such determinations of place and time situate very well. And also: they 'singularize', i.e., indicate the unique, sole, singular nature of something. They also 'concretize': something is always 'concrete' - Latin: concretus, integrated, i.e., to be found in some set of circumstances.

A figure like Napoleon, for example, is only 'understandable' ('true', revealable as he was) if one situates him within the course of history and also places him at home in his country, France. That time- and place-bound aspect is its 'concrete' nature.

Moreover: the singular or unique is always fused with the framework in which it exists. As a result, something is invariably “singular-concrete”.

3. Industriousness (activity) / passivity (passivity)

“Poiei/ paschein” (Latin: actio/ passio).-- “He just let himself be done” encompasses the two 'movements' or 'processes': letting (passive, undergoing), doing 'active', (acting upon).-- “Thrown into the world, we design that world”.

4. Active and passive state.

“Keisthai/ echein” (Latin: situs/ habitus). -- Often, people do not translate but say it in the Latin terms, namely situs and habitus.

In Greek and Latin, intransitive verbs are used. -- “I am standing up. I am afraid” (active state, both spatial and local as well as psychological, internal). -- “I am well off because I am armed (passive state, both internal and external).

Note : This latter system is related to the conjugations of the ancient languages. Nevertheless, they remain valid in our languages as well. For adverbs of state are a permanent part of language.

Conclusion -- Suppose someone is given a subject for discussion or to write a treatise on. The pairs above can serve as commonplaces to facilitate the 'discovery' (Greek: heuresis, Latin: inventio). In other words: they have 'heuristic' value.

Indeed, if one can develop those ten aspects of a theme, one will already have made considerable progress in the development of the theme. For one finds 'thoughts'. And specifically, a system of thoughts.

EO87

Restrictive concepts. And judgments. (87/92) .

We already saw this in EO 87 ("Are there no exceptions even there?"). There we saw that there is real universality and apparent real universality. Which frees us from the so-called 'absolute' statements. -- We will now delve deeper into this.

Dialectics

Bibl. st.: A.Gödeckemeyer, *Platon* , Munich, Rösl., 1922, 126ff.-- Gödeckemeyer states it as follows.

What is the principal concern of Platon's dialectics? Answer: to obtain clarity, in pure thought, regarding the susceptibility of ideas (concepts) to consolidating and integrating treatment (stoicheiosis), as well as, in that context, regarding the arrangement of concepts into comprehensive (more general) and comprehensive (less general). Of which we saw models above.

The importance of the viewpoint.

A first restriction or reservation arises from the standpoint or perspective from which one judges.-- "Observation shows that something – depending on the standpoint from which it is approached – can be interpreted as both a unity and a multiplicity".

Applicable model

"A human being, for example, is, insofar as he is compared with other human beings, a 'unity' (note: belongs to the same set or class on the basis of common properties). However, insofar as he is approached in terms of himself and taking into account his internal structure ('composition'), he is a 'multiplicity' (note: consisting of very different and therefore 'many' parts)". (Oc, 123)

Note -- 'Perspective'—a concept emphasized by Fr. Nietzsche—is clarified by the following model: a tree viewed from afar is small; up close, it is large. Yet, in itself, as 'substance' without 'relation' (the two main viewpoints of the categories), it is one and the same tree. It is therefore not Nietzsche, but rather Plato, so undervalued by Nietzsche, who realized the perspectivity of our judgments. And articulated it clearly, in logical language. Long before Nietzsche.

Think.

Thinking according to Plato exhibits two aspects, a logical and an epistemological aspect.

1. Logical aspect.

Gödeckemeyer, op. cit., “All thinking is combination or connection, i.e. of nouns (subjects) and verbs (predicates). All thinking proceeds as follows: a predicate is connected with a subject.

EO88

In which the statement is either affirmed or denied. All thinking is therefore judging, -- affirming (uniting) and denying (separating). Those are the elementary forms of it.” Cf. EO 23 (Theory of Judgment).-- One senses, through Gödeckemeyer's text, the theory of identity.

2. Epistemological aspect.

Logically, the sentence or judgment is considered in itself—as a substance. Epistemologically, that same sentence is considered “in relation to” some reality, the given being judged.

Gödeckemeyer, *ibid.* -- “All judgments relate to a given of which it asserts something. From this it follows that it can be true or false. 'True', insofar as it states with regard to the given what is; -- 'false', insofar as it treats nothing as something”. -- Cf. EO 64 (Epistemology).

Note: It is clear that the dialectic-synoptic method is at work here once again: the connecting of concepts relies on encompassing and/or being encompassed. What is particularly striking is that Plato also 'connects' viewpoints or perspectives with one another. And that he likewise 'connects' judgments and the realities being judged. Constantly through 'stoicheiosis', the essential core of his dialectics.

Yet let us continue in that 'connection mania'! -- Let us quote an expert.-- WNA Klever, *Dialectical Thinking (On Plato, Mathematics and the Death Penalty)* Bussum, 1981, 32.

“V. Goldschmidt summarizes the logical démarche (note: method) of the Socratic dialogues in the formula “Et alia. Et oppositum. Et idem non”. Translated: “Also others. And the opposite. And not the same”. With this, he has captured the structure well (V. Goldschmidt , *Les dialogues de Platon (Structure et méthode dialectique)*, Paris, 1947).

Socrates is repeatedly confronted with certain definitions of concepts. -- A concept—e.g., “the good”—is—provisionally—identified with another concept—e.g., the useful—and understood as such. In that case, “the good” is particularized or 'specified' into 'usefulness'.

The analysis as Socrates performs it, however, now shows that things other than usable and useful (et alia) are also called 'good'. In other words, this definition is too narrow.

In fact, ongoing research shows that “the good” is the opposite (et oppositum) of 'usefulness'. So that “it only becomes evident that the definition of ‘the right’ has turned into its opposite” (State 343a).

EO89

In other words: defining the good as “what is useful” holds true to a certain extent (= restriction or reservation). Indeed, not only is the useful merely an encompassing concept within the encompassing unity of the good as a more encompassing concept: some forms of usefulness can be called radically non-good!

Conclusion: based on an overly narrow definition, one arrives at two appalling findings:

- a. Other things are also good,
- b. Some useful things are not good, the opposite of good. That is Platonic dialectics. It is a restrictive way of thinking, as it observes the limits of what is asserted.

Klever's decision.

In scientific knowledge—let us not forget that this is still the point—we realize coherence, structure, and system. This is achieved by weaving our ideas together.

Note: In Plato's terms: *sumplokè*, interweaving; *desmos*, connection – : “Only through the mutual interweaving of concepts – “*ton eidon sumplokèn*” – does insight arise (Sophies 259e)”. “Wanting to separate everything from everything is unphilosophical” is added – for the benefit of fanatical 'analysts' (note: those who think apart) – (Oc, 54).

Klever adds: “That is Platon’s final word on scientific knowledge. As one can see, he has thereby arrived right on the threshold of system theory (...)”. (Oc, *ibid.*).

Applicative models. (89/92)

GJ de Vries, *Plato's image of man* , in Tijdschr.v.Phil. 15 (1953): 3, 426/438.

Thus, the body can become an obstacle to the activity of the soul. Then it is a 'prison' in which the soul is confined—like an oyster in its shell—and from which it longs to be freed.

Behold a Platonic assertion. And now the true, the real and not the apparent real scope. “These are perhaps the most famous “theories of Platon”.

They are indeed fundamental. But ... like all his 'thesis', they have no more than limited validity. (Ac, Maw: when one reads Platon truly and not superficially, one ought always to situate one of his propositions (= judgments) within the entire framework of his dialectical thought: they are propositions-with-reservations. That is: they refer to, are interwoven with, other propositions.

EO90

Those “other propositions” (et alia), indeed, those “opposite propositions” (et oppositum), state, for example, that “the soul must take care of all that is inanimate just as well as it takes care of itself” (*Phaedo* 115b; *Phaedrus* 246b).

Another model.

The soul itself chooses its 'daimon', the supernatural being that helps determine its 'happiness' ('eudaimonia' or 'kakodaimonia', happiness or unhappiness). But – “et alia”, “et oppositum” – “after that choice it is bound to

that daimon” (ac, 436).-- That is the twofold concept of 'fate' in Platon, encompassing inner contradictions.

Another model.

Plato considers it possible to regard life as a game. He calls this “the entire tragedy and comedy of our life” somewhere. By this, he by no means implies a smiling or despondent underestimation of human existence. Man is, in his eyes (he was deeply religious), “a plaything of the deity”: precisely that is “the best thing about man”. Thus he speaks—according to de Vries—“with the deity before his eyes and under its impression” (ac, 437).

Life is, according to Platon, a mixture—together—indeed, a combination—of sometimes harsh disappointments (he has experienced quite a few), and of joy. According to Platon, who is a reincarnist, the deeper reason for this, situated in the 'anamnesis', is the fact that man, before his earthly existence, enjoyed “a blissful spectacle and sight.” The memory of this lingers: more or less consciously, man strives precisely for that “blissful experience,” in order to relive it.

With the realization of this, man can conceive of this earthly life as “a game” (tragedy and comedy).-- That is the proposition.

But now the restriction or reservation (et alia et oppositum): the (theatrical) play is 'ambivalent' or 'two-valued'. The play can have a good essential nature (“as a reflection of heavenly life”). It can also exhibit a non-good essential nature: as merely “a play”.

Only the highest and all-encompassing idea, “the good,” is not dualistic: it is undivided good—absolute good—good-without-further-qualification. All other 'goods' (values) are 'mixed'; good and evil. Such, for example, is the drama (tragedy and comedy) that is life.

EO91

Another model.

Dialectics is stoicheiosis, a gathering—indeed, an merging—of sometimes opposing propositions. Such as, for example, what follows.

Platon is sometimes accused of standing at the cradle of “Western rationalism.” This is because he proceeds by thorough logical reasoning, a

method which the entire Western tradition has imitated, time and again in different ways.

But look: in the universe, the cosmos or 'fusion', nature (the totality of all that is), Platon observes two 'forces'.

a. 'Nous', Latin: intellectus, spirit (understanding, reason,-- temperament, will),-- “insight that is accompanied by an objective” (de Vries, ac, 427).

b. 'Aneke', Latin: necessitas, fate. This second 'force' is 'irrational' but an inevitable contributing cause of all that the cosmos reveals. Specifically: the divine, understand: the higher, indeed, paranormal, model of everything is hindered by that 'necessity', -- “to a certain extent” (restriction, reservation).

Conclusion . -- Thesis: nous, reasonableness, 'rationality'. Opposite thesis: ananke, unreasonableness, 'irrationality'.

Latest model.

We simply cite. -- de Vries, ac, 437.

The game of our life—finds the limit in ethical (and related political and pedagogical) action. Where the freedom of play clashes with responsibility for one's fellow man. Where duty arises.

Man is called—in his life, indeed, even before—to moral decisions which may be supported by the memory of a spectacle enjoyed (in a pre-existence) and the prospect of an all-encompassing play, but cannot replace the gravity of the choice. To wish to play then would be an impermissible anticipation (fore-delivery) that presupposes a harmony that is not (yet) present.

In the theoretical and artistic realms, man can fully experience “the freedom of play”.

Does this not remind one of S. Kierkegaard's stages? He posits that in a first existential stage, man “can play” (with ideas, theoretically; with pleasures: aesthetically). But already, in that phase, the ethical, responsible stage is at work: life is seriousness that sets limits on playing with ideas and pleasures.

Let us now reread EO 56: Every flaw violates the total value! In other words: position: play; opposing position: seriousness. -- That is dialectics.

EO92

One's own opinion / the opinions of others.

Socrates, and following in his footsteps Platon, held their own opinions, at least on fundamental points, especially: 'ethical', matters of conscience, and 'political', matters of community. This is one aspect. The other – et alia, et oppositum – are the opinions that 'deviate'!

Bibl. st.: AR Henderickx, *Justice in The State of Platon* in: Tijdschr.v.Phil. 7 (1945): 1/2, 19/34.--

Cephalus believes that 'dikaiosune', justice—understand: acting conscientiously in society—consists in speaking the truth and honesty, -- Polemarchus in doing good to his friends and harm to his enemies. Thrasumachus: dikaiosune, justice, means only advantage for the one who is the stronger, the more powerful; -- Glaucon: 'dikaiosune' is considered to mean “a lesser evil”; Adeimantis: a semblance of justice brings man all earthly happiness.

Behold the perspectives (EO 87 (The importance of the standpoint) with the opinions in their wake. This entails the ambiguity of what is designated by the same term (with a multitude of sometimes contradictory meanings): dikaiosunè, justice, acting conscientiously.

This was, incidentally, the basis of the nominalism of the Sophists. “Dikaiosunè” is merely an “onoma”, a “nomen”, a word-sound. What the word-sound actually covers depends on each person’s perspective and interpretation.

In contrast, Socrates and Plato argued that, amidst these many viewpoints and interpretations, there is an idea of 'justice' at work that is objective—although it can be interpreted differently from region to region and from individual to individual.

Conclusion -- Not the commercial center (Kephalos), not the circle of friends (Polemarchos), not the mentality of the time of a good part of the fellow citizens with their cynicism (Thrasumachos), not the eternal seeking of compromise by a part of the citizens of that time (Glaukon), not soulless opportunism (Adeimantos) is the correct position! Even though there is much descriptive truth in it (as positive science).

For Socrates-Platon, the soul, the essential core of human beings, must be examined to find the correct definition of conscience. -- Meanwhile, all opinions are discussed democratically.

The diereitic-synoptic method distinguishes (classification) them—the opinions—but summarizes them (summary). Judging critically.

EO93

13. The inductive (generalizing/generalizing) method. (93/ 97)

Socrates of Athens—with him Platon—is known for the very frequent application of the “inductive method”. Briefly outlined:

a. of at least one specimen with a (striking) characteristic, one concludes that it includes all, indeed, all possible specimens of a collection;

b . Starting from at least one component with a (striking) property, one arrives at the system encompassing all parts. The first mode of induction is called 'generalization', the second 'generalization of wholeness'. Both lead to a totality consisting of elements or components. One feels the breath of Stoicism! Specifically: the joining together, indeed, the merging of punctual units into a comprehensive unity. But now on the basis of observation.

Anaxagoras and others. (93/95)

Socrates followed a long tradition in this regard. The Milesians, led by Thales of Miletus (-624/-545), had initiated a tradition of observing nature. Extensive traces of this can be found in Herodotus of Halicarnassus (-484/-425; *Historiai*) and Thucudides of Athens (-465/-395; Peloponnesian War)—as far as the science of humankind is concerned—and in Anaxagoras of Clazomenai (-499/-428). Let us dwell briefly on the latter.

Natural science.

D. Gershenson / D. Greenberg, * *Anaxagoras and the Birth of Scientific Method* *, New York, Blaisdell, 1964, claims that, with Anaxagoras, we are faced with a true natural science in the modern sense. Why? Because he advocated a unified theory regarding natural phenomena, which he substantiated with (rationally speaking) a good observational basis coupled with sound logical processing.

a. Careful observation bearing witness to 'akribeia', accuracy. -- Instead of passive experiences, he employed active observations, i.e., trials or experiments.

b. Construction of logically rigorous Theories. - In his time, thinkers in Hellas began to articulate rules of logical behavior.

a/b . It was precisely the fusion—the bringing together, indeed, the merging of both methods, observation, indeed, the experiment and applied logic—that allowed him a sound insight into both the essential nature of matter and that of the universe—the cosmos or nature—as a totality. That, precisely—according to Gershenson/Greenberg—is still characteristic of contemporary natural sciences.

EO94

From the visible to the invisible.

Herodotus, Hist. 2:33 for example, already upholds this arch-scientific principle: “From the known I conclude the unknown” (he says literally). Moreover, his scientific criticism of Homer's texts (which he partially misinterprets, for Homer was a seer-poet (EO 30) and had no scientific pretensions) proceeds from the same axiom: “Homer proceeds from something unknown that is not subject to testing. I know nothing of that stream Okeanos.” Homer, just like the average Greek of his archaic age, believed in a world water, Okeanos. - Cf. Fr. Krafft, *Geschichte der Naturwissenschaft*, I (*Die Begründung einer Wissenschaft von der Natur durch die Griechen*), Freiburg, Rombach, 1971, 145, 173.

In Anaxagoras the wording is clear: “Opsis ton adelon ta fainomena”, literally: the seeing of the invisible things, (...) the things that reveal themselves (= immediately given).

Maw: “ta chrēmata”, the immediately given things are, by reasoning (and/or 'seer's gift'), the necessary and sufficient reason to combine non-immediately given things (either as a presupposition or as an inference).

Cf. EO 76/80 (Platonic Theoria): Platon, following in Socrates' footsteps, starts from exactly the same premise.

Stoicheiosis -- The unity in the multiplicity (of punctual units) and vice versa!

A.-- Generalization.

Anaxagoras illustrated his scientific expositions with experiments: “This shows that in Anaxagoras' day, it was not uncommon to substantiate direct observation with active experimentation” (Gershenson/ Greenberg, oc, 42).

He immediately pointed out the repeatability by everyone of the processes thus demonstrated. He situated them in a set (class) with the same property.

Appl. mod. -- Oc, 40. -- He blew up, for example, a wineskin. He twisted its neck until the compressed air made the pliable sack firmly hard. Thereupon he demonstrated that, once turned to that extent, the sack withstood the pressure of a considerable force.

Caused—he said—by the air, which is thus a material and tangible reality. Indeed: he had first collected air, seemingly in 'nothing', in such a supple wineskin. -- Well, this applies not only to this one instance of air but to all (possible) instances (generalization).

EO95

It is clear: the inductive—and indeed experimentally inductive—method had solid predecessors in Socrates and Plato.

B.-- Generalization.

Here too, one starts from exactly one 'part', but not to generalize as just now, but to 'generalize', that is, to grasp the total reality.

Appl. mod. . - Oc, 16. -- A grain of wheat - As long as its constituents are well arranged - can live, can grow, for example.

Second phase of the (biological) experiment. -- Anaxagoras plants the grain in the earth. Two-part process or 'kinesis' (Latin: motus):

a. the specific structure ("comprehensive unit") of the grain is destroyed and its scattered particles take on the appearance of inanimate matter;

b. precisely because of this, or at least simultaneously with it, a new plant arises which will then itself bear seed again, for it, in turn, exhibits the same specific structure or "encompassing unity of punctual units". If that is not stoicheiosis; this time in the form of seeing a system that – moreover – repeats itself.

Oc, 34: "A structure or configuration is built up from disordered elements into an ordered totality." Thus, authors summarize Anaxagoras's idea.

Plato, for example, will emphasize that same structure, and indeed cosmically, like Anaxagoras: "The mind – nous – that governs the universe, is the same as the right order" (Cratylus 413c).

So much for what preceded Plato regarding generalization or generalisation (induction).

We shall see that what Anaxagoras attempted to realize in the realm of natural science, Platon, following in Socrates' footsteps, transferred to the human level, that is, within the conscience and in society. Psychology, sociology, and cultural studies thus gradually and tentatively take root. And indeed in the wake of Protosophistics, which placed the emphasis on human coexistence and the expertise that can assert itself therein.

Note: Sophistry, with its argumentation, and with its will to persuade and push through practically and especially theoretically, was not so new! Can you imagine Anaxagoras and others persuading when they conduct an experiment in public? They had to convince that same public of what they were conducting. Science without argumentation does not exist.

EO96

Concluding argument (syllogism).

A deductive argument consists of three sentences, two of which are the logical introductory clauses and one the logical concluding clause. From the two introductory clauses (Preface 1 and Preface 2), one concludes with the concluding clause. We have already repeatedly established that this can be done in more than one way (EO 76/80).

If A, then B. That is VZ 1. -- Well, A. Therefore B. (VZ 2 + NZ).-- Well,). -- us A. (VZ 2 + NZ). -- That is the syllogistic scheme of deduction and reduction, of forward and backward reasoning.

The three main types of Ch. Peirce (1839/1914).

Of the 256 possible 'combinations' regarding syllogisms, 90 are logically valid and 5 to 6 are common. However, let us consider what Peirce teaches us.

1.-- Deduction.

All beans in this bag are white. Well, this bean/ these beans (a handful, for example) come from this bag. So this bean (singular)/ these beans (particular) are white. -- Let us now move the first preposition to the end.

2.-- Reduction

(in the form of an induction - generalization).

This bean/these beans (singular/ particular) come from this bag. Well, this bean/these beans are white. So all (universal) beans in this bag are white. -- Let us move the first prefix to the back again.

3. -- Hypothesis

('abduction' in Peirce's terminology).

This bean/these beans are white. Well, all beans in this bag are white. So this bean/these beans come from this bag. -- This is also a reduction, but not a 'generalizing' induction, but a hypothetical reasoning.

With this, the domain of inductive reasoning is somewhat defined. Induction is a hypothesis, because there is no deductive proof of it: it is merely an assumption. Peirce's hypothesis is actually a generalization: from a part, one concludes that it belongs to the whole or system that, in this case, is the bag. Although the entire case can also be interpreted as a mere collection, of course.

The Socratic induction.

Aristotle characterizes Socrates as follows: "Socrates addressed the ethical virtues. -- He was the first to seek to formulate general definitions—with this in mind—(...). The valid reason for this was his will to arrive at conclusions through reasoning ('sullogizesthai') (...).

EO97

Two elements are, for good reason, Socrates' own achievement: inductive reasoning and general definitions" (Ar., *Metaph* . M 4: 1078 b17-32).-- We already saw that in EO 80 ("Are there no exceptions even there?").

Socrates was particularly shocked by an emerging elite of 'experts' who were skilled in some 'technè' or other—technical knowledge, skill, (proto)science. If you will: 'specialists'. They were indeed skilled in agriculture, shipbuilding, etc., but lacked conscience ('justice').

Consequence: in his eyes, such specialists were a potential danger to the 'polis', society. For they were – ethically – 'specialists'.

Socratic dialectics.

He sought them out—those specialists and their charioteers, the sophists. He reasoned through dialogue. To this end, Socrates takes samples from the totality of actual behavior—the unscrupulous as well as the conscientious. In order to potentially generalize. That is: to induce.

The other opinions as well.

Democratically minded as he was—he bore witness in his life to a far-reaching freedom of criticism of established morals—he began by assuming that he was “an ignorant man.” In order to provoke the contradictors, the ordinary conversational partners, to lash out. He was aware that he himself, too, knew only samples and not the totality. As a result, he learned much, around and especially from the Sophists.

Thus, those with differing views had their say. Democratically. This is: different samples—for other viewpoints (EO 87, 92)—were exposed ('a.letheia', 'apocalupsis', truth).

In summary: dialogical induction. That is the core of Socrates' 'dialectics'. All of Plato's dialogues reflect this.

Applic. mod .. “Thus Socrates observes that we only call someone “a good runner, a good wrestler, a good singer” if he cannot also run, root, or sing well at his own discretion. Not if he fails against his will.” (E. De Strycker, *Bekn. gesch .*, 74).

From those samples, Socrates concludes that competence encompasses both possibilities: the ability to perform, and the ability to fail knowingly and willingly. That is, then, “the common characteristic” (of the collection of 'experts').

EO98

14. Types of inductive method. (98/115)

Let us now pause at a multitude of inductions.

1.-- The summative, 'formal' or 'Aristotelian'.

What one has established taken separately of each member of a set or of each part of a system, one summarizes by asserting it of all members or parts collectively. -- Generalization and/or generalisation here amounts to summarisation. Cf. EO 81 (Dieretic and/or synoptic method).

Applicable model

In his **Analutika** (= logic), Aristotle says: “Man, the horse, the mule—each species taken individually—live long. Now (in the interpretation of the time), they are the (only) animals without bile. Thus, all bile-free animals taken

collectively live long.” - We have supplemented Aristotle’s text with “each taken individually” and “all taken collectively” to clarify what he actually meant.

Note : 'Summative' renders it perfectly, because 'summa', sum, is each taken separately together. 'Formal' is merely an unfortunate phrasing, because 'formal' here means 'summarizing'; 'Aristotelian' is a purely coincidental designation, of course.

A stricter formula.

Imagine a teacher who, after checking each piece of homework individually, counts them again: all together! The number is the sum of all the individual pieces. This is represented – 'depicted' – as a number.

IM Bochenski, *OP Philosophical methods in modern science* , Utr./Antw., 1961, 146.

It is called summative induction “complete induction” (yet another title).-- “If $x_1, x_2, x_3, \dots x_n$ are elements of a class a and all its elements—so there are none other than these—and F (note: some characteristic or property that was tested) applies to $x_1, x_2, x_3, \dots x_n$, then f applies to all elements of a collectively”.

Note : Let us not forget that summative or summarizing induction constitutes the essential core of all types of induction. Why? Because a generalization invariably presupposes such a summative induction.

For example: I observe that two instances of water boil at 100°C. I summarize this and state a hypothesis: all possible water will likely also boil at 100°C. Without that distinction between the two instances—two instances of 'water'—it is impossible to generalize to all (possible).

EO99

2. -- Amplifying, knowledge-expanding induction (99).

Summative induction reasons: from all individually to all collectively. -- Amplificative induction reasons: from at least one to all (possible).

In other words: summative induction summarizes the tested samples. Amplificative induction expands—or 'extrapolates,' as they say—to the testable but not yet tested samples. Thus: building upon the summative results.

2.A.-- Set theory.

One can also say; 'metaphorical'.

VZ 1: This bean/ these beans comes/ come from this bag.

VZ 2: Well then, this bean/ these beans/ are white.

NZ: So all the beans in this bag are white.

From the whiteness of one or some to all (possible).

2.B. -- Systems theory.

One can also say: 'metonymically'.

VZ 1. This is part of a bean.

VZ 2 : Well, this one part is white.

NZ: So the whole bean is white.

From the whiteness of a part to the whiteness of all parts or the whole. This distinction rests, in the case of Platonic thought, on the duality found in Platon, namely all and whole. Which the medieval scholastics translate as “totum logicum” (set) and “totum physicum” (system).

A paradigm.

Let's take a textbook example. -- The teacher is on a walk in the woods with the children: “visual instruction”. Suddenly, a girl comes trotting up with a beautiful striped feather.

Inductive, generalizing reasoning.

1.-- It is immediately clear: that feather is part of the entire bird (the system).

2.-- So much for summative induction.-- From that single feather, one now reasons toward the bird as a whole: a child, a connoisseur of some birds, says that that feather “with those pretty stripes” is a magpie feather.

That is amplificative or knowledge- or information-expanding induction. -
- This is, of course, a guess or hypothesis. Further research can confirm or deny, provide a 'conclusive answer'. This means that amplificative induction is a restrictive reasoning containing reservations. The derivation is not absolutely necessary (ED 37: possible).

EO100

3A. -- Baconian or causal induction. (100).

Francis Bacon of Verulam (1561/1626), known for his '*Novum organum scientiarum*' (1620), advocated a more experimental approach in the specialized sciences and in philosophy. He views 'science' as the mastery—free from any ethical or religious 'value'—of nature by (modern) man. Through experiment and reasoning—the two combined, as in Anaxagoras of Klazomenai (EO 93)—one “tortures nature” so that it reveals its secrets. -- That is the background of his type of amplifying induction.

Causality

The narrative theory schema of “omen/continuation (VT/VV)” is known. The causal link between two phenomena is an application of this. Specifically: the omen is the cause; the continuation is the effect or consequence.

Bacon's reasoning: if cause, then effect (Prep 1); well then, effect (Prep 2); therefore cause (Prep).

Causal induction.

Causal induction reasons from one or more instances of the same type of causality to all possible instances (the entire set).

If all water boils at 100°C, then this water and that water (sample). Well, this water and that water boil at 100°C (experiment twice). So all water boils at 100°C.

That is the inductive core. Now for causal induction.

If sufficient heating, then the boiling point of water. -- Well then, the boiling point of this water and that water. -- Thus, sufficient heating of this and that water as specimens of all water.

From two instances of causal connection (“comprehensive unit of two punctual units, namely the cause (heating) and the effect (boiling point)), one reasons for all cases”.

This is simply the application of anaxagorean or Socratic induction to causal processes.

“It holds for all water that, if heated sufficiently, it boils at 100°C.. Well, this water and that water reach the boiling point of 100°C after sufficient heating.. So all water, if heated sufficiently, boils at 100°. That is a second formula.”

Law of nature.

When a phenomenon holds always and everywhere, then it is lawful. -- It is clear that sound induction leads to lawfulness. One reasons from some cases to all.

EO101

3B. The operative or induction of use, (101/102).

Here, more than one type can be distinguished.

(A) educational induction.

It begins with showing, for example, a pen, to which a term—in this case, the word 'pen'—is associated. It continues with (learning) to use—to handle—that of which one primarily wishes to instill a correct understanding, a practical understanding to be precise. When a child has written with a pen a few times—at least once—he concludes from this—from the use, from the handling—that from now on, the pen will be usable time and again. And, immediately, he has a practical or handling understanding.

The reasoning.

From interacting with an object at least once, regarding which it is to acquire (practical) knowledge, the child decides on all (possible) subsequent interactions with it.

Summative induction: the number of times the child interacted with it.

Amplificative induction: the number of times it will deal with it—as an extension of summative induction.

Eg. rule

We find ourselves in 'programmed' education. -- From one or more examples—applicative models—a learner decides on a general rule—a regulative model.

Incidentally : 'eg' comes from the medieval “*exempli gratia*” (= by example), shortened to 'eg'; 'rule' is the Anglo-Saxon for 'rule'.

Note : What is called the “deductive method” in the same programmed education is: first the general rule; then the examples. Which is then called 'rul.eg'.

(B) operational induction.

'Operatio', Latin, means 'processing'. -- From the actual application—at least once—of a scientific concept, one concludes its “operational or usable character”—in all (possible) further cases.

For the natural sciences, P.W. Bridgman (*The Logic of Modern Physics* (1927-1; 1960-2)); founder of physical operationalism) was groundbreaking. In the pragmatic tradition, he held that theoretical concepts coincide with their use (value): from the repeatable practical use of a concept, one concludes its paradigmatic character: one possesses a paradigm (Th. Kuhn). And indeed, one of an operative or utility nature.

EO102

In the humanities, this induction was introduced—for psychology—by Stevens (1935) and Tolman (1936);—for sociology—by Lundberg (1953) and Zette (1954).

This method has been criticized from other perspectives (phenomenology, for example). For it presupposes a minimal number of 'factors' or 'parameters'! How does the operationalist find these parameters? Apparently like any other person: first and foremost through an intuitive grasp; after which the operative application becomes possible.

Appl. mod.,-- You wish to conduct a survey among the parents of your children regarding their willingness to cooperate with you as a teacher.

How are you going to define the concept of “willingness to cooperate”? First, through a vague intuition. Like everyone else. How can one tell that someone is showing “willingness to cooperate”? By their claims? Yes, insofar as these are sincere: not everyone who 'says' they want to cooperate is necessarily willing!

By what means is sincerity to be recognized? The criteria—means of identification—must be established in this regard. For example: “I acknowledge willingness based on the fact that parents have demonstrated that willingness in practice at least once.” Such a 'deed' is one parameter. Without that 'deed,' your concept of 'willingness to cooperate' hangs in the air.

Having pointed this out is the great merit of the operation(al)ists. 'Intuitions' are at most 'hypotheses' or – Platonically – 'lemmas', provisionally accepted concepts. Until when they are operationally defined!

Note : One should now reread EO 76/80 (Platonic Theory): the analysis of foundations and the analysis of inferences contain something operational. This is also evident from EO 79 (The Pragmatic Maxim), where the importance of an action, an experiment, in which the object of investigation is involved, becomes very clear. “By its fruit you will know it,” said Jesus.

Incidentally: A. Gödeckemeyer, **Platon**, Munich, 1922, 111, emphasizes Platon's reasoning based on consequences: in itself, conscientious living is “of higher intuitive value”; but the external consequences of conscientious behavior, individual and social, tangibly and palpably 'operationally' confirm “that higher intuitively felt value”. However purely theoretically oriented Platon may have been, the tangible parameters were an integral part of his thinking.

EO103

The structural induction. (103/107).

Structuralism—which, incidentally, exhibits many forms—is characterized by the primacy of concepts defined as mathematically as possible, which illuminate empirical research like a light. Due to their high inductive value, we will focus on an application model.

Bible st.: Cl. Lévi-Strauss, *Le totémisme aujourd'hui*, Paris, 1969.

The term 'totemism'. -- It is known that the term 'totemism' was introduced by religious scholars—ethnologists—following a term from the Ojibwa language, a language north of the North American Great Lakes.

The expression 'ototeman' means, approximately, “He belongs to my (blood) kinship”. It can be broken down into: 'o' (third person), -- 't' (inserted consonant to separate the vowels), -- 'ote' (kinship) between I and a cousin, -- 'm' (possessive), -- 'an' indicating the third person with 'o' (beginning).

This is how clan ties were expressed. “Makwa nindotem” means “The bear is my clan”. The ojibwa, for example, say: “Pindikén-nindotem” (“Come in, clan brother”). They bear many animal names.

Conclusion . -- Central is a relationship, namely between a. an ojibwa and b. an animal that is his totem animal.

Structural induction.

First and foremost: it is certainly operative. Based on at least one confirmation (tested case), one concludes regarding the scientific-operative value for all (possible) further cases of a predetermined term or concept.

But there is this.

Empirical research is blind, to a certain extent, if one does not possess a research scheme of pairs of concepts (relationships) that serve an informative purpose.-- Levi-Strauss does this as follows for everything that could be called 'totemism'.

nature	category	category	individual	individual
culture	group	person	person	group

In 'nature' he situates the object, plant, or animal that is a 'totem', and in 'culture' the people who adhere to totemism (individually or collectively).

It is clear: thus, he has at his disposal a 'grid' of a priori pairs of concepts. Based on this, he will then investigate and classify the empirical facts, as confirmations or negations. In other words: the combining—primarily—of elements is typical.

EO104

Let us note that set theory governs the combinations: natural group (= category)/natural individual and cultural group/person.

According to Lévi-Strauss, Australian totemism (social, sexual) fits into “category/group”; the individual totemism of Native American Indians, within which the person honors a set of plants or animals as a totem, into “category/person”; on Mota (Banks Islands), for example, the child born is an 'embodiment' of a plant or an animal—eaten or encountered at the moment the mother becomes aware of her pregnancy—“individual/person”; in Polynesia and Africa, some animals—crocodiles, lions, panthers, etc.—are revered and protected by the group: “individual/group”.

Note : Some structuralists hold this classification in high regard. But, - frankly - what does that tell us about the full phenomenon of 'totemism'?

To begin with: only the first two relationships—category/group and category/person—are usually called 'totemism'. Relationship three—

individual/person—is called the “prelude to totemism,” and relationship four—individual/group—is called the “remainder of witnesses to totemism.”

Therefore, we refer briefly to a report concerning 'nagualism'. This provides us with empirical material—concrete, alive, and lived through. More than the carcass of the relationship “individual (nahual) / person”!

Bible st.: I. Bertrand, *La sorcellerie* , Paris, Bloud, 1905-5, 16ss. (Nagualism).

At the time—yes, centuries ago already, since the practice is pre-Christian—nahualism existed. Because the social structure of such 'totemisms' was sometimes very 'esoteric' (inaccessible to the general public), it is sometimes a matter of groping in the dark to find the right information.

In any case, the following 'story' (oc 17s.; taken from an earlier work: M. Gougenot-des-Mousseaux, *Les hauts faits de la magie*).

Padre Diego—we are in Mexico—was a man of great character. One day, he had to administer a punishment to an Indian for a serious crime.

The result: the Indian wanted revenge—in the manner of a Nahual sect. He took up position on the edge of a river that the missionary had to wade through on horseback to visit a dying man. The mount had barely entered the river when it suddenly stopped. P. Diego, seeing what was happening, looked down and discovered a caiman attempting to yank the mount into the water.

EO105

Thereupon he shook the reins vigorously—calling upon God's help—: the horse charged forward with such a jerk that it dragged the caiman out of the river. The horse's backward kicks and a hail of blows inflicted on the caiman's head with an iron-shod stick forced the aquatic animal to let go.

The caiman lay stunned on the bank. He continued on his way. He completed his visit to the sick man. And lo and behold: a messenger arrived with the news that the Indian—whom he had punished a few days earlier—had died. The unfortunate fellow had succumbed to the backward hooves of Diego's mount.

Padre Diego hastened to verify such a story: the caiman lay lifeless on the bank, and the Indian displayed exactly the same marks of the hoofbeats by

which the caiman, his nahual, had died. So far, reduced to the essential, the story.

The inductive scope lies not so much in the report—for it is no imagined story—in itself, but rather in the fact that such stories are audible all over the planet. At least for those who do not proceed with rationalist prejudices.

We will examine this in further detail: when facts repeat themselves independently of one another—however bizarre they may be—and when, moreover, they 'converge' (point in exactly the same direction), then we are faced with what is called “convergence induction”.

A structure.

The structure - comprising unit - is the following:

a. A person - child, - man/woman - imagines becoming one with a 'totem' - a pole, a plant, an animal; - a group of objects, a group of plants, a group of animals (let us recall the very solid list of transpositions ('permutations') by Levi-Strauss) - .

b . The animal—something within the animal (its soul, its spirit?)—responds to this with an accommodating unification. Result: two beings, with their destinies, become one 'occult' (= invisible) being. Such a structure is the core of Nahualism.

Further result: 'simultaneous course of life'. This is the fact that specific, vital events become common from the rite of unification. - The 'repercussion' (French: 'répercussion') of the afflicted animal (fatally wounded) upon the nahual worshipper is one of the most remarkable symptoms thereof.

EO106

Nahualism and biblical faith.

Ethnology, yes, but religious studies too.-- I. Bertrand, oc, 16.-- The nahual is - among other things - the entity ('genius', (Greek: daimon; Latin: genius, containing the root 'gign-ere', to beget, to produce) that governs the birth of a child. In doing so, it manifests itself in the form of an object, plant, -- here: animal (= totem).

What do the followers of the secret society do when, under pressure from the Christian occupier, parents have their child baptized?

a. The parents are requested to curse the Holy Trinity, Christ and Mary, as well as the saints.

p. A rite precedes baptism: the magician draws blood from the baby's tongue or ear and offers it to the nahual as a means of unification. Moreover: once an adult, the child ought, through another rite, to realize what was previously assumed in his place. In a secluded place, an offering is made to the nahual, whereby it reveals itself ('theophany' or 'hierophany') to the initiate as the totem object, as the totem plant, or especially as the totem animal (lion, tiger, caiman, crocodile, snake).

b2 . Thus, the ritual before the baptism and after the baptism. -- But as soon as possible after the baptism, the magician washes the body parts (especially the head) of the newly baptized person, -- where the baptismal water and the anointing oils have touched them.

Thus, through rituals, the synchronicity of life is established. -- It must not be forgotten that those involved are subjected to a 'catechesis' by the us man or us woman. The main content of which is: "The Nahual has given you life. He will protect you from now on. Condition: from now on you bear His name and conduct yourself as a true worshipper of your Nahual".

Note: In our regions of Western Europe, there used to be a custom for parents to enter a tavern immediately after the baptism, give the baby a little gin as quickly as possible, and, of course, have a good drink themselves. This custom is less innocent than one might think: just as in Mexico, it was intended as a means to "wash away" (the unwanted influence of) Christianity—to remain a good heathen!

EO107

One can, with the support of some rationalists, label such a use of gin after ecclesiastical baptism (we do say 'ecclesiastical', since the purely Trinitarian effect of the sacrament lies beyond the reach of pagan magic) as 'folklore'. In which the nuance is then placed of "innocent—meaningless". Such a thing is possible in principle. But anyone who closely examines certain folklore customs will frequently discover that a—sometimes ancient—clear and distinct knowledge regarding hidden—'occult'—processes lies concealed. It concerns an 'occult' knowledge that lives on in hiding as "mere tradition".

Conclusion . -- A Levi-Strauss induces like all other scientists, of course. But by introducing a—formalizing—permutation table, he organizes the empirical data on the basis of the comparative method—often, as it were, in advance. Yet it is the direct, unprocessed reports that provide the breeding ground for the actual insight—e.g., in totemistic praxis—and the 'formalizing' is a kind of carcass in which the data are housed.

5.-- Similarity or analogical induction.

Bibl. st. : Ch. Lahr, SJ, *Logique* , Paris, 1933-27, 608/611 (L'analogie).-- Note: 'analogie' is not simply 'similarity' (as imprecise usage sometimes assumes) but rather “similarity and difference”.

A. Purely inductive analogical reasoning. (107/109).

A multitude of data, examined by the comparative method, reveals at a certain moment one or more common properties. Analogic induction summarizes them under one or more terms for those properties. -- In this sense, analogical induction is very close to summative induction.

A series of examples.

1. Means-ends relationship (referred to as: organ-function relationship).

Someone delves deeper into the fossil limbs of an extinct biological species. That is the original. Suddenly, something becomes clear to him: the fin of our familiar fish or the wing of our birds, at home in water or air, resemble them. Those are the models.

Organ/environment - relationship between models and original appear identical.

Hypothesis : The extinct species, just like our fish or birds, lived in the water or in the air. Does a common characteristic emerge?

EO108

Note : Geoffroy Saint-Hilaire (1772/1844; founder of embryology) was the first to point out the similarity (= common characteristic) regarding the function or role of the human arm, the quadrupedal leg, the bird's wing, and the fish's fin.

This became the premise of Georges Cuvier (1769/1832): he founded comparative anatomy. -- Note: arm/roll = leg/roll = wing/roll = fin/roll.

2.-- Cause-and-effect relationship.

See above EO 100 (Causal ind.). -- J. Priestley (1733/1804; chemist) saw the similarity (common property) between what rust produces (wasting away) and what other forms of 'combustion' produce: combustion/ wasting away = rust/ wasting away. Generalization: whatever oxidation is, is merely a slow form of combustion.

Second case. -- B. Franklin (1706/1790) saw a similarity (= common property) between the effects of an electric spark (model) and those of lightning. He generalized: spark/effect = lightning/effect. Premise: if lightning, just like the spark below, is also an electrical phenomenon, then the similarity becomes understandable.

3.-- Essential nature/ lawfulness.

Light, heat, and sound share a common characteristic or similarity: vibration. They can be summarized—inducible—as three types of vibration. -- Which immediately implies that they are governed by one and the same law inherent in all vibrations.

Conclusion. -- From established similarity(ies), one concludes, in summary, to a single general concept that establishes that similarity as a common characteristic. What is purely Socratic: based on induction, he aimed to develop general concepts (which are invariably common characteristics). They summarize a multitude.

4. The Socratic a fortiori induction.

Bible st.: E. De Strycker, *Bekorte gesch.*, 74v. (Argumentum a minore ad maius).

Socrates often employed the induction of the type “if already, then all the more so”.

Applicable model

a . The argumentum minus.

In the fields of agriculture, maritime transport, and health, we already rely on experts.

b . The argumentum maius.-

How much more shall we entrust the upbringing of our children and the government of the state to experts!

Pre-configurations:

a. parable: “What is important is entrusted to experts”.

b. difference (gradation) within the parable: “What is more important is entrusted all the more to experts”. The comparative reinforces the parable, as it were.

One observes the generalization or general characteristic: “if important, then experts”.

B. Hypothetical analogical reasoning.

Lahr: “This kind of analogical induction concludes

a. from at least one established similarity (common characteristic) between model and original

b . to the possibly ascertainable further similarity.

Applicable model

Mercury, Venus, Earth, Mars, etc. are planets around the sun: orbit around the sun, round shape, axial rotation, and atmosphere are common characteristics that have been established.

Based on those established similarities, and assuming the fact that Earth has an atmosphere and is therefore inhabited, can one conclude that other planets are also inhabited?

A hypothesis is at work here—albeit supported by analogical (summarizing) induction, but going further than what is certain. It is an amplifying induction and is therefore true subject to (restrictive) further research, which either confirms ('verifies,' says K. Popper) or denies or refutes ('falsifies,' says K. Popper).

Conclusion . -- Always the comparative method! But now grappling with the question: “How far does the similarity go and where does the difference begin?” Here, then, amplification or knowledge expansion is at work. More than pure summary.

6.-- Cumulative or convergence induction. (109/113).

The fruitfulness of Socrates' discovery regarding generalization is evident from the many forms of induction.

Bible st.: H. Pinard de la Boullaye, SJ, *L'étude comparée des religions* , II (*Les méthodes*), Paris, 1929-3, 509/554 (*La démonstration par convergence d'indices probables*).

Let us note that the author applies the cumulative method to singular phenomena: a flight of geese from the north in 1929; a volcanic eruption in late antiquity; -- a crime that has still not been solved; -- the unknown author of a book. General or particular phenomena are frequent. Singular phenomena are unique, singular, one-off. -- The induction regarding such phenomena therefore exhibits a structure entirely of its own. Therefore, we consider the cumulative or accumulating induction that relies on uncertain but minimally probable (EO 38) data.

EO110

A.-- Idiography or individualology. (110/112).

Reality—being—is not merely a collection or a system: it is also—and indeed first and foremost—an individual. The ontology (and logic, especially in its applications) of the singular (unique, individual, singularized) finds its fulfillment here, as an object of cumulative induction.

Library st.:

- IM, Bochenski OP, *Philosophical method of thinking* n, 162/171 (Historical method);
- CG Hempel, *The Function of General Laws in History* , in: *Journal of Philosophy* 39 (1942): 35/48;
- G. Nuchelmans, *Overview of Analytical Philosophy* , Utr./Antw., 241.

Note : Usually, one focuses on the historical sciences when discussing the singular—whether purely individual or collective (e.g., a single people).

But let us not forget that, for example, the geographical sciences also primarily encompass singular realities: there is exactly one single Antwerp, for instance. Just as there is exactly one Stalin and exactly one Hitler.

General concepts or even particular concepts do not suffice to represent the total—the only one that truly exists—reality of history or of the natural or cultural landscape: only singular, individual concepts (EO 08; 45) suffice.

Model-theoretical : for a unique original (as subject), a general or particular concept (as model) is insufficient.

The exceptional or the rare.

Anything exceptional or rare is not necessarily unique, as multiple examples may exist. -- This should be taken into due account.

There is singular and singular.

Take, as regards toys, a set of teddy bears. Each one individually is exactly one singular specimen of 'teddy bear'. However, especially if they are mechanically made, they are usually so similar to one another that they are indistinguishable and thus interchangeable or 'identical'. Swap them unnoticed, and a child will not even notice. Napoleon and Hitler, -- Antwerp, - they are singular but, moreover, not identical, for they are separable. They are radically individual and not identically individual.

The 'singletons' in ordinary, purely mathematical set or systems theory are usually merely identical singletons. The singular realities in history or geography are radically unique.

EO111

The system of the singular-concrete.

a . All that is unique is distinguishable (discriminable) from the rest of all that is (the totality of being(the)),-- indeed, it is separated from it to a certain extent (note the restriction or reservation). A city like Antwerp or a historical figure like Hitler are radically singular.

b. All that is unique is 'concrete', di 'con.cretum', fused with. With what? With the same rest of the universe – with the rest of all that is – from which it is distinguishable and, to a certain extent, separated. That paradox encompasses the fact that it is fused – concrete – with that same rest.

Conclusion. -- In order to represent the singular, the radically singular, one must therefore presuppose what? The complementation or dichotomy that encompasses

- a.** the singular and the rest,
- b.** such that they are both distinguishable, indeed, separate, and yet also 'concrete'; existing within one.

Proper nomenclature.

We know the genus name – human – and the species name – negro – . But there is also the proper name – Whoopy Goldberg – So that idiography or individuology can be translated as 'the study of proper names'.

Definition of the singular.

A good definition encompasses all instances or the system with all its parts and only that.-- The ancient saying goes: “individuum ineffabile”, Whatever is unique is ineffable. Understood by: with purely general or particular concepts.

The great tradition tends to dismiss every true science concerning the singular as singular, as impossible. Lahr, Logique, 537: “Non datur de individuo scientia” (There is no science concerning the individual).

Definition of the singular.

Romanticism (1790+) took a decisive step in this regard: it clearly distinguishes 'unique' concepts from general or particular ones as equally valid.

Yet Aristotle already preferred the singular regarding the degree of reality.
-- But the School of Coimbra provided an accurate formula.

Bible st.: O. Willmann *Gesch. d. Idealismus* III (*Der Idealismus der Neuzeit*), Braunschweig, 1907-2, 112/115.

The Conimbricenses are known for a work: *In universam dialecticam aristotelis* (1605). In it we find a very remarkable method for defining everything singular.

EO112

What is a unique item?

“Id cuius omnes simul proprietates alteri convenire non possunt”.
Literally: That which is such that its properties, and indeed all its properties collectively—omnes simul—cannot be stated of anything else. In other words: distinguishability!

System.

Note: all characteristics but such that they are taken 'simul', all at once, as a single package, -- which are taken as the same coherent whole or system.
All: set. Collectively: system.

The two-line verse.

“Forma (note: form of being), -- figura (configuration, 'Gestalt', material appearance), locus (place), stirps (origin), nomen (name, preferably: proper

name), patria (homeland, residence, region of birth), tempus (time(point)) unum (the unique) perpetua reddere lege solent (invariably represent the unique).

Enumeration or accumulation.

Actually, this is an accumulating or cumulative enumeration—on an inductive, i.e., sampling, basis. Apart from the proper name, which in itself says nothing to those unfamiliar with that proper name and its everyday use, all the characteristics—notae, characteristics that constitute the content of a concept—are in themselves, i.e., individually insufficient. Only the accumulation of them into a system serves to truly define, i.e., to describe the defining and only the defining.

There must be such a formula possible for geographical things as well, unique ones that is.

Appl. mod..

A. Forma, general form of being: woman.

B.1. Figure: view very beautiful.

B.2. Proper name: Roxana.

B.3. Origin: daughter of Oxuartes, satrap (governor) of the Basileus, the prince of Persia.

B.4. Country: Baktrianè (an area within what was then Persia (= + /- Turkestan/ Iran/ Afghanistan).

B.5. Location: Central Asia.

B.6. Time: -327 (marriage of Roxana to Alexander III the Great (-356/-323; founder of a Macedonian-eastern empire); -319 (departure to Epirus to Alexander's mother, Olympias); -310 (murdered by King Cassandros of Macedonia after imprisonment).

Behold the abstract and general schema, -- filled in. This is how one 'defines' the Eastern princess Roxana, one of Alexander's many wives who, through those many marriages, wanted to pave the way for a multiculturalism—Greek and Eastern combined.

One sees clearly, therefore: it is an induction, a taking of samples, but defining the singular through accumulation.

EO1413

B. Induction by means of convergence.

'Convergence' or 'coincidence'.

Suppose someone is traveling in a deserted area. The only thing he has is a good map. Relying on the signs on the map, he ventures from (indicated) sign to (indicated) sign. Yet he has the impression that he is finding “the right path”.

One can see it: sign after sign accumulates. Individually not decisive, but collectively still decisive somewhere ('somewhere' means “somewhat, groping in the right direction”).

Vague indications.

Ancient Greek rhetoric, in its theory of argument, speaks of 'sêmeion', an uncertain sign (distinguishable from 'tekmeîon', a sign providing certainty).

Anyone seeking the right path with a map in a deserted area is dependent on “uncertain signs”.

The rule reads:

- a.** more than one uncertain sign (vague indication);
- b.** each of those multitude of signs is independent of the others.
- c.** especially: they point - gradually more and more - in the same direction (= convergence). They 'converge'! Accumulating. Cumulative.

Theories.

In very many cases, in everyday life and also in scientific work, we proceed in this way: by convergence induction.

1. Some see in this mere accumulation (a kind of summative induction). If even one uncertain sign shows credibility, how much more so than more than one uncertain sign, -- at least if it points in (one and) the same direction.

Incidentally : compare with the argumentum a minore ad maius (EO 108).

2.a. Others see this as an inductive application of probability theory. That may be true, but the purely calculating aspect plays no role in practical searching!

2.b. The limit value theory is advocated by others as well: just as in mathematics a gradually increasing value approaches a limit (boundary value) but never reaches it, so too does the one experiencing cumulative induction acquire gradual certainty, but never absolute certainty. We believe that appealing to the limit value theory offers us a metaphor, a model, but no real explanation.

Treasure hunt.

A textbook example of cumulative induction is children playing and searching for a hidden treasure. Every clue – indicium (Latin) – brings them closer to the goal.

EO113

7.-- The statistical inductions (114)

Bibl. st.: W. Salmon, *Logic*, 55ff. (*Induction by Enumeration. Statistics*).-
- In short = 100% or 0% is universal induction; neither 100% nor 0% is statistical induction.

First type.

VZ 1.-- These beans come from this bag (private).

VZ 2.-- Well, these beans are 63% white.

NZ.-- So the other beans (rest, complement) are 63% white.

One generalizes a sample.

Second type.

VZ 1.-- These beans come from this bag (private).

VZ 2.-- Well, these beans are 63% white.

NZ.-- So the next bean (singular) is 63 chances out of 100 (63%) white.

The concluding clause refers either to the total, examineable remainder or to exactly one member of that remainder.-- That is statistical induction. It has as its predicate neither 10,. nor 0%.

Statistics

Bibl. st.: I. Adler: *Probability Theory and Statistics*, Utr / Antw. 1966.

The term 'statistics' comes from the state, 'status' (Latin), which takes an entire population into account. Replace 'population' with 'collection', and you arrive at statistics.

An opaque multiplicity (material object), viewed from the perspective of statistical induction (formal object) that is summarized in numbers (counting) and arrangement (classification).

Summative and amplificative induction.

EO 98; 99. -- The samples taken are summarized in a percentage (summative part). From there, one concludes regarding the unexamined cases

(amplifying induction). From some, one concludes towards all. -- Which is restrictive reasoning, -- subject to further testing.

The preliminary positions.

All laws governing sound induction also govern sound statistics. The foundation, the summative part, can be insufficient for two types of reasons:

a. quantitative (too few samples are taken);

b. qualitative (one proceeds selectively rather than haphazardly (there is insufficient 'randomization')).

Opinion polls . -- The application the public experiences most is the survey. How often do so-called 'forecasts' (in elections, for example) turn out to be incorrect! The basis! Too few samples! Non-random samples.

Consequence : the predictions of fortune tellers do not differ that much from such forecasts based on opinion polls!

EO115

B.-- The induction of authority (argument from authority). (115)

Bible st.: W. Salomn, *Logic* , 1963, 63/67 (Argument from authority).

“Argumentum ex auctoritate,” said the medieval scholastics.

Syllogistic: X is a reliable authority when he pronounces the judgment p. Well, X asserts p. Therefore, p is reliable. -- This is actually a deductive syllogism. -- So where is the induction?

If a. the vast majority, b. a majority, c. a number of judgments p of X (concerning his specialty or domain of expertise) are true, then X possesses a. very great authority, b. great authority, c. some authority. Now, insofar as p belongs to a. the vast majority, b. the majority, c. a number of true statements of X, p is reliable. Thus, p is correspondingly, in fact, reliable. And X has 'authority'.

It is clear: formally, the reasoning is deductive, but the restriction lies in the inductive basis of the first clause: only a percentage (statistical induction) of the statements p of X is true! Not all, only some statements are true. Some others are false. -- Especially outside the domain of expertise, that is the restriction or reservation.

Applicable model

Some thinkers invoke Albert Einstein (1879/1955; mathematician and physicist; Nobel Prize in Physics 1921), who, in 1905, formulated Einstein's Law (relationship between photons and electrons) and, in 1905/1911, introduced a cosmology (theory of the universe) called 'theory of relativity'.

In the microphysical and macrophysical fields, (according to that theory) partially non-absolute statements apply.

From this, some deduced that, besides mathematical and physical phenomena, our traditional value judgments, the basis of our Western culture, are likewise non-absolute but 'relative' (relative, i.e., dependent on other elements).

Criticism.

a . Einstein never provided any evidence of the purely relative nature of our cultural values (perhaps he never wanted to provide it).

b . People forget that his epistemological authority is merely mathematical-physical and not axiological.

In other words: people forget his domain of expertise. In other words: the terms 'relative' and 'relativity' may sound the same in mathematics, physics, and cultural theory, but in terms of content, they are not the same.

EO116

15. Holistic ontology. (116/119).

The word 'holistic' and in Dutch 'heel' is 'in!

'Holos'; Latin: totus, whole, entire. -- Thus in the compound 'holo.klèros' (Platon: Phaedrus 250c, Timaeus 44c) which means 'intact', 'whole' (hence 'holoklèria', integrity, integrity).

Panta.

Let us reread EO 30,-- 45, 52, 65, 94. -- 'Everything' is the object of ontology.

Let us reread EO 32,-- 45, 65.-- "All that was, is, and will be" is the object, diachronically, of ontology.

EO 98/115 (Types of Inductive Method) taught us that we can grasp the 'all' (the universe) only through samples, -- even though the idea of 'everything' (possibly in the form of "All that was, is, will be") presents itself to us. In

fragments, but with a view to totalities (sets/systems), we explore the totality of All that is.

More than one way.

What we immediately grasp—the phenomena or the things that reveal themselves—is the solid foundation

1. Let us reread EO 94: Herodotus, Anaxagoras, they proceed from what is given. Not to dwell on that immediately given. To transcend it. Towards what we call “the indirectly given”, for it is attainable via the immediately given.

Thus the inductivist: through samples that are given immediately, by amplifying knowledge expansion, he reaches the indirect given (the totality), namely the set and/or the system.

2. Let us reread EO 73/80: the hypothetical method begins with the phenomenon. But it investigates it—probing it—backwards, via 'analysis', the reductive method (the prepositions—the omens) or forwards, via 'synthesis', the deductive method (the inferences).

In this way, we gain insight into the totality of, for example, the theft, insofar as it is given immediately and given as a corpse.

3. Let us reread EO 81/92: an immediately given thing, a 'phenomenon' therefore, exhibits mediate data, namely when one classifies it within a schema that summarizes a set of data. The categories (universal/particular and singular data), the categories (some system or other) situate the immediately given within a totality that also includes the data that is not, unless mediate, related to the phenomenon.

EO117

The ontological method.

Ontology, like every science, has its own method. -- What could be such a method that refers to total reality? Platon calls it—following in Pythagoras' footsteps, 'theoria'.

1.-- Theory.

O. Willmann, *Die wichtigsten philosophischen Fachausdrücke in historischer Anordnung*, Kempten / Munich, 1909, 20, says what follows.

'Theorein' was translated by the ancient Romans as 'speculari'. This verb means: to examine very precisely, to keep a thorough record, -- so that that

which is examined, that which is kept a record of, is revealed and brought into the truth — a. letheia, apokalupsis.

For example, a spy is a 'speculator'. Similarly, 'specula' is the place from which observation takes place—where one “keeps watch”—where one observes keenly to know what is at stake. Likewise, 'speculatio' is the correct translation of 'theoria'.

Note -- Isaiah 21:6/10. -- The Old Testament seers—'prophets'—knew that meaning perfectly in Hebrew. -- “Thus spoke the Lord to me. -- Well! Set the observer on the lookout. Whatever he 'sees', let him report it. -- He will 'see' a group: horsemen in pairs, men seated on donkeys, men on the backs of camels. -- Let the observer look closely, with great attention.

And the observer cried out: “Look! On the lookout, Lord, I am all day long. At my watchpost I stand all night long. (...)”.

Alfred Bertholet, *Die Religion des alten Testaments*, Tübingen, 1932, 110, n. b, says: the observer is “the second self of the visionary”, the second self of the seer.

Here, 'perceiving' and 'observer' still have the very archaic meaning that we find, for example, in Homer and Hesiod (EO 32: Mnemosune, Remembrance; 52: Anamnesis, all-encompassing and ordered consciousness). Specifically: the paranormal – and thus, in the archaic-primitive worldview, 'divine' – ability to see, if necessary from a distance – mantic.

'Speculation'.

One 'speculates' on the stock markets! That is, on rational grounds, gambling! From immediately given financial (and many other) data, 'expanding' the knowledge thus acquired (= amplificatio) to indirectly attainable data (here: the intended profit). -- The mystic Ruusbroec Jan - (1293/1381) calls one “someone who lives and thinks 'speculatively'”: from the immediately given, he penetrates to the indirectly given (here: God's working in the depths of the soul situated in the universe). This is another 'amplificatio', an expansion of knowledge. A paranormal one, -- comparable to that of the Old Testament prophets.

EO118

2.-- He theoretike tou ontos.

Ontology is “theory that focuses on all that is ('panta'),-- diachronically: on all that was, is, will be”. O. Willmann: “We call 'speculation' the actual philosophical way of engaging with something. In that case, ‘speculative interest’ comes down to:

A. observing – that is the empirical interest,

B. so that – based on that observation – connections become apparent”.

In other words: philosophizing is

a . observe keenly

b . of the immediately given – the phenomena – and, through that immediately given, that which reveals itself indirectly.

Homer and Hesiod (as Mantic poets),-- Thales of Miletus and his contemporaries, in whose wake a Herodotus ('historia', Latin inquisitio, inquiry),- Pythagoras and the Paleo-Pythagoreans ('theoria', e.g. at the Olympic Games: seeing more than the superficial spectator),-- Parmenides ('alètheia'),-- they were all 'philosophers', di 'speculatores', observers who penetrated to - what Willmann calls - the coherences or connections (the encompassing units,-- object of stoicheiosis): aiming time and again at two aspects (the immediately given/ the indirectly given).

O. Willmann, oc, 20. -- Platon calls 'science' “*theorètikè tou ontos*”, the thorough examination of all that is. Which is actually the ontological definition of 'science'.

Note -- Ch. S. Peirce (1839/1914), the pragmatist, distinguished the following types.

a1. The headstrong person views everything as it is, based on individual presuppositions,

a2. The orthodox views all that exists through the eyes (predictions) of others (authority figures, -- including dictators, traditions of all kinds).

1c. The preference-minded person views everything as it is from the perspective of his personal or social presuppositions that he favors.

b . The scientist, however, views all that exists from the perspective of the given itself. In doing so, he approaches the Platonic definition.

Note -- Aristotle. -- Aristotle calls ontology 'wisdom' -- in the ancient sense of “knowledge concerning human and divine things”.

EO119

We know that the concept of 'wisdom' roughly coincides with our concept of “general education”. Philosophy was, in Aristotle, therefore a (higher, more elaborate) form of “general development”.

Aristotle also calls ontology 'philosophy'. In the Paleopythagorean sense, this term implies that he considers himself “on the way to wisdom,” for for Pythagoras, only the deities—as for many; very many thinkers in ancient Hellas—were the possessors of wisdom. And thus, the search for wisdom was the fate of mortals. The Paleopythagoreans definitively embedded a healthy fallibilism or sense of fallibility in the term 'philosophy' or, as our forefathers translated it, 'desire for wisdom' or—better—'disposition of wisdom'. A desire to learn! To approach the ideal of the deities (and thus to 'deify' oneself).

Ontology was, for Aristotle, “the doctrine concerning being as being”. This is: delving deeper into all that is, insofar as it is—into being as being or into being as such. The lowercase terms 'as' and 'as (such)' express the viewpoint or, as the scholastics said, “the formal object”.

Compare with studying “the child as a child” or “the child as such”: which is taking the child insofar as the child is a child. Looking at all that makes it a child. Unveiling the 'ousia' or essence of the child.

Ontology was, for Aristotle, ultimately also “first philosophy”. -- Why? Because it examines more closely “the presuppositions of all that is”, as well as “the inferences” thereof.

We now call that “transcendental ontology”. -- What he calls “second philosophies”, we call “categorical ontologies”. Thus, in his view, mathematics (as a specialized science and also as a categorical ontology) was merely “second, derived philosophy”. Likewise, 'physics' (“hè fusikè”), i.e. the specialized science and the categorical ontology concerning nature ('fisis', Latin: natura, nature), which, in his view, encompassed what we now call “psychology”, was merely “second philosophy”.

This is: just as mathematics, with regard to the most general presuppositions and inferences, is dependent on general ontology. -- This prevented what we today—with MacLuhan—call 'specialized obsession'. By situating his own limited specialization within “first philosophy” as a framework of thought, the scientist relativized himself.

16- Holistic ontology: phenomenology (120/125)

The term 'phenomenology' is used in more than one sense; Father Teilhard de Chardin (1881/1955; scientist and also ... exorcist; thinker in evolutionary terms) speaks of his 'phenomenology' as a representation of the phenomena of evolution—scientific, philosophical, and even theological.

G. Fr. W. Hegel (1770/1831; German idealist thinker) spoke of his “*Phänomenologie des Geistes*” (1806): all the manifestations of what he labels as 'Geist', spirit, are the object of his phenomenology (which in fact encompasses the entire history of culture).

Edmund Husserl (1859/1938) uses the term in its meaning. He wanted an irrefutable foundation for all (possible) sciences, philosophy in the first place.

Four main propositions.

Bible st.: R. Kuhn, *Intentionale und materiale Phänomenologie*, in: Tijdschr. v. Philos. 54 (1992): 4 (Dec.), 693/714. -- Steller tries to summarize.

A.-- Phenomenology.

1.1.-- “To the matters themselves”. -- To the data themselves! To the matter under discussion itself. That is the great, all-encompassing motive that underpins Husserl and Husserlians.

To which the opponent raises the question: “What exists, exists by itself.” The small term 'zu' (towards) is superfluous! We have been confronted with the data itself from the very beginning. Something is given by itself: our step in its direction is superfluous.

1.2.-- Perception! “The principle of all principles”! In other words: insofar as something is directly perceived (1.1.), it is “a given”. This is: 'being'!

2.1.-- “Wieviel Schein jegdoch soviel Sein”.

This is how Heidegger articulates Husserl's position. This is: insofar as something reveals itself (for that is the correct meaning of 'Schein': the act of revealing itself), there is something, that being. Reality.

Opponents: “However, there is also apparent and actual being.” Both manifest themselves. But how to distinguish them without transcending the purely observing and thus phenomenological standpoint? More on that later.

2.2.-- “The more 'Reduktion'...

(Reduction, reduction to what is actually intended, elimination of the unintended), the more something is given”. The reduction refers to more than one point in what is directly perceived. -- More on that later.

EO121

Explanation. -- 'Reduction'.

Or perhaps 'Einklammerung' (bracketing) -- What exactly is Husserl methodically (not really simply) “bracketed”?

a. The eidetic reduction.

This is: Anything that is not the 'eidos' or 'essence' of the given is bracketed (Husserl acts as if it does not exist). He limits attention, in perception (direct perception, that is), to the pure 'eidos' or essence of the given.

Appl. model -- I see a girl playing on the beach there. -- The essence of the girl playing on the beach (as far as I see it, perceive it directly): that is intended.

Meanwhile, I pay no attention whatsoever to:

- 1.** the deeds on my part (I view myself as an act of experience, for example),
- 2.** my own self as seat of those deeds,
- 3.** the fact that that girl playing on the beach is something that exists independently of me, of my seeing

The latter requires a brief explanation: Husserl considers objects to be seen “as objects” (of being or of general (human) consciousness, precisely insofar as they are objects of being) consciously (in this case)). To the extent that I am aware that I see (directly perceive) that girl playing on the beach, that is as far as I concern myself with it as a phenomenologist: the rest does not interest me. In scholarly terms, this is called 'Gegenstandstheorie' (object theory), where 'Gegenstand' (object) is everything that is directly perceived.

b. The phenomenological reduction.

This is already present in No. 3 above: I am a 'phenomenologist' and thus I am interested only in the phenomenon (here: the girl playing on the beach) as a phenomenon, -- insofar as it manifests itself (to my consciousness), -- for the phenomenon as such. -- In which the primary role of “my/ (general)

consciousness” comes strongly to the fore, of course. It is a philosophy of consciousness ('conscientialism').

Explanation.-- Appearance/to be.

Joh. H. Lambert (1728/1777; *Neues Organon* (1764)) already spoke of the distinction between “the true” and “error or illusion”.

Appl. model.-- Tina Turner (actually: Anna Mae Bullock (1940/2023)) is, in 1993: 53, still “the wild Tina” (as she calls herself) and still relevant. In 1990 she toured Europe: three and a half million pop fans cheered! -- But Tina herself, privately, is a Buddhist, or rather a Baptist Buddhist.

EO122

The Ten Commandments, the core of the ethics of the Old and New Testaments, are the foundation of her life. So she says. But the Buddhist religion taught her the perception of 'soul regions', of which she had no prior inkling. Immediately, she developed “a spiritual consciousness”.

In that sense, she sings—every morning and every evening—a mantra (a magical-religious song characteristic of the Soka-Gakkai school). She attributes her profound compassion for her fellow man, which manifests in her performances, to Buddhism. So she says herself. But look: anyone who observes her directly—during her performances—risks never experiencing her inner conviction!

“Many believe that I am an unleashed savage. Or a sex-obsessed ripper. That is all nonsense! I am a real “My stage image (note: visual impression) has nothing to do with my private life. In reality, I am rather “old-fashioned.” Also in my morals. I emulate the real noble ladies: Thus Tina herself.

Conclusion . -- The mere description of the phenomenon, as briefly outlined above, is indeed “a true foundation” of science as well, but within the methods outlined previously, primarily the inductive ones. Whoever sees Tina Turner only in her public appearances sees only a single sample of the totality of what she truly is—and not merely in appearance.

Ontology is 'holistic', that is, the development of a sense of the whole. -- Whoever views Tina Turner as a pop star can therefore form an impression that is correct but restrictive, subject to further and closer examination of the whole Tina Turner.

In phenomenological terms: there are more than one perspectives on her. In the old language of induction: there are more than one samples in her reality.

Bible st.: Christiane Rebmann, *Interview (Einfach die Beste)*, in: *Cosmopolitan (Für die Frau)* 1993: 8 (August), 36/42.

Such 'unmaskings' of illusory realities are legion.

For example, G. Steiner, **In de burcht van blauwbaard** (*Some notes for a redefinition of the concept of 'culture'*), Amsterdam, Bakker, 1991-2.-- "A high degree of culture and barbarism seem to go together perfectly. This is how one could phrase one of Steiner's main theses. In the said work, he attempts to find an explanation for that barbarism.

EO123

The Foundations (123/125) We saw it: already the oldest thinkers of Hellas were 'phenomenologically minded'. Herodotus (Hist. 2:33): "From the known I conclude to the unknown. This is: from the immediately given to the indirectly given.

Anaxagoras of Klazomenai: "The seeing of invisible things (is to be situated in) the revealing things". Cf. EO 94.

The Greek rhetoricians

Those who study eloquence as the act of making a message gain acceptance knew an analogous distinction. -- When someone attempts to convince a fellow man with "proofs or indications", his first source is 'atechnos', those proofs that convince immediately without ('a-') reasoning ('-technos'). Think of a girl who is pregnant: anyone who knows a little about life sees immediately that she had sexual intercourse or allowed herself to be impregnated. The result is a symptom, and indeed a clear symptom.

But there is a step further: the second source is 'entechnos', proofs that only have a convincing effect through sometimes complex reasoning.

Conclusion . -- The human mind 'grounds' its propositions first and foremost through direct contact with reality. Not merely by chaining together judgments, one after another, as mathematics, logic, and logistics do. However

difficult direct perception may be, in its purity (provided with reductions or eliminations), it is nevertheless the basis.-- In this, Husserl is radically right.

Logically expressed.

There are introductory clauses that articulate direct contact with realities, finding them, if necessary, not merely passive but actively tested or at least testable. From these, one may derive logically strict concluding clauses.

The foundations of proceeding logically.

Bible st.: HJ Hampel, *Variabilität und Disziplinierung des Denkens*, Munich/Basel, 1967, 17/19 (*Die classical Logik als engeres Untersuchungsfeld*).

Steller summarizes the principal premises or axioms of traditional logic.

A .-- The laws of identity, contradiction, and the excluded third (EO 23/28).

B. The presupposition of necessary and sufficient reason or grounds (EO 63; 68).

We have clearly outlined them above.

But Hampel focuses on the justification of those axioms.

EO124

For—as Hampel states—the axioms in question are “not descriptive laws” but normative laws. That is to say, they impose rules on our behavior, if it is to be logically strict! How do the classical thinkers prove those laws or axioms?

He cites.

H. Dingler, *Das Prinzip der logicalen Unabhängigkeit in der Mathematik, zugleich als Einführung in die Axiomatik*, Munich, 1915.

Dingier says: “Indeed: evidently, I myself cannot in turn logically prove these foundations. After all, that proof would first presuppose the logic that still needs to be founded! In other words: whoever wants to prove is compelled to presuppose, without proof, the highest presuppositions of rigorous logical proof.”

From where, then, do the classics derive the certainty that those axioms are the correct ones? Not from “innate ideas” (as some moderns advocate—for,

if one wishes to prove so, one must first prove that innate ideas exist and that they are the correct ones (circulus vitiosus)).

Indeed, from a personal experience which, however pre-scientific and pre-logical, reveals a light that enlightens us (even though we cannot deduce that light and its enlightenment from pre-given preconditions). That is light metaphysics, at least since Plato.

Thinkers such as Wilhelm Dilthey (1833/1911; * *Einleitung in die Geisteswissenschaft* * (1883)) or Wilhelm Wundt (1832/1920; *Psycholoog* (*Logik* * (1880/1883)) attempt to derive validity from “immediate experience”. In more than one way, moreover.

In that direction E. May, *Am Abgründ des Relativismus* , Berlin, 1941. -- “When, for example, I perceive ('erlebe') 'red' in an experience and at the same time understand the meaning 'red', while I live through 'red', then I furthermore grasp in a lived manner that 'red' simply is (as a meaning known through experience) 'red' and that this 'red' is precisely that.

Thus, I intuitively grasp the principle of identity (the law of identity) in its compelling validity, even when my instantaneous empirical experience of 'red' owes its origin to an illusion. For the law of identity means nothing other than that “something coincides with itself” (Driesch), whereby it is irrelevant whether that something is experienced within an illusion or within reality regarding experience. —

EO125

What matters, in other words, is that the coinciding with itself—in its compelling, completely arbitrary-free validity—in conjunction with and at one with the original given, namely “I am experiencing something,” is also experienced.

In simpler terms: the decisive element is the fact that, when someone experiences 'something', some given, this is always accompanied by “whatever that something, that reality, is, that is that something” (the law of identity).

Whereupon the author concludes: “The first presupposition or axiom of logic is thus neither presupposed ‘with consciousness’ nor constructively ‘thought’ anywhere, but genuinely ‘perceived’ (note: intuitively grasped). The

latter means that it is so and even must be so, is grasped through experience (...)"

Steller thus excludes all conscientiousness (human or non-human consciousness creates the law of identity) and all constructivism (human or non-human mind constructs the law of identity from pre-existing materials). Leaving only this: each of us, as soon as he or she grasps something, grasps that something as an application of the all-encompassing or transcendental law of identity.

Note: May rightly adds: whether one invokes the law of identity, the axiom of the excluded middle, or the principle of contradiction (the primal dilemma), those three principles of logic are merely three formulations of one and the same primal experience, namely: we grasp the identity of something. That grasping precedes every (theoretically developed) logic. It is therefore 'pre-logical'. Logic places that primal perception and primal intuition at the forefront—in order to be able to start.

Note - The same can be said of the principle of necessary and sufficient reason or grounds.

If A, then B (in the Jevons-Lukasiewicz scheme). If A, i.e. the sufficient reason, then B, i.e. that which finds its sufficient reason in A and precisely thereby becomes understandable, sensible, non-absurd, 'rhymed' (not absurd).

It is not our creative consciousness that creates that principle. Our constructive mind does not create this principle proceeding from pre-given grounds. Our mind, our consciousness, establishes this principle as soon as we consciously perceive even the slightest thing.

That is immediately the (pre)logical basis of every phenomenology or representation of immediately grasped data.

EO126

17. Holistic ontology: phenomenal/ transphenomenal. (126/131).

It is therefore established: the first 'foundation' or 'presupposition' or 'reason' or 'ground' of our speaking and living is the immediately given.

As the ancients said: the visible (where 'seeing' stands for all forms of perception). Phenomenology, or the representation of phenomena, stands or falls with that principle.

But there is the transphenomenal.

That which is only indirectly attainable. Or, at least, not simply given immediately. Let us reflect on this.

Library st.:

-- IM Bochenski, OP, *Philosophical methods in modern science*, Utr./Antw., 77v. (What does 'verifiable' mean?);

-- K. Oehler, Uebers., Ch. S. Peirce, *Ueber die Klarheit unserer Gedanken*, Frankf.aM, 1968, fl. 105ff.;

-- E. Walther, Hrsg., Ch. S. Peirce, *Die Festigung der Ueberzeugung und other Schriften*, Baden - Baden, sd, vrl. 49ff..

A position on the matter.

Let us connect with someone who—more than a century ago—already clearly grasped our problem. Ant.-Augustin Cournot (1801/1877, in his *Matérialisme, vitalisme, rationalisme* (Etudes sur l'emploi des données de la science en philosophie), 1875.

Cournot is a typical 19th-century thinker for whom reason, la raison, is central, just as Western rationalism has maintained since the beginning of the modern era. Yet his 'rationalism' is restrictive. The reservation lies, on the one hand, in the vital, which is to be situated before reason (in other words, reason does not fall from the sky; there is a pre- or pre-rational grasping in man thanks to his vitality), and on the other hand, in the transrational, which surpasses reason (he situates that transrational in the domain of religions—in all that is called 'sacred' or 'divine').

The vital grasping of things and the transrational grasping of things are situated 'rationally' by a Cournot. In the land of Descartes, the rationalist par excellence, this is not surprising: the purely intellectual grasping by reason is central to this form of rationalism (EO 13). Strongly a priori oriented.

A second point of view. (126/129)

Bible st. B.C. Roche, *Hans Reichenbach*, in: D. Huisman, dir., *Dictionnaire des philosophes*, Paris, 1984, 2206/2208.

EO127

H. Reichenbach is one of the best-known figures of neo-positivism (= linguistic positivism, logical positivism) or logical empiricism.

This last title situates him within empiricist rationalism, which, in contrast to the 'intellectualist' or 'a priori' rationalists (Descartes), emphasizes 'empiricism' or sensory perception. In other words: reason, central to all rationalism, is reliable only insofar as it relies on sensory impressions.

Reichenbach therefore believes that “the philosophers”—Descartes, Spinoza, Kant (three rather a priori or intellectualist rationalists)—are already too far removed from the empirical method. Compare with EO 13, where Fr. Bacon already interprets “the close connection of experience and reason” experimentally.

Reichenbach's life partly explains his experimentalism.

In 1910/1911, he studied at the Technical University in Stuttgart. From 1917 to 1920, he headed a laboratory for radio technology. From 1920 to 1926, he was a Privatdozent at a higher technical school. In 1933, he defected to the Nazis and went to Istanbul. Later, he moved to Los Angeles (where he became a university professor).

Reichenbach's testing methods.

The list of methods reflects his empiricism.

All.-- Technical testing.

As an experimentalist, Reichenbach is difficult to convince. Yet when a technical method emerges to uncover reality—alètheia, truth—then he is persuaded. -- But in many cases, this method is impossible. Take, for example, the solar temperature in his time: as with every star of the type that the Sun represents, the solar temperature is very high (certainly in its core). Measuring it directly with an instrument—a technical method—is, for the time being, impossible.

A2.-- Physical (physical) testing.

As a true positivist who swears by the specialized sciences, led by physics, Reichenbach allows himself to be convinced when it can be proven that something aligns with “the hard laws of physics”.

Anyone who takes a sunbath will (physically speaking, certainly) get warm. Physical thermodynamics, constructed inductively (he was an inductivist: samples provide probability), teaches that if one is in the vicinity of a heat

source, heat develops around and within the body. A sunbath is a sample of this.

EO128

According to Reichenbach, samples—induction—yield only probabilities.

His professorship at the University of Berlin (1926/1933) in “scientific philosophy” reflects something similar. Philosophy is called 'scientific' insofar as it takes both the data and the presuppositions of mathematical natural science as its starting point. This type of science dates primarily from G. Galileo (1564/1642) with his concept of “exact science, connecting experiment and mathematics”.

A3.-- Logical testing.

Notwithstanding his highly empirical, indeed, experimental-mathematical approach, Reichenbach does not disdain rigorous, contradiction-free reasoning. In addition to 'material-tangible' proofs, the logical positivist also accepts logic, especially in its logistic (understand: following a mathematical model) or computational logic.

This, too, reflects his life: in 1928 he founded the *Gesellschaft für empirische Philosophie* (Berlin), a group that merged with the Ernst Mach Verein (based in Vienna since 1923) in 1929. Immediately, *Erkenntnis* emerged, a well-known philosophical journal, under the direction of Reichenbach and Rudolf Carnap (1891/1970; *Der logische Aufbau der Welt* (1928)).

This review works on an international scale on a “scientific philosophy” and involves the Polish school of logic (Warsaw/Lwow), with Alfred Tarski (1902/1983), a logician, in its publications.

B.-- Transempirical testing.

Father Bochenski says that Reichenbach gives the following example, namely the statement of a follower of a religious sect who claims “Cats are divine beings”.

Incidentally : such a belief is found in ancient Egypt. Moreover: 'sacred' or 'divine' animals appear frequently in the imaginative world of religions. Cf. H. Bouma, * *Het dier in de wereldgodsdiensten* *, Kampen, Kok, sd. Cf. EO 104 (Nahualism).

For a Reichenbach, it is abundantly clear: making such a thing true requires a proof *sui generis*, a proof of an inherent nature. The phenomenon, if it exists at all outside the minds of those who believe in it, is transempirical—transcending ordinary, earthly, highly material proofs (cf. Cournot's transrational).

EO129

Note : (129/130). Let us briefly touch upon that. -- People who, for example, believe in divine beings—animals, for instance—a. experience something and b. also reason. But in their own way.

a. Experienced.

Reread what we wrote about Nahualism: there is no getting around it! There are facts! Moreover: there is a convergence induction. Independent of one another, spread across the entire planet, people experience a structure that is virtually the same everywhere.

b. Reasoning.

Let us cite one author: Stephen Toulmin, *The Uses of Arguments* , Cambridge University Press, 1958.

Besides the strictly scientific, logistical, and/or experimental reasoning, there are the everyday ones. The majority of our reasoning never reaches the rigor of exact thinking (mathematics/experiment).

Yet we, scientists included in their daily lives, believe in its emptiness. One expects something (a good marriage between a mathematician and a biologist, for example); one concludes something because the same phenomenon has already occurred more than once (the biologist has gotten angry on several occasions; -- an induction); one moralizes the abuses of capitalism (our boss abuses us, -- says the mathematician, back from school where he teaches).

In all such cases, absolute certainty is unattainable (a limit approached but never reached). There is “a leap” between the antecedents and the consequent! -- Is that 'rational'? No, not in the strict sense of the scientific discipline! Is that 'irrational'? No, not in the absolute sense. The doctor who guesses regarding the cause of the ailment; the art critic who rejects a work - with arguments; the judges who convict someone -- with arguments. They all operate within the realm of ordinary argumentation.

Well then, so too those who believe in sacred things—cats as holy animals, for example—a. experience and b. reason.

Reichenbach must have sensed something like that when he briefly touched upon transempirical testing. From his extremely strict standpoint.

One need now reread EO 101, where operational induction is discussed. Reichenbach is not so far removed from PW Bridgman (The Logic of Modern Physics). One might find the one-sided exact stance too strict. But one thing is certain: Reichenbach and Bridgman demand hard science, and rightly so.

EO130

Some – extremely 'critical' – scientists and thinkers grasped very well what Reichenbach, as it were, left open regarding “unexplained phenomena”.

G. Le Rouge, *La mandragore magique*, Paris, Magerie, 1991,10, quotes (Pierre Simon, Marquis de) Laplace (1749/1827; mathematician/astronomer). Laplace was perhaps the coldest materialist of his time. But listen to what he says.

“We are so far removed from knowing the factors of nature and their various modes of operation that it would be hardly philosophical to deny such phenomena, merely because, in the current state of our understanding, we cannot explain them. But what is advisable is that we investigate them with an attention that is all the more keen the more difficult it is to accept such phenomena as real.”

In other words: Laplace is well aware of the limits of the exact science.

Expressed in plain language: both the presuppositions—for example, only that which is exactly verifiable is real—and the observations and reasoning in the wake of those presuppositions are merely inductive samples. This demonstrates their restrictive nature: they apply with reservations. Namely: other, equally valid presuppositions may well be possible. Anyone who does not accept these alternative presuppositions, on the grounds of absolutizing their own presuppositions, is downright dogmatic and falls into ideology instead of science.

For example: if materialist presuppositions fail to sufficiently explain paranormal and sacred phenomena, why, in the name of those (absoluted)

presuppositions, deny or conceal the phenomena—which happens regularly—instead of questioning one's own presuppositions?

Francois Arago (1786/1853), astronomer and physicist, collaborator of A.M. Ampère (1775/1836; physicist), once uttered the phrase: “He who, outside the domain of mathematics, utters the word 'impossible' lacks caution.”

That is to say: within some axiomatic-deductive mathematical system, one can dismiss something—a sentence, for example—as 'impossible' (ED 41). But, once outside of it, in the all-encompassing system of “all that is—however—real”, deeming something impossible—no matter how bizarre—is very risky.

EO131

General decision

Even supporters of “hard science”

- a** . admit that their practice has limits and
- b** . that there are phenomena which, if not temporarily then definitively, exceed the explanatory capacity of that limited science.

Expressed in terms of the object: a. there are phenomena; b.1. one does indeed get beyond those phenomena to a certain extent, through experimentation and calculation; b2. beyond those phenomena, however, one also gets through very personal experiences and reasoning, which one designates with terms such as 'magic' ('occultism'), 'mysticism', and, even generally, with 'sacred' ('religion').

Experimenting and calculating, one remains 'rational'; magically-mystical and sacred—religious—one enters the realm of—what many call—“the irrational”. A Cournot said 'transrational' and a Reichenbach said 'transempirical'.

In any case: transphenomenal. Insofar as 'phenomenon' means: Anything that a very large number of people, with or without scientific training, can observe and process through experimentation and calculation.

As soon as the average sensation and the exact (or as exact as possible) processing of that experience are insufficient, it becomes 'transphenomenal' in a second degree. Let us say: paranormal-transphenomenal.

Reality as findability and testability.

The three domains exhibit 'alètheia', truth, i.e., the revealing or exposing of what is.

a. The phenomenal because it suffices to observe it directly, at least in normal cases (for an insane person or even just a neurotically disturbed person may already have difficulties with phenomenal data).

b.1 The transphenomenal, insofar as it remains accessible to all who proceed experimentally—calculating ('exactly'), reveals itself—which is alètheia—to the great scientific community. Even if it imposes extremely strict requirements (Bridgman), it 'sees' the transphenomenal through the phenomena.

b.2 The transphenomenal, insofar as it is accessible only to a very limited number of observers and reasoners—let us call them 'gifted' (paranormally gifted, that is)—also manifests itself. But on a much more limited scale. Hence initiation concepts and the like.

In the three cases there is:

A. findability: the phenomena and what extends above them are 'found';

B. Testability: the same realities are 'tested'.

No matter how different!

EO132

18. Holistic ontology: the ABC theory. (132/137).

The 'truth' or “revealed reality” contains data regarding the subject as well as the object. In the language of the Enlightened rationalists—especially since the 18th century—these data are called 'prejudices', judgments or starting points (axioms) that are already at work for our (conscious) judgments.

The theory of interpretation or 'hermeneutics'

This is where it comes into play: the 'lens' through which we view, investigate, and fathom reality—including our own reality ('theoria') creates the 'color' (understand: the interpretation or meaning) of our own reality (and sometimes even decisively so).

The term 'projection' is applicable here: “the pot calling the kettle black”! That means: the pot, which blackens, 'projects' its own “blackening role” onto the kettle it has blackened itself. 'Projecting' here means: pushing one's own

reality away from oneself and having it drawn into another reality. --
Prejudices do that, at least partially.

A type of theory of interpretation or the science of interpretation is the – originally psychiatric – theory concerning the ABC structure of (neurotic) personality, – in short: “ABC theory of personality”.

Bible st.: A.Ellis / E. Sagarin, *Nymphomania (A study on the hypersexual woman)*, Amsterdam, 1965, 137ff..

This book provides both the rule (the theory that illuminates the facts) and applications (the facts of nymphomania).

Incidentally : a 'nymphomaniac' is a woman who is 'driven' from one man to another.

Features:

- a. radical lack of self-control (“If the urge comes on, I must satisfy it quickly”);
- b. insatiability (“I constantly have to get into bed”);
- c. compulsiveness ('compulsivity': “Even if I wanted to: I cannot control it”);
- d . self-contempt (“I am a slut, after all”).

Behold the fact.

The requested or sought: an explanation (= the necessary and sufficient conditions or – better – presuppositions, which make a 'theory' understandable that sheds light on the facts, – reveals their 'truth').

The structure (comprehensive unit) of ABC theory.

This can be condensed into a basic schedule.

'A' is something to be processed—good news, for example. Psychiatrically, 'A' is of course some kind of difficult-to-digest fact—such as a romantic disappointment. 'A' acts as a stimulus.

EO133

'B' amounts to the set of presuppositions—idiosyncratic, orthodox, preference-minded, and/or scientific (as Peirce sees them: EO 119)—that, inevitably, also influence the processing of the data ('A').

'C' is the final reaction or interpretation,-- the final answer to the given ('A').

The schema is a cognitive enrichment of the overly simplistic “stimulus (A)/response (C)” schema, which lacks the middle term 'B' linked to the subject (the lens through which the subject views things).

Typology.

Stellers—Ellis and Sagarin, psychologists/psychiatrists—distinguish two main types in their recovery work regarding the inner life, albeit based on ambiguity. Specifically: the same A (fact) can evoke a plurality of BC (prepositions / answers).

1. Common sense. -

Note: the term “common sense” (“sens commun” (Fr.), 'commonsense' (Eng.), „gemeiner Menschenverstand” (Dt)) means something else (namely, everything that the average representative of a community thinks).

Stellers introduce the term “common sense” as follows: -- “At point A, I experienced something that I will never forget. E.g., a painful miscalculation. But, at point B, I say: “I can process the painful miscalculation. I will always regret A, though. But I can process it, -- bear it.” Result: at point C, I experience tempered (completely controlled) feelings of disappointment, regret, -- annoyance. Nothing more.”

2.-- The neurosis.

Or rather: the neurotic mind. -- “In A, I experienced something that I can never forget. At B, I say to myself: “I cannot possibly bear something like that: it is so terrible. Something like that makes me a worthless person.” At C, I fall into fierce, unbearable 'emotions' (mood swings), -- sorrow, despondency ('depression'), -- anger, hostility, -- lament ('melodrama').

Ellis/Sagarin literally say: “At point B, the neurotic is deluding herself.”

Conclusion . -- Not reality (the miscalculation A) alone (= necessary but insufficient condition or stimulus) but the usually ill-considered (hiding, concealed and therefore 'untrue' assumptions (B) give rise to the neurosis (C).

EO134

The ABC theory makes sense.

Classically understood logic or theory of thought is the theory of reasoning: “if ..., then ...”.

In the terms of Jevons-Lukasiewicz, the ABC structure reads as follows: “If A and B, then C. Well, C. Therefore A and B”.

Explanation: “if A and B, then C” is the hypothesis, in Platonic terms (the presupposed reasoning); “now, C” is the established interpretation (common sense or neurotic), the ultimate form of behavior; “thus “(to understand C, to make it understandable, to 'explain' it) (we conclude, logically, to the presuppositions) A and B”.

Let us reread EO 96. -- The reasoning above is a reductive reasoning (“If A, then B. Well, B. Therefore A”), specifically the inductive type thereof, namely a generalization. For “if A and B, then C” is the general (pre-established) rule or law, while the determination-and-explanation-of-that-determination “well, C; therefore A and B” is an application thereof that sets the way toward generalization.

We do say “sets in motion”, because reductive or backward reasoning is restrictive, that is, subject to further samples with confirmatory value ('verification', to use Karl Popper's terminology).

Another model.

Bible st.: Lea Marcou , *Le goût (Une affaire d'apprentissage)*, in: Que choisir/ Santé (Paris) 1991 : Janv., 18/21.

Nicole says that she feels “an invincible aversion to tripe.” Upon closer analysis—anamnesis (ED 52 (65;117)), ordered memory—it turns out that the disgust dates from “that time when she became ill from it a few hours after having eaten it.” In other words: miscalculations, however small (a tripe stomach is no big deal!), 'mark' the soul and form a 'B' in the soul (a presupposition, which is the result of an experience).

Sociologists and psychologists demonstrate that, for example, our taste preferences and dislikes are influenced by:

- a.** (psychological) our personality (of which an example will follow shortly),
- b.** (sociological) our family,
- c.** (cultural) our entire culture.

Model . -- Psychological: Monique, a young woman, says: “I have always been disgusted by veal sweetbreads, kidneys, brains. Anything that is the inside of a body and directly evokes the animal.” Here the 'B' apparently comes from the unconscious or subconscious life of the soul: “always.” Or perhaps

our Monique has forgotten the 'traumatizing' event from, for example, her childhood.

EO135

Incorrect induction.

Note Nicole's behavior—after she became sick of tripe. From that single sample, she generalizes to all possible tripe! Her fundamentally 'irrational' (meaning: logically indefensible) behavior is based on induction but with a disregard for its restrictive nature: that one time does not mean all (possible) times.

The Latins called this with a saying: “Ab uno disce omnes” (based on one case, know all cases).

Such irrational induction happens frequently: for example, someone has had an “unpleasant experience” with a teacher once, and from then on, “all teachers have been screwed over”!

Or conversely: one has done business with a merchant once and from then on places unconditional trust in him for all future cases. In this latter case, this is called 'naive' trust. After all, the fact that a merchant acts conscientiously once does not mean that he deserves trust “unconditionally” (meaning: for all subsequent cases).

Note-- The terms “sound or neurotic mind”.

'Understanding' here means “applied logic.” Indeed: the mind or understanding of a non-neurotic person is exactly the same as that of a neurotic person. But the B, the presuppositions upon which the reasoning capacity of both proceeds, differ.

'Reasoning' is pure logic or the theory of thought. 'Prioritizing' is applying the theory of thought or logic.

The logic applied in the projection.

EO 132. -- Nicole 'projects exactly one experience or sample into all subsequent cases! One sees that projection also involves the application of reasoning (logic)! And indeed, a false generalization is its core.

The term 'B' as a mentality.

You hear it regularly: “That won't sink in with her. Her mentality is different.”

In 1960, the expert on the Middle Ages Georges Duby introduced the term 'mental history' into circulation in an article: *Histoire des mentalités*, in: Ch. Samaran, ed., *L'histoire et ses méthodes*, Paris, Pléiade, 1960, 937/966.

This is comparable to concepts such as the history of ideas or the drama of ideas (where it should be noted that the term 'idea' is used here purely epistemologically (concept, notion) and not Platonically (objective structure)).

EO 136

One can, indeed, call the presuppositions (in the mind) - B - “the mentality”. The final interpretation scheme then becomes: A (the given) is interpreted (C) via the mentality (B).

B. The (secret) presuppositions: transphenomenal.

Professor de Waelhens, an expert on phenomenological movements at the time, once said that every phenomenologist offered his individual interpretation of phenomenology.

This fact proves our thesis: the given, A, only becomes an interpretation C through the 'lens' of subject-bound presuppositions (traditions, established theories, mentalities of all kinds).

But this draws attention to the restrictive nature of pure phenomenology! The secret presuppositions B remain all too hidden. They are not 'phenomena': they do not reveal themselves. The eidetic and phenomenological reductions (EO 121) are compromised as sources of truth if it is true that the phenomenon itself is already transphenomenally 'corrupted' by prejudices; without the phenomenological subject realizing this. The phenomenological description of “all that reveals itself immediately” is restrictively valid, i.e., subject to further, if necessary non-phenomenological, contacts with reality.

Did Parmenides himself not already say: “Being exists according to itself” (“kath 'heauto”)”? (EO 03). In itself it exists according to itself, but as a 'phenomenon' it is perhaps already perceived according to the subject rather than “according to itself”!

Note : This explains why even the oldest Greek thinkers sought a 'hetairos', a fellow thinker, and why Socrates and Platon dialogued in his footsteps to jointly arrive at the full truth concerning being, reality.

That same reservation explains why Plato wrote 'aporetic' dialogues— dialogues that end in a state of not knowing: one has engaged in dialogue and yet retains reservations regarding the result. To such an extent, one realizes that one attains being-in-itself only as a phenomenon-for-a-subject, and not merely and purely “in itself, according to itself”.

Ideology

Bible st.: J. Servieu, *L'ideologie*, PUF, 1982.

In the current sense, an 'ideology' is a system of ideas that wholly or partially control a community—rather with the aim of subjugating a community as much as possible. This is done without sufficient rational grounds: that is, therefore, a B, a pair of glasses!

EO137

19- Holistic ontology: axiomatics. (137/142).

Let us begin with dating. -- Hippocrates of Chios lived -470/-400. Plato lived -427/-347. -- Now, Hippocrates already wrote a book on mathematics, *Stoicheia geometries* (Elementa geometriae, Elements of Geometry). In doing so, together with other later mathematicians, he anticipated the very famous Euclid of Alexandria (-323/-283), who also wrote *Stoicheia geometrias*.

The fact that the mathematics of that time had already adopted the axiomatic-deductive structure is evident from the fact that, for example, Platon (and later Aristotle) refers to the mathematics of that time as an axiomatic-deductive science.

Platon's 'sunthesis' (deduction), for example, is a model from the hypothetical method of those days (EO 73ff.). From presupposed concepts and judgments, one deduces theorems according to strict logical rules. “Mathematicians proceed from certain principles ('archai'), unproven theorems, which they regard as evident and irreducible and of which they therefore believe they need not give an account. When they—by the way of 'analysis' (reductive reasoning)—seek the 'elements' ('stoicheia')—presupposed elements—of a certain proposition, they come to a standstill at those same 'principles' and search no further! (E. De Strycker, *Beknopte geschiedenis van de Antieke filosofie*, Antwerp, 1967, 104). -- We now call those principles or 'elements' 'axiomata', basic presuppositions.

Aristotle of Stageira (-384/-322), Plato's most brilliant pupil, even clearly formulated the structure of the axiomatic-deductive method.

EW Beth, *The Philosophy of Mathematics (From Parmenides to Bolzano)*, Antwerp Nijmegen, 1944, 63ff., summarizes as follows.

1.-- a. All propositions (statements) of a deductive nature relate to a specific area of reality.

Note : Beth forgets that “real objects” can be understood in a purely ontological sense, such as the signs of mathematics or logistics (which are purely ontological 'things', realities); shortly we will see the reality “positive integer” according to Peano's axioms).

EO138

b . All statements of a deductive system are 'true'.

Note : Beth forgets that 'true' can be understood in the ancient sense of “reality exposed”: 'a.lethes' (revealed) is all that is laid bare before the gaze, the eye, of our mind. Whether that be a fiction or a dream or the operations of mathematics or a cultural system, is of no importance: reality, in any case, “is laid bare” (apokalupsis).

a . If some theorem belongs to the axiomatic-deductive system, then some theorem that follows logically strictly from the theorem (deduction, 'sunthesis', derived theorem) also belongs to the system.

Note : This clearly articulates the deductive nature of such a set of propositions.

b.1 . A finite number of terms (basic concepts) whose meaning requires no further explanation are stated upfront.

Note -- Just now it was said: “unproven propositions” (EO 137).

A finite number of propositions—postulates or axioms—whose 'truth' (revealed reality) is evident, is posited. -- Now follows the complement of the dichotomy.

b.2. The meaning of all other terms can be defined using the finite number of presupposed terms. -- all other theorems are deducible (= logically strictly differentiable) from the finite number of presupposed theorems (axioms, postulates).

As Beth very rightly observes: with these sentences, stoicheiosis (EO 52; 54) or factor analysis is very clearly articulated. An axiomatic-deductive text is a system, i.e., a collection of mutually independent (distinguished) data that refer to one another (indivisible). Let us think of the system of letters of an alphabet.

The axiomatic induction.

'Induction' is, first of all, one or more samples from a totality (collection: specimens; system: parts).

By stating very sharply, Aristotle says: “a finite number of terms and an equally finite number of basic theorems,” he insinuates that one chooses from a totality that exceeds that finite number.

Since the time of the ancient mathematicians, the West has discovered that logical deductions can be performed from any system of clauses.

Scheme : if A, then B; well, A; therefore B – we have a suitable instrument to, for example, accurately (with akribeia) verify the reality value of the 'B' in the ABC structure (EO 132). Which we will now elaborate on further.

EO139

Suppose: someone with the spirit of God, in the traditional Biblical sense, collects all possible presuppositions that articulate, in addition to all factual ones, all possible presuppositions. This would constitute a gigantic collection.

Well, anyone who proceeds axiomatically-deductively takes from that totality only a part, “a finite number” (says Aristotle). Such a thing is merely a single sample, a characteristic of the inductive method.

We call this axiomatic induction: every finite number of presuppositions—axioms—limits itself to all that can be revealed regarding “a region of reality” thanks to those axioms. The axioms, finite in number, provide a grasp of total reality, albeit a very limited grasp. The axioms are the 'lens' through which a domain of reality is viewed.

Axiomatics and ABC – structure of interpretation.

The Eleate Zenon of Elea (c. -500) - according to Aristotle - realized that neither the propositions of his teacher Parmenides nor those of his opponents were sufficiently probative. Hence his slogan: “You, opponent, just as I, proponent, cannot conclusively prove what you assert.” Neither party had 'apodictic' but only 'dialectical' (in Aristotelian terms: probable) arguments to support their claims.

Now, every axiomatics, by presupposing a finite number of axioms, limits its scope regarding the domain to which it applies to a single sample. It expresses this in a system of “true (revealing) propositions”. This system provides a grasp of reality, but an axiomatically limited grasp.

We saw that the ABC structure was: A as “the domain of reality”; B as “the presuppositions of the one engaging with that domain”, C as the (ultimate) interpretation.

A finite number of axioms amounts to the B in the ABC structure: it is the 'lens' through which an area of reality is viewed.

Conclusion : One axiomatic deducer may say to another axiomatic deducer: “You—with your finite number of axioms—know no more than I—with my finite number of axioms—know everything about the domain of reality.” This is the lesson that leads to humility. And to dialogue. In dialogue, humble people with different viewpoints come together.

EO140

Applicative model.

We will now give a brief example of axiomatics. First, however, this.

The current chapter is titled “holistic ontology”. Indeed: the “phenomenal/transphenomenal” distinction is also addressed here. The axioms that Giuseppe Peano (1858/1932; Italian logician, mathematician, linguist) puts forward to define the positive integer reveal the phenomenon, the positive integer, but, without changing at least one axiom, that “finite number” of axioms remains blind to the transphenomenal domain of numbers that are not integer, positive numbers.

In terms of ABC theory: A is the domain of positive integers ('phenomenon'; 'original'); B is the finite number of axioms; C is the system of theorems that make up the axioms. Whereby B and C constitute the 'model' that provides information about A. Or: Peano speaks of the positive integers in terms of his axioms and the theorems derived from them.

Library st.:

-- W. C. Salmon, *Logic*, Englewood Cliffs, NJ, Prentice-Hall, 1963, 18/52 (Deduction);

-- A. Virieux-Reymond, *L'épistémologie*, PUF, 1966, 48/52 (La méthode axiomatique);

-- C.-I. Lewis, *La logique et la méthode mathématique*, in: *Revue de Métaphysique et de Morale* 29 (1922): 4 (oct.--dec.) 458/460.

Note how Peano prioritizes both initial concepts and initial judgments. The basic sentences are provided immediately.

1.-- Harmonological and logical terms.

Peano introduces: (harmological "member of" (= "element of"); 'class' (logical set);-- (logical) 'encompass' ('implication': if..., then...; - which amounts to total or partial identity (EO 23ff.)) With this, there is a minimal "harmological-logical syntax": expressions and deductions have minimal rules).

2.-- Mathematical terms and basic theorems.

This section splits into two parts. -- Purely basic mathematical terms: number, zero, and successor.

2.A.-- The species name or class "integer positive number".

The axioms.

a .-- (Integer positive) number is a class (logical set).

b .-- Zero - 0 - is one member of that class.

c .-- If a is a number (= member of the class), then a^+ , the successor of a, is also a number. -- For example: $0^+ = 1$; $1^+ = 2$.

EO141

d.-- If s is a class of which 0 (zero) is a member and if every member ("exactly one") within the class s has a successor, then every number ("all numbers") is a member of s.

Such an axiom is called “mathematical induction”. Indeed: every member of the class “positive integers” is exactly one sample that can be generalized to all possible samples.

e.-- If a and b are numbers and if the successor of a is identical to the successor of b , then a is identical to b .

In other words: by axiomatic definition, two different numbers cannot possibly have the same successor.

f.-- Every number has a successor that differs from 0 (zero).

This limits the sequence of numbers to 0 and all successors in the path of 0. Which is only possible for positive numbers.

2.B.-- The operations within the class.

We note that three basic concepts of a mathematical nature are regularly used. Namely: number, zero (0) and successor of number (0+, 1+, 2+, etc.). These 'expressions' belong to logical syntax.

a sum. If a is a number, then $a + 0 = a$.

b .-- sum. -- If a and b are numbers, then $a + b+ = (a + b)+$. In other words: $a +$ the successor of b is equal to the successor of $a + b$.

c.-- multiplication (product). -- If a is a number, then $ax\ 0 = 0$.

d .-- multiplication.-- If a and b are numbers, then $ax^2 + b +$ (the successor of b) $= (ax^2) + a$.-- One can also write: $ax^2 (b + 1) = (ax^2) + a$.-- For example: $3 \times (4 + 1) = (3 \times 4) + 3$ (which gives 15 in two ways).

Axiomatics is the definition of concepts.

Reread EO 08 (Content/scope of a concept). -- The smaller the content, the larger the scope. -- We see this from axiom 2. From: drop this axiom—i.e., reduce the content—and you will see that the scope, provided new axioms are introduced, increases. For in this way, for example, $-1+$ (the successor of -1) can be introduced, which has 0 as a successor.

In other words: the negative integers come into view (become a 'phenomenon'). Which is an enormous expansion of the scope or realm of reality. Through this new finite number of axioms, our mind now 'sees' things that lie outside the realm of positive numbers. To which it was previously 'blind'.

Stoicheiosis (factor analysis).

In ancient language, the terms and axioms above are called “ta stoicheia”, the elements, or “hai archai”, the prepositions ('principles') of the positive integer. See EO 01, 31, 67).

Note : Virieux-Reymond emphasizes a few features of axiomatics.

a.1.-- System character.

The mutually independent (= distinguishable) basic concepts and basic judgments form a coherence such that one or more of them also presupposes all others (= complement).

a.2.-- Consistency (lack of logical contradiction).

The system has no contradictions regarding concepts and theorems (both the axioms and the derived, deduced theorems). Otherwise, there is no system.

b.1.-- Completeness.

If one of two propositions formulated flawlessly according to the system is provable, then there is 'completeness'.

b.2.-- Decidability. -- If the system is both consistent and complete, then of two opposing statements, one and only one is provable. In that case, the system is called 'decidable'.

Although these basic characteristics of axiomatics are not applicable here, it is nevertheless good to briefly note these concepts: they clarify the thoroughly logical character.

Axiomatics and science.

We speak of “axiomatic-deductive sciences” and “other sciences”. Fine. But take note: whether a scientist explicitly or mostly implicitly states the axioms of his field is fundamentally not that important. For in any case, he proceeds axiomatically and deductively.

1. As Aristotle (EO 137) noted: every science has a certain area of total reality as its object (axioms have this too).

2. In principle, all propositions of a science are true (revelation of reality) (which an abductive system also exhibits).

3. Every science possesses a finite number of basic concepts and basic judgments (axioms) (= deductive system).

4. Every science presents propositions that are derived from basic concepts and judgments according to strict logical rules (= deductive system).

Conclusion . -- Whether he likes it or not: the scientist, in the strict sense, proceeds axiomatically and deductively. If he does not, his text exhibits gaps and even contradictions (in other words: he is not scientific).

EO143

20. Holistic ontology: the fellow man. (143/

'Holistic' means "All that concerns the whole (the totality: collection and/or system)".

In an ontological sense: "All that concerns the totality of reality ("being")" (EO 116). Ontology is essentially 'holistic', a theory concerning the totality of reality. 'Panta', all beings (all that is anything at all),-- "All that was, is, will be": that is what occupies the ontologist, as an ontologist.

Inductive

'Inductive' means "anything that, by means of samples from a reality, seeks to know that same whole reality" (EO 93). A collection is known thanks to at least one instance (sample); a system is known thanks to at least one component (subsystem) (sample).

To conclude from at least one instance ('element') to the entire set is called "generalizing induction"; to conclude from at least one part or subsystem to the entire system or structure is called "generalizing induction" (one attempts to gain insight into the entire system by pushing through from a part to the 'overall' system). We viewed this as the two types of 'stoicheiosis'. (EO 94/95).

EO 120/125.

The step that the 'phenomenologist' takes in (general and/or total) reality is very limited: his 'sample' is "All that is phenomenon (directly, immediately given)."

EO 126/131.

The step into the transphenomenal entails samples that concern data or realities that are not immediately observable.

Incidentally : just like the phenomenologist, so too is the transphenomenologist! Whether one tests technically, physically, logically, or transempirically (Hans Reichenbach), one obtains only samples of the total being. What is the reason for this? It lies in the structure of our knowledge.

We examined this structure in two steps.

1.-- 132/136. -- The ABC theory of perception (grasping reality) teaches us that, because we proceed from presuppositions (B), we obtain only a sample insight (C) of reality (A). Nothing more.

2.-- 137/ 142. -- Axiomatic ontology teaches us that every finite number of axioms (note the B or axioms) grants access only to an equally finite domain of reality. As a model, we provided Peano's axiomatics regarding the positive integer (the domain).

EO144

In other words: reality becomes a 'phenomenon', accessible to our mind, only insofar as that same mind carries within itself the corresponding presuppositions (axioms) – called B.

Or again: of A, the brutal, unprocessed reality, we understand, in the light of some very small number of axioms, B merely “the domain” that becomes a 'phenomenon' thanks to those same 'axioms'. Which we explained in EO 137—based on Aristotle's conception of axiomatic-deductive thinking. What is revealed in C, i.e., that which we say about A, the unprocessed reality, is not simply A, but A insofar as seen, 'drawn bare' (a.letheia, apokalupsis), thanks to B, the presuppositions.

Conclusion . -- C, that which we express in true sentences, comes down time and again to a sample. The rest of A, the total reality is transphenomenal, situated beyond the boundaries of our mind's eye.

Let us now turn to the presuppositions or axioms that determine our knowledge of our fellow man—called by phenomenologists the “alter ego”, “the other self”.

Technically expressed: A is now the fellow human being as he/she is in itself, unprocessed. B is the small number of presuppositions that grants us access to (the true sentences about) the fellow human being (who, viewed in

this way, constitutes “the domain” of our gaze). C is then what we say about A, seen through B.

A.-- The gaze of the common sense. (144/147)

Bible st. : Ch. Lahr, *Cours de philosophie*, I, Psychology, Paris, 1933-27, 488/490, 230 (Bon sens),-- 230, 641, 710 (Sens commun).

Let us pay close attention, with Ch. Lahr: the terms “common sense” and “common sense” do not cover the same meaning.

“Common sense” is, for example, “the intellect of man insofar as it judges something without clouding its judgment”. “Common (or shared) sense” is, for example, “the intellect of some group insofar as it arrives at a small number of propositions concerning some reality, accepted by the vast majority of that group”.

Common sense is a matter of epistemology (theory of knowledge). Common sense is a sociological or community-theoretical phenomenon.

EO145

'Commonsenism'.

Let us summarize the essence of the philosophy of common sense.

It begins with Claude Buffier, SJ (1661/1737; *Traité des premières vérités*, Paris, 1717). In it, this French Jesuit corrects the position of R. Descartes (1596/1650; *Discours de la méthode* (1637)), which he considered too narrow. As a modern rationalist, Descartes proceeded from “le sens intime” (that which each of us perceives inwardly). This purely inner perception had the greatest difficulty in 'proving', for example, the existence of “the external world” (in which the fellow man or “the alter ego” naturally situates himself) (i.e., making it true rationally, i.e., scientifically irrefutable, from the perspective of the sens intime (or the consciousness life intended solely for the inner life of the soul)).

For the modern, rational-thinking person, we are all, each individually, radically trapped in our inner little world or “subjective consciousness.” Therefore, Cl. Buffier adds to this “sens intime” what he calls “le sens commun” or “common perception.” In this way, he arrives at “vérités premières”: basic truths (axioms) that derive not only from “le sens intime” but also from “le sens commun.”

One of those axioms, inherent to common sense, is: besides our inwardly conscious world, there exists an extramental world or 'outer world'. In that outer world, there are fellow human beings. Fellow human beings, for example, “with authority” (the argument from authority – EO 115 – stands or falls with such presuppositions).

“Philosophy of the commons” in the stricter sense begins in Scotland—hence “Scottish philosophy”—with Thomas Reid (1710/1796) and his *An Inquiry into the Human Mind on the Principles of Common Sense* (1761). Following in his footsteps are: J. Beattie, D. Stewart, Th. Brown, J. Macintosh, and others.

They further elaborate on the basic intuitions of Cl. Buffier, emphasizing that “the common sense” is present in all people, either latently or explicitly.

In other words: common sense would, according to them, be a universal characteristic. At least where common sense prevails over deviant forms of thinking.

But take note: the Scots are not naive! In what passes for a “universal mentality,” commonsense thinkers distinguish two layers.

EO146

a. A truly universal section

(such as the conviction that an outside world truly exists, to a very high degree independent of ourselves, such as that each of us, if sufficiently normal, possesses a dose of freedom).

Incidentally : this universal or quasi-universal element also appears in ancient Greek rhetoric under the name 'eikos'. 'Eikos', literally: “that which resembles it”, means, in that context, “anything that seems 'evident' to the great mass of people”.

b. A private section.

As an example of this, Lahr gives the opinion, held up to Copernicus (1473/1543; founder of heliocentrism) and others, that the sun revolves around the earth. Something that is—purely phenomenally (phenomenologically)—correct! But which is based on an optical illusion, for—on closer inspection, i.e., starting from another small number of axioms (called

'heliocentrism')—it turns out that we, standing on the earth, are the ones who are rotating!

Scientifically speaking, therefore, a number of ill-considered, unexamined, and untested insights or impressions belong to “common sense,” which can be branded as 'prejudices.' An attempt has been made to compile a kind of list of “vérités premières”—basic insights inherent to common sense.

Let us touch upon that briefly. -- Among the fundamental truths are:

(i) mental facts or realities: acts such as “I hope Mieke comes” (hoping is such a psychological act); states such as “When he is in the house, I don't feel very well” (not feeling very well is such a mental or soul state);

Furthermore: the reality of the 'I' that remains identical (one also says 'substantial') throughout all acts and/or states; “After all, I am the same person from twenty years ago, although I have changed a lot”;

Furthermore: the reality of what was sufficiently clearly perceived (“We very actually saw flying saucers in the vicinity of Liège”) or of what was sufficiently clearly remembered “It is as if I experienced it only yesterday”;

Likewise, for example, “Green color differs from lilac” (if observed and remembered sufficiently clearly) or “Two plus three is five” (after sufficiently clear instruction);

(ii) extramental realities: fellow human beings; indeed, their inner life insofar as this “inner life” shines through their outwardly observable behavior in a sufficiently clear manner: “He turned white with rage!”.

EO147

Conclusion . -- The step from inner perception, Descartes' style, to 'common' experience, Buffier or Reid's style, signifies an increase in contact with the totality of reality. For Descartes' presuppositions, common experience is transphenomenal.

It is therefore not surprising that so much energy was spent on 'proving', in a 'rational' manner, the existence of an external world or the existence of another self ("alter ego").

In other words: the so-called 'outside world' and, immediately, in their own way, every fellow human being are not immediately available realities to the narrow consciousness, which has become entangled in its own 'autism' and enclosure. Rather, they are available indirectly, via a very sophisticated reasoning mechanism!

Note : When the average person learns that so-called scholars struggle to make the actual existence of the world around us 'true' (revealed) through ingenious reasoning, they shake their heads in pity. After all, they proceed from the common consciousness of reality.

Note : What logical-epistemological value can then still be attached to the 'proofs' of the critical-rationalists regarding the external world and fellow man? For this, we refer to EW Beth, *De wijsbegeerte der wiskunde* (Van Parmenides tot Bolzano), Antwerp/Nijmegen, 1944, 78/92 (Eristics and sepsis).

From Zenon of Elea (c. -500) through Gorgias of Leontinoi (-480/-375; one of the greatest Protosophists) to the school of the Megarians (Euclid of Megare and Euboulides of Miletus), one sees the origin and development of what is called 'eristics'.

'Eris' means 'dispute (conversation)'. -- "Hè eristike technè" therefore means "the skill of conducting discussions". Platon uses the term *Soph.* 231e (*Sph.* 225c), for example.

Beth speaks of 'hair-splitting' (oc, 79), which on the one hand have caused 'bad blood' among many, but on the other hand sometimes possess a profound logical-epistemological depth. In other words: even though the concern to 'prove' the actual existence of the outside world and of one's fellow man may seem bizarre, one should not simply dismiss such reasoning: quite a few logical fallacies are exposed when one follows eristics closely. It is sometimes an ideal way to learn to think 'critically', even about the most obvious 'truths' of everyone's daily life.

EO148

B.-- The indirect (mediatism) and the direct (immediatism) method. (148/152)

Library st.:

-- Ch. Lahr, *Logique*, 547 (*L'esprit de finesse et l'esprit de géographie* ; -- id., *Psychologie*, 113/119 (*Le médiatisme*), 119/124 (*L'immediatisme*);

-- IM Bochenski, *Philosophical Methods in Modern Science*, Utr./Antwerp, 1961, 25/26 (Classification).

Note: Lahr, as a Frenchman, connects with Blaise Pascal (1623/1662; *De l'esprit géométrique* (1654)).

1. Perceptual acuity - la finesse -

perceives data—reality—“from a single view”, all at once. If that which is grasped 'all at once' as given reality appears too uncertain, then keen observation, **la finesse**, adheres to the most probable, i.e., to approximate intuitions (perceptions). In the latter case, the 'observation' guesses, presupposes—if necessary, by guessing! In other words: hypotheses—guessing explanations—spring from “la finesse”.

Incidentally: this bears a striking resemblance to what Ch. S. Peirce calls 'abduction' (hypothesis guessing).

2. The reasoning mind - “l'esprit géométrique”

However, it comes down to “rational thinking” that is revealed in those things. 'Deducing' is typical—according to Lahr—of the 'geometric' mind. The principle of sufficient reason or ground plays a leading role here. -- Compare with Platon's 'sunthesis' (deduction) and 'analsis' (reduction), both of which also presuppose a necessary and sufficient reason.

Conclusion -- Sharp observation is a direct grasping of reality, whereas the reasoning mind is an indirect grasping of a (suspected) reality that one arrives at fully through reasoning.

Note: Following in Pascal's footsteps, Lahr argues that only both forms of knowledge together constitute “true knowing”.

Father Bochenski's opinion.

Instead of 'finesse' and 'geometry', Bochenski speaks of knowing 'directly' and 'indirectly'.

(A).-- Direct knowledge. (148/149).

According to Bochenski, directness manifests itself in two aspects. -- Direct knowledge—such as Husserlian phenomenology (EO 120/125)—is always “spiritual contemplation.” Understand: our mind 'contemplates' (intuitively) the grasped reality. For instance, when I see a hare running. I grasp, with my mind, immediately ('directly'), without an intermediary (which

would be 'medial'), the hare in its running. Immediately, the concept of “running hare” arises in my mind.

EO149

Note : The phenomenology of Edm. Husserl (and following in his footsteps of all that is called 'phenomenologist') stands or falls with at least one direct relationship between knowing subject and known object, namely intentionality.

'Intentionality' means that each of us is “oriented towards the world” in which we situate ourselves. 'World' means “the totality of all possible objects of our knowledge, which naturally situate themselves within that one world towards which our consciousness is directed. Were that world not given to us immediately—directly, without intermediaries—then we would be “circulating in our own subjective little world” when we see a hare running; then we would only 'perceive' a kind of mental product that resembles or is related to a running hare, and not the objective hare independent of our mental life.

Incidentally : do not confuse the general 'intentionality' or 'direction' of every conscious act of our life with the very specific 'intention' or 'purpose' ('intended-ness') inherent in our acts of will! The latter are merely one kind of 'intentionality' of conscious life.

The first aspect of direct or immediate perception is the contemplation (= directly grasping) of our mind (“spiritual contemplation”).

The second aspect—according to Father Bochenski—is the rendering, in the form of a description (which may occasionally take the form of a story when dealing with diachronic or temporal phenomena), of the spiritually perceived.

Note : Such a representation or description can, if necessary, take the form of what is now called 'model-making': whether or not via a computer, one “represents as exactly as possible” what one 'contemplates' ('sees', 'grasps') with the mind. Consider a geographer's map that 'represents' ('describes') on paper what he mentally contemplates, namely a natural and/or cultural landscape. In that case, the map is a model (that provides information about the original). Consider a signpost: it represents what a connoisseur of the landscape has observed regarding the path to follow in a landscape. If the map

was a model of likeness (metaphorical), then the signpost is a model of coherence (metonymic).

One could also say that the map is a metaphorical sign and the signpost a metonymic sign which the spiritual observer uses to represent that which is observed.

EO150

(B).-- Indirect knowledge. (15/152)

Bochenski classifies the classical forms of reasoning as indirect or mediate forms of knowledge. Within these, he distinguishes two main types. Following in the footsteps of William Stanley Jevons (1835/1882; *The Principles of Science* (1874), a treatise on logic) and especially Jan Lukasiewicz (1878/1956; *Aristotle's Syllogistic* (1951)), he formulates the two main types of indirect knowledge of the world in which we intentionally situate ourselves as follows.

Deduction .

If A, then B (= hypothesis). Well, A; therefore B (= derivation).

That is the structure of Platon's 'sunthesis': from the (ontologically understandable) reality of the hypothesis "if A (preface), then B (subordinate clause)", and from the reality of A (preface), one derives the reality of B (subordinate clause). And indeed with necessity (modality).

Reduction.

If A, then B (= hypothesis). Well, B; therefore A (= derivation).

That is the structure of Platonic 'analysis': from the reality of the hypothesis "if A (prefix), then B (consecutive clause)" and from the reality of B (consecutive clause), one deduces the possible reality of A (prefix). Here the modality is "non-necessity".

Incidentally: the inductive method is a curious case of reduction. Cf. EO 63; 37; 73.

Note (150/152) Father Bochenski also includes semiotics in indirect knowledge. -- By this he means language analysis.

In fact, the pedestal upon which he bases this chapter in his rock-solid little work is broader than what the average person understands by 'language'!

He refers to Charles Morris (1901/1971), *Foundations of the Theory of Signs*, Chicago Univ. Press, 1938, -- a work that has become a 'classic'.

Morris himself connects with Ch. S. Peirce and his famous theory of signs or semiotics (a reference: H. Van Driel, ed., * *Het semiotisch pragmatisme van Charles S. Peirce**, Amsterdam, J. Benjamins, 1991).

Well, Peirce viewed his theory of drawing extremely broadly—ontologically broad, even. Peirce saw the entire 'being' or reality as drawing reality through and through: everything refers to everything!

Note : Bochenski omits from Ferd. de Saussure, **Cours de linguistique générale**, Paris, 1916-1, that it provides us with a semiology (which encompasses the core of Saussurian structuralism). That, too, is a type of theory of signs!

EO151

Applicable model

Morris, following in the footsteps of the Vienna Circle (logical or linguistic positivism; EO 126) and American pragmatism, respectively pragmaticism, developed, for the first time, clearly three aspects of every sign. Namely: the syntactic (the concatenation of signs), the semantic (the meaning of signs), and the pragmatic (the use value of signs).-- We will explain briefly.

a.-- Syntactics.

The study of the interrelationships of signs.

Model . -- In ecclesiastical circles at the time, the often bizarre and humorous West Flemish priest Van Haecke was well known. One of his lectures was called 'Faict'. One day (EO 46: combinatorics) he combined the 'elements' - letters - of 'Faict' into the following Latin phrase: "Faict ficta facit" (translated: Faict makes imaginary things).

Such 'stoicheiosis' or combination is a pure case of syntax. It consists in varying the configuration of the name elements.

b.-- Semantics.

Signs in one configuration or another can signify something, referring to something by virtue of similarity and/or coherence. -- Within our world, in which we—intentionally—situate ourselves (we can, with the Germans, also

say “Sitz im Leben”), we semantically direct our attention or 'intentio(nality)' no longer on the mutual relations of the signs, but on the relationship between the signs and that which is signified or indicated by them. That is then a reality outside the sign.

Coincidentally, the sentence has a (semantic) meaning: the fellow priest Faict “comes up with imaginary things:”

c.-- Pragmatics.

Signs, assembled in a configuration, possess, in addition to a meaning that 'applies' to things outside those signs, a use value as well. Within the world in which we intentionally situate ourselves, we apply things—for the sake of the signs—with a view to achieving a goal that likewise lies outside those things (signs). That, then, is the object of the study of the relationship between the user of signs and those signs themselves.

Consider, for example, that a sign can be used by one person as a signal for another (the sign is used to give a sign to others, for example to establish a relationship; -- which is the domain of signification (the study of understanding))).

What utilitarian value did Van Haecke attach to his playful little sentence? Did he want to ridicule Faict? Or did he merely want to play with letters regarding the name 'Faict'? The 'pragmatics' is sometimes difficult to determine.

EO152

What utilitarian value did Van Haecke attach to his playful little sentence? Did he want to ridicule Faict? Or did he merely want to play with letters regarding the name 'Faict'? The 'pragmatics' is sometimes difficult to determine.

Conclusion.-- In what sense exactly is semantics (semiology) indirect knowledge? To the extent that, through signs, we come to know other realities. -- Thus “Faict ficta facit”:

a. we do not learn much about Faict himself (though his existence, for example) (semantically);

b. regarding Van Haecke the man himself—the fellow man (significant)—we learn that, knowing Latin, he took pleasure in playing with letters—that he perhaps wanted to ironize his college (pragmatic).

In other words: to the extent that signs provide us with information (serve as models) regarding the realities indicated (semantically) or intended (pragmatically) by them, to that extent they constitute indirect knowledge. -- This is particularly useful in rhetoric.

Note: Very early on, in Greek philosophy, the sign was grasped as indirect knowledge.

Alkmaion (=Alkmeon) of Croton (-520/-450), an ancient Greek physician influenced by Paleo-Pythagoreanism, says: “Only through 'tekmeria', signs or symptoms of the hidden can we deduce that hidden thing”. Indeed: even today, a physician is constantly confronted with symptoms of an ailment, such that he knows the ailment only through its 'signs'.

Alkmaion emphasizes a duality. -- There is 'aisthanesthai', direct observation, and there is 'xuni.ēnai', indirect knowledge. The latter is called “interpreting signs”. As a physician, Alkmaion was a 'semeiologist' (a medical interpreter of disease symptoms).

He even saw a hierarchy:

a. Animals possess direct perception, but not the ability to interpret; humans possess both;

b. Deities, however, see everything directly and with absolute certainty. The latter shows what high conception the ancients held of the deity. Cf. EO 03 (apokalupsis).

Note .-- There is a duality in mathematics:

a. the given (which we grasp through direct knowledge);

b. the requested (which we only grasp through reasoning). One might say: the given is a 'sign' that refers to the requested, otherwise there would never be 'those requested'!

EO153

C.-- Do we know our fellow man directly and/or indirectly? (153/155)

Given : the direct and the indirect method.

Question : what knowledge do we have regarding our fellow man? Let us specify:

a. does immediatism apply, i.e. immediate knowledge?

b. Does mediatism apply? In other words, is the other 'I' (subject, soul) given to us immediately (immediately, without intermediaries), or is the other

'I' only accessible to us through reasoning and/or signs (mediately, with intermediaries)?

By way of introduction.

Library st.:

-- St. Englehardt, *Monde virtuel (Entrez dans l'image)*, in: Reader's Digest/ Sélection (Zurich) 46 (1994): fevr., 122/127;

--- D. Jeanmonod, *Des robots commandés par les mondes virtuels*, in: *Journal de Genève/ Gazette de Lausanne* 17.02.1994.

One places a computer helmet on the head, slides the right hand into a silver computer glove. What does one experience? A world—consisting of simulation—or imitation images, conjured up for you by coordinators.

Two small TV screens (3D (= three-dimensional)), integrated into the visor (eye shield) of the computer helmet, display a scene in front of the eyes—each slightly different to achieve the 3D effect. Not like what happens in 'three-dimensional' movie theaters! For one can 'touch' (via computer) the virtual objects viewed—things, fellow human beings, landscapes—by means of a 'tactile' glove.

The opinion of Gary Bishop, Professor of Computer Science at the University of Northern Carolina: “The limits of imagination are the only limits of technology (regarding virtual realities).”

The goal of virtual reality is to give the viewer the illusion that the world simulated by the coordinator is 'real'.

Mind you: the applications are virtually unlimited. In medicine and engineering, in the military and in space travel. But also in the entertainment industry (including the porn world).

Like this: at the Battle Tech Center, a park for 'virtual' pastimes in Chicago, lines of people are waiting to, for a good three hundred Belgian francs: “visit a distant planet, experience a battle with laser weapons, fight a blind giant”.

The question is: how do we know that a virtual world is merely a virtual world, and how do we know that Jan next to us is non-virtual?

EO154

The answer shows two major types.

a. Common sense – the non-intellectual (let us say) – says: “That is surely obvious! One only has to look!”

b. The skeptical mind says: “How does one know that, -- indeed, how does one prove that that is so evident?” Modern and postmodern humanity thinks easily in this way.

The position of the Austrian School.

Bible st. : H. Arvon, *La philosophie allemande* , Paris, 1970, 133ss. (L'école autrichienne).

a. B. Bolzano (1781/1848), known for his struggle against psychologism regarding logical entities (concepts, judgments, reasoning), is a predecessor.

b. Franz Brentano (1838/1917), known for his * *Psychologie vom empirischen Standpunkt* * (1874), is the founder.

His psychology did not aim for a causal explanation of psychic phenomena (as, for example, a number of positivists wanted), but rather the description of psychic phenomena as phenomena. This is: insofar as they are immediately given. Immediate.

Psychological phenomena.

What does Brentano understand by that?

a. There are “physical phenomena” around us, such as colors, people, and landscapes.

b. There are, however, “psychological phenomena”: 'acts'. For example, the act in which I form the image of a walking person. Furthermore: hearing, seeing, -- remembering, judging and reasoning, -- experiences such as joy or sorrow.

'Intentionality'.

What, then, is the essential nature of a psychic act? That which distinguishes it from non-psychic phenomena.

Here Brentano re-establishes medieval scholasticism (800/1450) with her concept of 'intentio'. 'Intentio' can be translated as 'direction (of consciousness)'. Middle-century thinkers distinguished two types in this regard.

a. “Intentio prima”, first orientation. -- When I simply become absorbed in the (outer) world, living fully, my consciousness is in a first, obvious orientation. Towards things, towards my loved ones, for example.

b. “Intentio secunda”, second orientation When I pay attention to the fact that I am paying attention to something, then the orientation or intentionality of my consciousness is 'second-degree', because I focus on my (first) orientation.

That intuition was further developed by others (Al. Neinong (1853/1927), C. Stumpf (1848/1936), especially by the famous Edmund Husserl (1859/1938)).

EO155

Mutual intentionality.

Based on Brentano's psychology of intentional acts, we can formulate the problem of (the reality of) one's fellow man as follows: “I make sure that my fellow man pays attention to me”.

Second degree: “I make sure that I make sure that the other person pays attention to me.” Or again: “I make sure that the other person pays attention to the fact that he/she pays attention to me.” Finally: “I make sure that I make sure that the other person pays attention to the fact that he/she pays attention to me.” -- It seems like a word game, but it isn't one: that is how life goes.

Such a thing is unthinkable in virtual reality, unless one is carried along for a while by the illusion—according to Gary Bishop, professor of computer science—that the merely 'virtual' (understand: conjured up by computer images) reality (ontologically that is one type of reality, of course, however illusory) is 'real' reality, the reality that takes place outside the computer images.

The blind giant in the virtual games pays no attention to me; -- nor does he pay attention to the fact that he is paying attention to me! And I; — I pay attention to what that 'giant', created by images, forces me to process in terms of 'attacks' or 'defense'. Nothing more!

The common sense man finds this no problem: a virtual giant is no giant outside the virtual. The skeptical man, on the other hand, delights in finding

out exactly how we perceive the difference between merely virtual reality and real reality.

In other words: as always, the presuppositions or axioms of the common man and the skeptical man are different axioms. In ABC-theoretical terms: the 'B' of the common man and the 'B' of the skeptical man differ. Immediately, the domain upon which those axioms apply differs.

Mediate/ immediate.

a. It is certain that we know our fellow man by means of indirect means—so highly valued by the skeptical person. Let us think of the behaviorists and Pavlovism, who observe (external) behavior—sometimes exclusively. That then becomes hard science.

b. But all this would be meaningless if we did not perceive each other immediately, “from soul to sight,” from “I” to “I.” That is a kind of—not so rigid—scientific intuitionism. But it is virtually omnipresent between people.

EO156

21. Holistic ontology: formalism (formalization) (156/167).

Bibl. st.: IM Bochenski, *Philosophical methods in modern science* , Utr./Antwerp, 1961, 51/55 (Formalism).

“One of the most important results of modern methodology (= applied logic) is the insight that operating with language at the syntactic level can substantially facilitate intellectual activity. Such 'operating' is called 'formalism'! (Oc, 51).

Ontologically speaking, formalized operation is directing the attention of consciousness to written characters such that they are logically processed. 'Operating' is therefore “performing operations”. Specifically: logical operations.

The being that is thus 'processed' is not nothing but something, namely signs.

It follows illogically from this that our spiritual life can empathize with a 'world' or 'universe' (as some also say) of mere signs, -- with any semantic or pragmatic meaning-making in parentheses.

The semiotic presupposition: (156/157).

We now examine some axioms of formalization.

The graphic foreground.

With Ch. S. Peirce, we can distinguish between mental signs (= concepts), speech signs, and also written signs.

The formalist “swears by the written word,” says Bochenski. Phenomenologically, one can speak of “graphic reduction”: the formalizer reduces (limits himself to)! His consciousness “pays attention only to” what blackens paper. -- In Peano’s language, ‘pasiography’.

Bible st. : J. Ritter, *Le sources du nombre (Entre le Nil et l'Euphrate)*, in: Le Courrier de l'unesco 1989: Nov., 12/17.

Ritter, author of * *Eléments d'histoire des sciences* *, Paris, 1989, writes: “Mathematics is closely related to graphic skill (...). Have recent archaeological discoveries not shown that many writing systems arose from the vital necessity to measure, divide, and distribute wealth?”

He recognizes two graphic systems:

a. -3,500 in Lower Mesopotamia; somewhat later in Susa (present-day Iran);

b. -3,250 in Egypt.

Calculations are indeed one application of working in a formalized manner.

EO157

Ia the semiotic presupposition.

The second axiom regarding semiotics in formalism is a “syntactic reduction”: the formalist reduces the sign—graphicism—to a single dimension, namely syntax. Cf. EO 151.

The semantic and pragmatic dimensions are 'bracketed' ('eingeklammert'). Only the mutual relations of the sign components or signs apply, while any reference of the signs to something outside the signs themselves (semantics) or their application by the user with a view to achieving results (pragmatics) is eliminated.

This results in a sentence-diminished sign: the three-part sentence—syntactic sentence, semantic sentence, pragmatic sentence—is truncated to the first.

Ib-- The combinatorial positioning. (157/159).

Reread EO 46. -- The fact that only the syntax applies implies that combining is one of the operations. -- 'Combining' is assigning a position to pairwise elements—here: graphic elements—within a 'configuration' or positioning system.

In other words:

a . there are a finite number of places;

b. there is a (finite) number of data items to be placed.

This means: harmology or the theory of order. In the footsteps of ancient Greek stoicheiosis or analysis of factors.

Incidentally: the strongest form of this, logically speaking, is called “mathesis universalis”, general ‘mathematics’ (understand: combinatorics).

Galen of Pergamon (second century AD), the famous physician, wanted to develop a kind of mathesis universalis of everything known at the time.

Ramon Lull (= Lullus) (1235/1315), the Catalan Neoplatonist known for his ecumenism, wanted to establish an Ars magna, literally "comprehensive discipline," that combined all the sciences of that time.

Finally: G.W. Leibniz (1646/1716; Cartesian) turns this into De arte combinatoriek, a work that, in a certain sense, anticipates current formalized logic or logistics.

Incidentally: R. Descartes already had a mathesis universalis in mind and, after the rationalists, the German idealists (Fichte, Schelling, Hegel) attempted something like a mathematics-free mathesis universalis—under Romantic influences, among others.

Incidentally: H. Burkhardt , **Logik und Semiotik in die Philosophie von Leibniz**, Munich, 1980, specifically Chapters 3 and 4, demonstrates how the tradition of Lull's **Ars magna** is thoroughly re-established in Leibniz into a 'calculus', a calculation.

EO158

The combinatorial positioning.

Syntax involves 'connecting'. Connecting involves 'connectiva', connecting signs (functions, modifiers). Let us say: conjunctions. They are the expression

of the relationships between the graphic forms. -- We will consider the principal ones.

(1) The looping or reflexive 'relationship'

Logisticians usually neglect this type of 'relationship' of something to itself.

Appl. mod.. “Singing as singing”, “singing insofar as singing”, “singing as such”, “singing as such” mean that singing is thought of as something in itself, without reference to anything else.

The word “as (thus or such)” means that one refers to the total identity of something with itself. Cf. EO 25 (Law of Identity),-- 23ff.-- In the very abstract form “x as x”.

(2) The non-reflexive relations.

Cf. EO 23: partial identity. Or 'analogy'. The relations of something to something else.

(2).1. -- The combinatorial sum.

Singing and/or dancing entails either singing or dancing, or practicing both simultaneously. The 'or' signifies alternation or variation; the 'and' simultaneity.

Abstract: $x + y$.-- Another name: the disjugate.

It is also written xvy (as x and y and xy).

In Lukasiewicz's language game: Dxy .

A matter of convention. -- The sign 'v' is called a 'disjunct'.

(2).2.-- The combinatorial product.

Singing and dancing—singing-and-dancing—entails practicing the two together—simultaneously.

Abstract : xy .-- Another name: conjugate. With '^' as the conjunct, this gives “ x^y ” (x and y simultaneously).

In Lukasiewicz's linguistic system: Axy (= x -and- y).

(2).3.-- The ordinary negation.

Cf ED 20 (Categorical nothing).

Instead of singing and/or dancing, one can also do nothing. -- Semiotic: 1 or 0 (binary relation). Or: x or $\neg x$ (x or not- x).

Other names: inclusive (alternative, enclosing, -- divisive) disjunct. In Latin: 'vel' (= and/or). This is also called 'negate'.

Such a negate or negation, in Lukasiewicz's language, reads Nx (with the negator 'N') (not-x).

EO159

(2).4.-- The absolute negation (contradiction).

EO 18 (Transcendental nothingness). -- The irreconcilability (inconsistency, contradictions) is the radical counterpart of the (reflexive or total) identity.-- For example, “singing as singing” is absolutely opposed to “not-singing as not-singing”. Abstract: x is diametrically opposed to $-x$. Or: x is irreconcilable with $-x$. -- In Latin: x aut $-x$.-- Another name: exclusive (strict, dilemmatic, excluding) disjunct.

(2).5.-- The entailment (implication).

The logical deduction (= consequence, 'inference', implication) reads “if then”. This is called 'implicit'. In Lukasiewicz's sign system: Cxy (if x , then y).

One can also state it the other way around: “ y is specific to (inherent to) x ”. This connective is often indicated with an arrow: ' $--->$ '. Or in Peano's system: ' $\rightarrow$ '. (thus: $x \rightarrow y$ (x implies y)).

The connecting sign is called an 'implicator'. Thus, “Dancing and singing entails 'om dansen'” or “'Om dansen is characteristic of dancing and singing; -- In traditional logic, this is the artery.

(2).6.-- Mutual encompassing (equality).

This means: “if x , then y and vice versa (if y , then x)”. This is one type of mutual relationship or 'symmetry'. It is also referred to as equivalence or equivalence. -- The connecting sign or 'bi-implicator': $\leftrightarrow$. In Peano's pasigraphy: $x \leftrightarrow y$. ($y \leftrightarrow x$) -- One can also say: “if and only if”.

Note : J. Royce, *Principles of Logic* , New York, 1961 (first edition 1912), 74, says: “The actions—such as singing, dancing, doing nothing—constitute a collection of data—'entities'—which are in any case governed by the same laws as those governing classes (= concepts) and judgments.

The so-called “algebra of logic” can be applied to it! -- This amounts to the fact that the connectives, interpreted above semantically, prove to be valid. In fact, this is evident: the connectives were abstracted from everyday practice. It is therefore not surprising that they make 'calculating' with, for example,

human actions possible. Call that 'algebra' (in the broad sense, -- mathesis universalis) or 'calculus'!

The remainder of the text will make clearer what an enormous revolution computational thinking—understand: combinatorial thinking—entails. -- The Paleo-Pythagoreans, with their mathematism, could not have dreamed of a better future!

EO160

The logical-methodological premise. (160/161).

'Logic' is the study of thought: "if, then" sentences are central. 'Methodology' is applied logic.

As we saw: graphicism (syntactically) is the matter (the material object); combining is the operation (the formal object), and this in the definite sense of logical methodology. For not just any combining is 'formalism'.

The start.

J. Ritter, ac, says: -- Egyptian papyri -.of about -1,500 - give models of problems. For example: (given) a pyramid whose side is 140 cubits and whose slope is 5 hands 1 finger; (requested (sought)) calculate the height. Behold the base.

The method

The operation – here: the calculation of the height – proceeds step by step to the final solution. In this process, each part ('step') is differentiable:

(1) from a part of the data and/or **(2)** from the previous step”.

No better definition of formalism.

Stoicheiosis.

'Stoicheiosis' means 'factor analysis'.

R. Descartes, who still thought within that 'stechiotic' tradition, makes a totality (collection (all) or system (whole)) clear and transparent through his “analytical-synthetic method”.

(a) Cartesian analysis (not to be confused with Plato's 'analysis' or reductive reasoning).-- A totality is broken down into its smallest parts or elements (“ta stoicheia”, Latin: elementa).

(b) Cartesian synthesis (not to be confused with Platon's 'synthesis' or deductive reasoning).

Those individual elements are rebuilt, step by step, into the whole (collection and/or system)—which has in the meantime been made transparent.

Along the way, “summative induction” is constantly performed. Cf. ED 98.-
. For along the way, one continuously totals after every partial operation. Until, with the last operation, all subtotals give the final total.

Algorithm.

Our current mathematics, especially algebra, dates back to both the Indians and the ancient Greek Diophantus of Alexandria (lived +/- 250). Around 825, in Baghdad, al-Khwarismi, an Islamic mathematician, wrote a work on the rules of calculation in India. In the 12th century, this work was translated into Latin. Title: *Algorismi de numero indorum*. From al-Khwarismi it became 'algorismi'!

EO161

'Algorithm' is actually a pragmatic concept: it is the detailed answer to the question “What must I do to achieve the desired result (= pragmatics)?”.

Definition.

1. Given . -- I have been placed in a problem situation (initial situation).

2. Requested .

2.a . I perform a series of actions ('operations; operations) ((means)

2.b. such that I achieve the stated goal (= result) (goal) (final situation).

Thus, ancient spellbooks and, for example, cookbooks are full of algorithms: one executes the prescription step by step, resulting in, for instance, a cure (magic) or a good soup (cookbook).

As is evident: an algorithm is a goal-oriented sequence of actions.

Ontological : starting from an initial reality, one realizes a final reality through a series of realizations.

Applicable model

The automatic washing machine. -- Its algorithm comprises a. the initial situation, b. the sequence of 'commands' (instructions, tasks), c. such that the end result (washed linen) is achieved.

Here is the series of 'operations':

1. The clothes to be washed are placed in the drum; the power is switched on; the washing powder is placed in the compartment; the water supply is opened;

2. Depending on the nature of the laundry, a suitable program (a washing program is in turn an algorithm) – present in the built-in microprocessor (a chip with logical structure and memory (a computer in miniature)) – is deployed (a button is pressed that selects one of the many fixed washing programs); the machine executes the program; the detergent and rinse water are drained;

3. The clean laundry is removed from the drum. -- A magnificent algorithm!

Ic -- The logical-methodological premise.

Now, finally, the calculus or formalism. -- How do purely graphic signs, syntactically and combinatorially cast into an algorithm, acquire a formalized mode of being?

(A). -- First of all, syntax introduces meaningful, i.e., logically acceptable or permissible, signs. The smallest signs are thus incorporated into compound, 'well-formed' expressions.

(B). -- The same syntax applies logic to the characters thus placed in configurations. -- Well-formed expressions logically processed!

EO162

II.A.-- Mental arithmetic as a formalism. (162/166).

Let us summarize once again the essence of the foregoing: the rules of logical syntax comprise two aspects, namely well-formed expressions and applied logic. That is called 'calculus', --"logical calculus", then.

Applicable model

Given: 27 and 35; requested: calculate 27×35 .

(1). -- 27. -- One splits up (Cartesian). Into two subtotals (totalities), namely 20 and 7. -- Thus we calculate in the mind (mentally by means of mental signs) e.g.: $10 \times 35 + 10 \times 35 = 350 + 350$.

In summary: $20 \times 35 = 350 + 350$. -- Further summary or summative induction: $350 + 350 = 700$.

(2). -- 35. -- 7×35 can be split into $7 \times 30 = 210$ and $7 \times 5 = 35$. Again summative induction or totalization: $210 + 35 = 245$.

These are the intermediate steps. -- Now the final result: $27 \times 35 = 700 + 245 = 945$.

Note -- Phenomenological.

Making things transparent through splitting (splintering a whole into subtotals) amounts to falling back on direct intuition (the core of phenomenology). Thus, 35 is more transparent, more intuitive, because, split up, it is thought of as $30 + 5$. Formalism consists of small intuitions logically combined into large totalities.

Note-- Bibl. st.: J.-CM, *L'ordinatuer humain Wim Klein assassiné à Amsterdam*, in: Tribune de Genève 04.08.1986.

Wim Klein was a mathematical prodigy. Nickname: “the human coordinator”. -- Klein was a peaceful Dutchman from Amsterdam. Initially, he led an “eventful life”: he lived as a tramp; moreover, he was once persecuted by the Nazis. -

But in 1958, he ended up at CERN (the international center for microphysics in Geneva). The reason: by calculating purely in his head, he could perform arithmetic operations that the coordinators of that time could not handle! He stayed at CERN until 1968.

In that year, he retired to Amsterdam. This did not prevent him from giving demonstrations at higher institutions in many countries (including Japan). His lessons were educational and full of humor.

Appl. model.-- In the large auditorium of CERN, one day, he succeeded in calculating the nineteenth root of a number with one hundred and thirty-three digits in his mind ... in eight minutes. Consequently, he was mentioned in the Guinness Book of Records multiple times.

EO163

The conclusion of his life: his housekeeper found him lifeless in his home, -- stabbed to death.

Incidentally: the rapid evolution of the coordinators meant that, from 1974 onwards, the coordinators surpassed him.

The question arises: does Klein differ from the average person who “calculates in their head” by more than a more trained ability? Is a paranormal gift involved here? Or are the reincarnists right who claim that he already prepared this calculating ability in previous lives?

Note-- Bibl. st.: Y. Christian, *étonnantes découvertes d'un chercheur japonais (Les animaux peuvent-ils compter ?)*, in: Figaro Magazine 01.06. 1985.

Reason: a statement in the British scientific journal Nature.

A.-- Given.

Tetsuro Matsuzawa, at the Institute for Primate Research (University of Kyoto, Inuyama, Japan), recently demonstrated that a five-year-old female chimpanzee named Ai can handle number operations to a limited extent.

Ai had not only been taught to point to objects and colors; she had also been taught to count objects and colors. For example, she points to three red pencils by means of symbolic signals.

B.-- Requested.

So much for the facts. Now for the interpretation.

1. Everyone agrees that apes – including those other than Ai – use 'words' (which indicates language use or 'reason'),-- yes, to a certain extent “argue with humans (which points to dialogue and even discussion).

2. But whether such apes actually speak and argue as humans do is highly questionable.

The comparative method.

Comparing is invariably

a. see more than one piece of data and

b . to compare this data with other data. One should not confuse 'compare' with 'equate'.

After all, this is stoicheiosis! Dividing a totality (set ('all' in Plato's terminology) and/or system ('whole' in Plato's terminology) in such a way that that totality becomes more transparent.

EO164

Brendan McGonigle, psychologist, Edinburgh, reasons as follows.

Preface 1. -- If one shows children clearly identifiable objects—which points to direct intuition—then they recognize them immediately, -- in a global manner.

a. Up to and including the number four, only 200 milliseconds more are required for each attached object.

b. Beyond four, children need 1,000 milliseconds more, which is five times more.

Prefix 2. -- Well, Ai is beginning to make grave mistakes precisely between the numbers five and six. -- Which, compared to children, seems to point to something analogous.

Nazin. -- Thus Ai does not calculate in the strict sense of the word (di like an adult), but immediately grasps the meaning by means of a direct intuition (= immediate perception). Just like children.

Note the logical structure: antecedent 1/ antecedent 2 (introduced by 'well')/ concluding clause (introduced by 'thus'). That is the logical structure that constitutes the deductive reasoning or syllogism: which is 'combinatorially' (EO 159: encompassing) an implicative relationship (if antecedent 1 and antecedent 2, then concluding clause).

Or expressed differently: the reality of the subsequent clause is inherent to the reality of both antecedent clause 1 and antecedent clause 2 (= combinatorial product) (EO 158). In abbreviation: preposition 1 $\wedge$ preposition 2 $\rightarrow$ subsequent clause.

Incidentally

The syllogism is one example of logical calculus.

The Lemmatic-analytical method. (164/166).

Another name “proleptic-analytical method”.

Library st.:

-- O. Willmann, *Abriss der Philosophie*, Wien, Herder, 1959-5, 137 (Lemmaat-analytisches Verfahren);

-- id., *Geschichte des Idealismus, III (Der Idealismus der Neuzeit)*, Braunschweig, 1907. 2, 48ff. (Analysis).

As early as antiquity, Plato of Athens was regarded as the inventor of this extremely fruitful method, which can also be referred to as the “hypothetical-deductive method”.

Diogenes Laërtius (c. 200/250), in his history of philosophers (3: 24), says: “Platon was the first to make available the inquiry based on 'analysis' (understand: lemmatic analysis) to the Thasian Leodamas”.

The structure.

- a.** The basic duality of all problem solving, namely “given/requested”.
- b.** Reductive reasoning or 'analysis' which seeks the necessary (and sufficient) presupposition (conditions) (EO 63; 68; -- already 37): “if A, then B; now B; therefore A”. 'A' functions as the necessary and possibly sufficient condition or reason for B. The fine point of lemmatic-analytical reasoning consists in 'combining' a and b (literally).

EO165

The 'nice' part is that

- a.** the sufficient reason presupposed by the reduction (= here: that there is a solution)
- b.** to assume as already present in the given as an unknown, which is sought (what is asked = solution). -- Therefore, the name “lemmatic-analytical method” ('emma' = presupposition) or “proleptic-analytical method” ('prolepsis' = presupposition) would be better than the ordinary name “analytical method” or “analysis!”

By acting as if what is requested has already been found, the requested item becomes part of the given. As a provisional unknown. From this one deduces—'synthesis' or deduction: if A, then B; indeed, A; therefore B—conclusions that have test value.

Such a method is formulated as follows: “Assuming one already knows what one is looking for” or “if the problem (requested) had already been solved”. – This is comparable to the “black-box method”.

When an electrician stands before a device—a box—that he cannot possibly open or that he does not know at all—a black box—he can test the electrical wires coming out of it. In this way, he gets to know the unknown box somewhat, until he knows with certainty how to handle it without opening it.

In summary:

- a.** given: a black box;
- b.** requested: they integrate into the electrical grid. The assessment deeds that bring him to this point constitute an algorithm (EO 160).

From numerical arithmetic to algebraic arithmetic.

Medieval arithmetic handbooks do know the unknowns to some extent. They indicate them with a curl. -- But it is the brilliant Platonist François Viète (1540/1603: Latin: Vieta) who generalized the Platonic lemmatic-analytical process. Instead of calculating with mere numbers - *logistique numerosa* - he was the first to calculate with letters - *logistique sneciosa* - (his work: *in artem analyticam isagoge* (literally: introduction to analysis)).

Following in his footsteps, René Descartes, the father of modern thought, denoted the unknown—instead of by the medieval flourish—by means of 'X'. That has remained the case to this day! Thus, the requested 'x' is provisionally incorporated into the given as an unknown. That is Platon's lemmatic-analytical method.

As Willmann rightly points out: this method – combined with the equations (e.g. $x+y=z$) – has proven extremely fruitful (algebra, 'analytical' geometry, logistics).

EO166

Let's take a very basic but instructive example.

The rule of three.

This 'rule' consists in looking up some particular set or subset - x - from a (given or, if necessary, to be sought, in any case to be presupposed) universal set - u - via (the finding or existence of) exactly one element (= singleton) - s. -
- This is in any case the most common form.

The structure.

Given: you (a universal number);

Requested : x.

The algorithm. -- Given the ratios within a set (u = all x, of which s is actually the smallest case), one can reason as follows: $u = 100\% = \text{e.g. } 200$; well, $s = 1\% = 1/200$; so $p = x = 1/200 \cdot x$.

See 200. x. this very elementary example, the steps that together give the final result - x = known.

In fact, e.g., 25%, 3%, or 120% are merely names for 'x', the lemma that is introduced into the given. 25%, for example, is assuming the provisionally unknown as known, or at least anticipating its knowledge.

Typically the Platonic lemmatic-analytic method.

Ontological.

A reality (collection here) of which a part is known—'true', revealed (EO 62: the being and the true, understand: the revealable, respectively revealed)—and a part unknown (the requested), becomes better, eventually wholly known ('true', exposed, revealed) through the algorithm.

A case of induction, incidentally: EO 99 (amplificative induction), in which the whole is concluded from a part.

Phenomenological.

That which is 'true', revealed, is a 'phenomenon' because it presents itself to consciousness. The given is a phenomenon, while the sought or requested is transphenomenal (not yet (fully) revealed).

The algorithm of the operations therefore has phenomenological value, because it exposes, makes phenomenal, what it initially was not, or at least not sufficiently.

In that sense, solving the problem belongs to holistic ontology, which is essentially concerned with the transition from all that is phenomenal to the transphenomenal (which, once having become a phenomenon, entails an expansion of consciousness). And thus brings more of all that is—the totality of being or reality—to consciousness.

EO167

II. B.-- Calculation as a formalism.

This brings us to written arithmetic.-- Once again: the configuration!

Let us take the same multiplication "27 x 35". Every schoolchild learns in time that the units (5, 7) and tens (2, 3) must be placed correctly. EO 47 (Paleopythagorean configuration) and even 54 (Platonic philosophy of language)

27	we have already learned it: stoicheiosis! The split elements are
<u>x 35</u>	placed in a logical syntax from right to left (units E; tens T),
135	etc. Look: The splitting is clear: first 5 x 27, then 3 x 27. The
<u>81</u>	steps! The totaling of the subtotals, - result of summative
945	induction (EO 98), is also clear: 135 + 61 (0) = 945.- -Each

DHTE step takes into account everything that comes before (cumulative).

II.B. Algebraic arithmetic as a formalism.

Here we are already following in the footsteps of Francois Viète.

Let us take an algebraic model.

Given : the 'comparison' (ontologically, there is an analogy here)

“ $ax^2 + bx + c = 0$ ”.

Requested : 'solve' the equation.

'To dissolve' is 'analysis' in ancient Greek.

The algorithm . -- For example $(ax^2 + bx + c) - c = 0 - c$. This is the first 'step'. This leads - deductively and mathematically - to $ax^2 + bx = -c$. -- Once again the triad “given/requested/algorithm”. The essential structure.

Note-- Syntactic rule.

We have just applied a “syntactic rule”, namely “For all bridging, every member of a mathematical equation may be moved to the other side if it is given an opposite sign (+, - become -, +)”.

A law is something different.

For example: “a is a” or “ $x = x$ ”.

A rule in logical syntax relies on regularities of all kinds, but is practically reducible to a mechanism. Once a student is familiar with it, it becomes as easy for him or her as eating with a spoon and fork (which have likewise become 'automatic' – from conscious effort to unconscious playfulness).

Here: given the equality sign between the two comparison parts (which relies on the law $a = a$), one can automatically transfer (exchange) the parts by swapping the signs - and + (which is a syntactic rule, -- supported by the law of identity, -- a fundamental ontological law: EO 25).

EO168

22. Holistic ontology: formalism once again. (168/179).

Let us build upon algebraic arithmetic introduced by François Viète.

His “*logistica or logistica speciosa*” works, instead of with numbers—*logistica numeroza*—with 'species', the essential forms (“*forma rei*”, essential form of a given).

The background—according to O. Willmann—was the Platonic idea that encompasses all possible instances of a set (an infinite set).

In practice, this is represented in the universal or general concept.

Applicable model

EO 158 (Combinatorial sum) taught us a type of combining, namely the sum.

Until Viète, calculations were performed using, for example, “ $3 + 4 = 7$ ”; that is, with instances of the universal idea of 'sum'. To escape from that singularity—7 being a single singular number—and thus to be able to process the universal “sum as such” (EO 158: Reflexive relation), that is, “as a sum”, in operations or calculations, Viète resorted to letters.

Model-theoretical.

The abstract-universal concept (Platonic: representation of the pre-existing, indeed, eternal idea 'sum') – the original (in the mind) – is depicted by Viète in the model, namely the 'formula' or (literally) 'little form', i.e., “form, essential form, in miniature.”

Better yet: semiotic model of the being form.

This semiotization of abstract concepts is Viète's stroke of genius.

Quantity 1 + quantity 2 = quantity 3 or 'sum' (line)	$a + b = c$ Rule	$3 + 4 = 7$ Application	Note. The diagram or configuration shown here clearly illustrates the operational or formalistic progress: the alphabetical calculation comprises the pre-parts of both extremes, left and right.
universal and non- operational	universal and operational	private and operational	

Note -- The extensions.

1. Functional theory.

In mathematics, a 'function' is a quantity that is a “function of” (depends on) other quantities.

Let us take a formula by Einstein: $E = mc^2$ (= mass x speed of light squared ---> energy). c is an invariant (constant), while m is a variable.

Thanks to algebraic arithmetic, that function can become practically attainable. It is 'operational'.

EO169

2. 'Analytical' geometry.

The combination of function theory and spatial mathematical 'models' establishes analytical geometry. R. Descartes (1596/1650), in his *Géométrie* (1637), -- even more clearly Pierre de Fermat (1601/1665) are the founders.

A numerical mathematical function (= original) is mapped into a spatial mathematical configuration (= model) via the Cartesian coordinate system (the base configuration) with variables x and y along the axes.

Applicable model

In this way, the function “ $x^2 + y^2$ ” (r is radius) is mapped into a circle configuration or 'figure'.

Incidentally : as Willmann rightly points out, Descartes consistently rejected his dependence on the ancient Greeks, whereas Fermat clearly viewed Apollonius' *Topoi* and Euclid's *Porismata* as groundbreaking.

3. Infinitesimal calculus.

Differential and integral calculus (the first: the numerical value of two “infinitely small” values; the second: the sum of an infinitely large quantity of infinitely small numerical values) – together 'infinitesimal calculus' – we owe to P. de Fermat (who, incidentally, founded probability theory with Blaise Pascal (EO 148)). Again: the 'formulas' (semiotic forms) we owe to Viète.-- So far what O. Willmann says on the matter.

Logical arithmetic or 'logistics' (169/171)

Let us begin with a statement.

1950 : the congress of philosophers in Bremen fiercely debated the fundamental distinction between traditional logic and more recent logistics with the logisticians present there.

1951 : the discussion is resumed at a conference in Jena.

In Bremen, Bruno von Freytag - known for his *Logik (Ihr System und ihr Verhältnis zur Logistik)* , Stuttgart, 1955-1, 1961-3) - completed it:

- a.** there are many logistic calculi;
- b.** but there is only one logic.

For there are the logistics concerning predicates, judgments, modalities, etc., but all since Platon and Aristotle deal with a single theme, namely the if-then relationship, introduced by the logic concerning the concept and the judgment (concepts and judgments are merely components of reasoning, which invariably takes on “if..., then...” forms). But let us now turn to calculating 'logic' or logistics.

EO170

Applicable model

Let us take the strict encompassing or implication mark as a model.

Signs standing for sentences (judgments, propositions) are placed configurationally but in a logically strict manner. -- Like this: $(a \iff b) \implies (a \implies b) \wedge (b \implies a)$.

In colloquial terms: if $(a \iff b)$ then $(a \implies b)$ and $(b \implies a)$. According to EO 158 (product), 159 (implication), 159 (equivalence).

In other words: the equivalence relationship—a stochiometric or hermeneutical phenomenon—is expressed in a formalized manner in this way.

Note-- Analogy between logic and logistics.

Sometimes logistics is merely a formalization of what classical logic has known and applied for centuries.

Let us take the chapter on “immediate deductions” (Ch. Lahr, *Logique* , Paris, 1933-27, 511/514 (*La déduction immédiate*).

'Immediately' here means that the derivation takes place without much difficulty (practically always based on a smooth set theory (stoicheiosis) and an understanding of affirmation and negation).

A.-- Logical.

The logical conversion or exchange rule states: “In a syllogism, a negative judgment of general scope (general negative judgment) may be converted (exchanged)”.

Thus, “No (single) human is a stone” becomes, after conversion: “No (single) stone is a human”. Practically: subject - S - and predicate - P - ; - e - (= nego (= I deny)): “For all sentences of the type “S e P” it holds that they are interchangeable to “P e S”. This is called the traditional logic 'rule of thought'. Symbol-shortened logic closely approximates logical syntax.

B.-- logistical.

In formalized logic, it reads as follows: “There is a syntactic rule, applicable to “S e P” (universally negative judgment), such that the letters—alphabet arithmetic—before and after e—in all formulas of the type “X e Y” may be swapped (be convective)”.

In other words: what traditional logic initially practices when it proceeds in a symbol-shortened manner, logistics practices, implemented thanks to the letter calculation of Fr. Viète.

Thus, for example, an ordinary rule of thought becomes a “syntactic rule”.
-- Logic proceeds ontologically and colloquially, logistics ontologically and syntactically.

EO171

Note: The stages of “symbolic logic” (one of the names) give – in abbreviated form – what follows.

1.-- The preliminary phase. -- Two names: Fr. Viète and GW Leibniz.

2. The initial phase. -- “logical algebra”. -- 1847: G. Boole (1815/1864) and A. de Morgan (1806/1878) introduce “mathematical logic” (yet another of the names). Meanwhile, B. Peirce (1809/1880) and E. Schröder (1841/1902; *Algebra der Logik* (1890/1895)) develop a class and judgment logistics, in an analogous sense.

3.-- The actual logistics .-- G. Frege (1848/1925), with his *Begriffsschrift* (1879), and G. Peano (1858/1932; EO 140), with his *Formulario matematico* (1895+), re-establish the previous “logical algebra”.

Their work is crowned by the monumental work of A. Whitehead (1861/1947) and B. Russell (1872/1961), namely *Principia mathematica* (1910/1913).

This title can be misunderstood: the intention of both was precisely to reduce mathematics to a logic (albeit one based on mathematical calculation). D. Hilbert (1862/1943; *Grundlagen der Mathematik*, I (1932), II (1939) also immediately worked in an analogous sense with his 'proof theory'.

Note -- Incidentally, for those completely unfamiliar with certain terminology.

'Logistics' also has a military meaning. According to Vice Admiral GC Dyer, Naval Logistics, Annapolis, 1960, "Logistics" is "the total process by which the resources of a nation—both human and material—are mobilized and directed toward the execution of military tasks".

This entails that:

a. the general or 'political' strategy ("grand strategy") which sets out the major objectives, as well as the 'operational' strategy which is situated on the battlefield itself, and

b. the tactics, or the optimization or maximum useful effect—also on the battlefield itself—are aided by the (military) 'logistics' that makes combat means, personnel, and materials available.

Note - (171/176) - Besides the 'established' disciplines - relational logistics, class logistics, and judgment logistics - there is metallologics (called 'metallologica' by those unknown to the true nature of traditional logic).

Given the enormous importance of its basic premise, a word about that.

EO172

1.-- Xenophanes of Colophon (-580/-490).

Bible st.: W. Röd, *Geschichte der Philosophie*, I (*Die Phil. der Antike 1 (Von Thales bis Demokrit)*), Munich, 1976, 75/82 (Xenophanes).

Röd attributes "metatheoretische Einsicht" (metatheoretical insight) to Xenophanes, i.e., a theory concerning a theory.

Appl. mod..

a. *The language of ancient Greeks about Iris.*

'Iris' meant i. the natural phenomenon of the rainbow; ii. at the same time, in religious circles, the goddess who revealed herself in that natural phenomenon ('theo.fania', a deity who reveals herself, 'appears').

Iris was worshipped as the messenger of gods and goddesses, perhaps due to the observation that the rainbow connects heaven and earth.

b. *The language of Xenophanes on the language of the Greeks.*

“What the masses call 'Iris'—that too, considered according to its 'fusus', nature, is merely an atmospheric phenomenon which, when observed, displays purple and bright red and yellow-green colors” (Fr. 32).

If we interpret the term 'fusus', Latin: natura, nature, correctly, then Xenophanes means “a reality stripped of its religious interpretation”. Something like this has become common since Thales of Miletus, founder of Milesian natural philosophy: we would now call this 'desecration' (desacralization) or 'secularization'. For what interprets Iris both as a goddess and as a messenger on behalf of the world of deities is “sacred thinking”. However, what interprets 'iris' as a pure rainbow is 'secular' or 'worldly' thinking.

Note: for the Milesians, this did not exclude the sacred interpretation. They were still too 'archaic' for that. -- The way Xenophanes speaks in that fragment is language about language; thus, metalanguage. Instead of direct speech: indirect speech “I say what the Greeks say ...”.

c. *The language of Xenophanes about his own language.*

“These things were presented as mere opinion – the doxastho, as somewhat approximating the original reality – etumoi si eoikota –”. (Fr. 35).

In other words: Xenophanes 'relativizes' his own position. -- That is indirect speech about his indirect speech: “I say that what I say about what the Greeks say is merely ‘mere opinion’ (doxa), 'approximation'”. That is then metalinguistics of the second degree.

EO173

In other words: in this case, the metalanguage, or rather metatheory (for Xenophanes wishes, in the tradition of the Milesians, to express a 'theory' about 'Iris'), amounts to a modality (EO 36: linguistic mod.). Or an “inner speaking” about what he says addressing his contemporaries. Namely, how he

wishes to be interpreted. With reservations or restrictions. Reservations that he expresses in the form of a metatheory, a theoretical statement about a theoretical statement.

Note-- Semantic degrees.

Bibl. st.: IM Bochenski, *Philosophical methods in modern science*, Utr. /Antw., 1961, 72v. (Semantic steps).

1. Semantic zero step.

"I see that little squirrel over there picking apart a pine cone" is already a semantic step. But the fact that I "see that little squirrel over there picking apart a pine cone" is, before I say so explicitly, a semantic zero step, because there is not yet a single pronunciation or 'meaning' (in spoken signs).

2. Object language or first semantic degree.

The object in question is semantically a zero stage (there is no semantics because nothing is said). -- Object language, however, is language about the object. -- Grammatically: direct speech: "I see that little squirrel over there picking at a pine cone"

3. Metalinguistic or second semantic degree.

Zero stage (the object). First stage (the language about the object). Second stage: the language about the language about the object. -- "I tell you that I see that little squirrel there picking apart a pine cone" is indirect speech about the sentence "I see that little squirrel there picking apart a pine cone". --- Metalanguage is therefore language about language.

Analogous to this: metatheory is theory about theoretical speech. -- Semiotically expressed: signs about signs that represent the object.

2.-- The paradoxes of the liar. (173/177)

Bibl. st.: EW Beth, *The philosophy of mathematics*, Antw./Nijmegen, 1944, 78/92 (Eristics and sepsis).

Euboulides of Miletus' formulation: "One asks someone: 'If you say that you are lying, are you really lying or are you telling the truth?' To this two answers are possible: 'Yes, I am lying' and 'Yes, I am telling the truth': For centuries, people have debated the correct status (type of reality) of both liar answers.

Oi, the solution to that problem lies in the semantic stages. With the practice of what the Romans called “restrictio mentalis”.

EO174

The proof by contradiction reads as follows:

“If the liar answers: ‘I am lying’; then the interrogator says: ‘If you maintain that you are lying and you are lying, then you are telling the truth. Therefore your answer is incorrect, -- untrue’.” “If the liar says: ‘I am telling the truth’; then the objection is: ‘If you claim that you are lying and you are telling the truth, then you are lying’.”

Beth refers here to A. Rüstow, * *Der Lügner* *, Erlangen, 1908-1, Leipzig, 1910-2. -- But what exactly do we know more about that finesse regarding refutation? Nothing. The problem lies elsewhere.

The refutation of Chrushippus (-280/-207).

This “great Stoic logician” (according to Beth) asserts that “whoever says that he/she is lying is not uttering a meaningful statement but merely meaningless words” (Beth, oc 82). They are “merely sounds”!

Consequence: asking, with a Euboulides of Miletus, whether this statement “I lie” is a true or false statement is pointless.

“This solution to the liar problem – known to medieval dialecticians (note: specialists in reasoning) as ‘cassatio’ – has (...) been put forward again by Bertrand Russell and is accepted almost unanimously by contemporary logicians”.

Behold two methods to tackle the liar's paradox with strict logical rigor. -- But they leave the true structure untouched. -- This lies crystal clear in the doctrine of semantic degrees.

Let us start from Platon's definition of thinking.

As WB Gallie, *Peirce and Pragmatism* , New York, Dover, 1966-2, 131f., states in passing: Platon asserts that thinking is “the soul in conversation with itself”.

Gallie: “Thinking or reasoning is a rather special form of communication, namely a kind of internalization of speaking habits and habits regarding the

use of gestures, of behaviors. We only learn this through active communication with those around us.”

When I lie, it happens like this. -- “You are lying,” something says inside me. Religious people call that instance or authority “the voice of God within us.”

Ethical people reduce that voice of God to “the voice of our conscience” (socialized with Freud: “das Ueber Ich”), -- without wanting to know anything of God’s voice in it. Which is then a desecrated or secularized “voice of conscience”.

EO175

In the first (the religious) case, a rule of conduct from God is violated as a rule of the game in relation to God and one's neighbor. In the second case, a socially taken-for-granted rule of conduct is likewise violated.

In both cases, one transgresses the law of identity (EO 25), the basis of ontology and of traditional logic. And thus immediately the basis of all “communicative acts” (J. Habermas), those acts which—within a rational humanity—are intended to lead to all kinds of understandings (“consensual interpretation”).

Put more simply: if I cannot rely on the truth regarding statements and all other signs, how can I act 'rationally' (purposefully) within a community? That is “le contrat social”, the social contract, par excellence.

The voice, whether of God or of the ethical conscience, reproaches, in all silence but utterly unsuppressibly, that transgression consisting in perverting the law of identity: “What is, I claim outwardly that it is not.” That is the inner contradiction.

When I lie, it happens so.

“Actually, I am lying,” I say to myself, insofar as I do not consciously suppress or unconsciously repress the transgression of the law of identity.

Plato, *Sophistes* 228, cited—curiously enough in a book on 'madness'—and translated as follows, says: “Untrue knowledge is—seen from the truth, when the soul is breaking through to it and thereby a deviant judgment arises—nothing other than 'parafrasune' “ein Vorbeidenken” (thus the cited book), a thinking beyond reality”. (W. Leibbrand/ A. Wettley, *Der Wahnsinn*

(*Geschichte der abendlandischen Psychopathologie* , Freiburg/ München, Alber, 1961, 60).-- Usually 'parafrosunè' is translated as 'delusion', 'delusional thinking', 'madness'!

When I am lying, turned inward, I inevitably say to myself: “Actually, that is, when it concerns true reality (and not an illusion of reality), I must confess to myself: ‘I am lying’.”

Note : This is one form of what the ancient Greeks called 'antiphrasis'; contradicting oneself, 'antiphrase', whereby one indicates something by means of signs such that the indicating signs denote the opposite of that something.

EO176

Note: The successful liar imitates the truth regarding words as perfectly as possible, so that the conversational partner can penetrate as little as possible into the sentences just cited: “You are lying” (says the voice) and “Actually, I am lying” (I say to myself).

In other words: actual thinking, the thinking labeled by Platon as “inner conversation,” is kept 'indoors'! As a result, one gets the impression that what is said is 'sintentional'.

Didn't someone say that “man can be a cunning comedian”? A 'hupokritès', an actor, someone who plays the existence of someone other than himself—merely plays. Here: the existence of a conscientious being is betrayed for a game.

Internal reservation (“restrictio mentalis”).

When I lie, it happens like this. -- “I am simply lying to you.” This is how the liar speaks inwardly to his fellow man. That little phrase always resonates with the two previous ones: “You are lying” and “Actually, I am lying.” Platon calls this “thinking” speaking inwardly with and for oneself. As so often, he struck the truth!

But that third little sentence remains withheld from one's fellow man: the restriction or reservation ('modality') remains situated mentally, in thought, in the inner dialogue. -- That is essentially part of the structure of lying.

Metal language.

The language, here, is what the liar says outwardly. The metalanguage is the language about that language. This can essentially be summarized in three little sentences: “When I speak to you, -- I am listening to the inner voice that says: ‘You are lying’, -- I am forced, in all honesty, to admit: ‘Actually, I am lying’, -- I say—often cynically or shamelessly—‘I am simply lying to you’”.

It is clear: the application of the theory concerning the semantic degrees, especially the last two (language and metalanguage), elucidates lying more thoroughly than, for example, Euboulides' investigation into the (viewed from the outside) 'truth content' (content of reality) or Chrysippus' 'cassatio' ("They are merely sounds").

EO177

Semantic steps and intentionality.

When we return briefly to the chapter on intentionality (EO 154), in the experience of the lie—whether we lie ourselves or are lied to—we are confronted with: “I take care that you do not want to be lied to, but take care that I do not lie to you.” That mutual intentionality or focus on consciousness is clearly at play here.

Or on the other side: “I am mindful that you might be lying to me.” -- That intentional 'communication' without words (speech marks), but “from soul to soul,” “from inner speech to inner speech,” is here one essential aspect.

Descartes (EO 145), as a modern rationalist, started from “le sens intime”, inner perception. Through Augustinian tradition, he connected with Platonic insights on the subject.

In the phenomenology of lying and being lied to, the inner world comes into its own!

Consciousness, which according to the Austrian school (EO 149; 154 (Brentano)) is directed towards the world, can nevertheless limit itself to the inner world—confining itself into “le sens intime” or the closed-individual consciousness, shutting itself off. To ... lie to one's fellow man!

So that it becomes apparent from that experience that consciousness is directed in two ways: towards the inner world and towards the 'outer' world. In the experience of lying and being lied to, the term 'outer world' takes on a very intense degree of reality.

Language (in terms of spoken and written signs) and metalanguage (in terms of mere thought signs) reflect the inner and outer worlds in which our consciousness feels at home. Our dual consciousness expresses itself in spoken and written language and in thought-metalanguage.

Holistic.

Ontology is holism, i.e., a focus on the totality of being(the). -- But inductive, i.e., through samples taken in that totality (EO 143).

That is the fundamental insight of this ontology.

Through the analysis of lying and being lied to, both semiotically and intentionally (phenomenologically), we gain an expanded awareness regarding the definition of “being-in-the-world” that clings to the phenomenon of “consciousness” in phenomenological circles. Using lying and being lied to as a sample.

EO178

3 -- '*Metalogic*'.

John of Salisbury (1110/1180), the Latin humanist of the High Middle Ages, known for his theory of the “thesis/hypothesis” relationship (the relationship between a general and even ideal rule and a singular, indeed, non-ideal situation: such as “Go forth and multiply”. “Does our Anneke therefore necessarily have to have children?”), wrote a work, '*Metalogicus*', a logic on logic, -- a reflection on logical thinking.

In an analogous, re-established sense, metalogic is metalogic—a metalanguage about logical language as logical language. -- 1915: L. Löwenstein; -- later: Löwenstein, Skolem (1920); -- Herbrand (1928), Tarski (1930), Gödel (1930+), Henkin (1947), Cohen (1963), etc. These names demonstrate a new development, -- about which we will not elaborate further here.

Note-- Platonism and (formalized) logic.

“In fact, the founders of logic (understand: logistics) are not only not positivists but, on the contrary, Platonists—G. Frege (1848/1925), AN Whitehead (1861/1947), B. Russell (1872/1970)—at least when he wrote the *Principia mathematica with Whitehead* ; later he evolved; J. Lukasiewicz (1878/1956), Abraham Fränkel (1891/1965), H. Scholz (1884/1956; founder as a theologian of a Center for Logical Studies), et al.—and it counts adherents

in all (philosophical) schools (IM Bochenski, *Geschiedenis der hedendaagse Europese wijsbegeerte*, Bruges, 1952, 270).

This text challenges a widespread misconception. The neopositivists have, admittedly, made extensive use of logistics: they assumed that only the language of mathematical sciences permitted valid statements in the specialized sciences and philosophy.

This axiom has since been significantly weakened by all kinds of criticism, -- notably by the “new rhetoric” (Ch. Perelman/ L. Olbrechts-Tyteca) which, in opposition to the 'theory of proof' (EO 171: Hilbert) that features prominently in mathematics and the empirical sciences (“hard science”), proposed an 'argumentation theory' that belongs more in the humanities (legal science, for example) and in philosophy, but most of all in rhetoric (communication studies).

We are immediately confronted with the limited scope of calculating thinking.

EO179

Hermeneutics.

We have just established that there are at least two interpretations of 'formalized logic' – the (neo)psitivist one and many others. This sets us on the path to a type of relationship of our own (EO 158), namely the relation of meaning.

Note : The first thinker to have clearly grasped this relationship somewhere seems to us to have been Alkmaion of Croton (-520/ -450; Pythagorean physician): he makes a sharp distinction between 'aisthanesthai', direct observation, and 'xun.ienai', literally: establishing connections, interpreting, interpreting, -- best: understanding correctly through interpretations.

a. Animals—so he says—perceive,—directly.

b . People, however, perceive but understand indirectly, namely through interpretations, what they perceive.

c. Deities perceive and understand, evidently, directly or, at least, much more directly.

In any case: for Alkmaion, true knowledge lies in man, in direct perception and indirect interpretation.

This interpretation by this early thinker rests on, and above all on, the fact that he says: “Only thanks to 'tekmèria', signs of the hidden, can we conclude to the existence of that hidden.” We do not grasp the transphenomenal directly, but indirectly through signs present in the phenomenal. These literally 'betray' that which hides behind the phenomena-with-the-signs-of-the-transphenomenal.

Situated within Greek democracy, which presupposes essentially more than a single interpretation of the same given in the agora or popular assembly (direct democracy), this gives rise to the relationship of one-ambiguity: a given (perceived) ----> more than just an interpretation.

Alkmaion was a physician. Physicians are regularly confronted with symptoms, i.e. signals of something hidden, i.e. with ambiguity.-- 'Hermeneutics' is 'hermeneutikè', the art of interpretation.

Formalism and life.

a. The structure of the operations (EO 160) is: given/requested - algorithm.

b. Our life or 'existence' is structured in an analogous way: given/requested (we are 'thrown' into existence (thrownness) with the task of “making something of it” (design)) - algorithm (all acts after we are received in the womb are a series of acts that attempt to realize what is requested).

In other words: there is a similarity between life and formalism, which constitutes precisely one form – step – of life.

EO180

23. Holistic ontology: computer technology. (178/191).

Direct perception is the essential core of phenomenology: that which reveals itself immediately to consciousness is the starting point. All that reveals itself only indirectly we call 'transphenomenal', for it transcends all that is immediately given. We are therefore not aware of it... except through the boundary consciousness that accompanies all that is immediately given.

An Alkmaion of Kroton, an archaic thinker, displays such a boundary awareness in that, amidst the phenomenal, he encounters 'signs' that point to the 'trans'-phenomenal. Thus, the symptoms of an ailment.

When we engage so deeply—albeit in an ontological manner (and thus not so specialized)—with formalism, for example, it is because we thereby justifiably transcend the purely phenomenal and thus 'expand' our consciousness to transphenomenal data.

One of the phenomena that belongs to that same broadening is the computer. Hence this short chapter.

Library st.:

1 .-- E. van Spiegel et al., *The Information Society (The Consequences of the Microelectronic Revolution)* , Maastricht/Brussels, 1983 (work that points to the enormous resonance of the computer as an element of civilization);

2 .-- P. Heinckens, *Programming is more than typing* , in: Eos 6 (1989): 9 (Sept.), 69/73; -- H. Christiaen, Computers in the classroom? (Why, for what purpose, how?) in: Streven 1985: May, 634/645;

3 .-- E. De Corte/L. Verschaffel , *Learning to program: a vehicle for acquiring thinking skills?* in: Onze Alma mater (Leuven) 1990: 1 (Feb.), 4/35 (with bibliography);-- J. Ellul, *Le bluff technologique* , Paris, Hachette, 1988.

The bibliographic mass regarding coordinators is overwhelming, of course.

The 'dynamic' system. (180/183).

One of the basic presuppositions for understanding the computer is the concept of a "dynamic system".

Bible st.: D. Ellis/ Fr. Ludwig, *Systems Philosophy* , Prentice-Hall, Englewood Cliffs, NJ, 1962.

The book begins with a sort of definition. This posits a triad at the forefront, namely Matter/energy/information. With this tripartite structure, we possess the three basic concepts (categories: EO 85) of both the specialized sciences and the related philosophy of science.

EO181

Incidentally : in England, within the context of the first modern industrial revolution (+1770), the concept of 'energy' acquires, in addition to its traditional meaning, a practical-technical significance of the first rank.

Without 'energy', there is no industrialization! Industrialization, which was one of the main concerns of the enlightened rationalism of the time. The steam engine, coal, -- later petroleum, -- even later nuclear energy, embody the concept of 'energy'.

The concept immediately finds a place in the theories: Mayer (1845+), Helmholtz, Michaud (with his *énergétique générale* (1921)), etc.

Also in passing: since 1948 – Norbert Wiener (1894/1964), *Cybernetics (Control and Communication in the Animal and the Machine)*, The Technology Press of MIT/ J. Wiley, New York, 1948-1, 1961-2 – the concept of 'information' has acquired a practical-technical scope in addition to its traditional meaning. Information theory arises immediately, of course.

Organismic thinking, for example—Wiener, Rosenblüth, McCulloch—sees similarities between biological organisms and technical 'artifacts' (constructed machines): in both types of reality, one finds “goal-oriented or dynamic systems”.

1951: under the direction of L. Couffignal, a congress of cyberneticists and steering engineers already takes place in Paris. 1956: in Namur, there were already nine hundred participants from twenty countries at such a gathering!

Such an explosion was, according to Ludwig von Bertalanffy, *Robots, Men and Minds (Psychology in Modern World)*, New York, 1967, 61ff., explainable in three ways:

- a. von Bertalanffy's question for a general systems theory,
- b. the enormous resonance of Winners' work,
- c. the production system in the economy at the time that was intended to make “comprehensive organization” transparent in a rational manner.

All this is centered in an information theory: Cl. Shannon/W. Weaver, *The Mathematical Theory of Communication*, University of Illinois Press, Urbana, 1948. After all, goal-oriented or dynamic systems process information.

Computer science is the science that studies the storage, via memory,—the retrieval, comparison, and modification of information (= data, information with cognitive or characteristic value),—primarily by means of the computer, a device that processes data (information) computationally and logically.

With regard to 'systems', a distinction is made:

a. 'concrete (= semantic zero stage) such as a crystal, a biological body, a factory, a cultural center;

b. 'conceptual' (comprehensive,-- models) such as a set of points, a number system,-- an atomic model, a schema,- things constructed by the human mind but which still refer to concrete systems as representations thereof;

c. formal (formalized) such as a judgment logistics, a formalized axiomatic theory, a programming language for computers, -- things that represent a system of signs in which (i) a conceptual representation (model) (iii) of a physical or concrete reality is described mathematically and symbolically.

Bibl. st.: Doede Nauta, *Logica en model*, Bussum, De Haan, 1970, 174.

Information processing systems.

According to Ellis/Ludwig, oc, 3, a system is “a design, method, or scheme that behaves according to some prescription (information, 'command')”.

Its role or function—hence “functional system”—is the processing of matter and/or energy and/or information such that matter and/or energy and/or information emerges as a result.

Between the 'input' and the 'output', the result, various transformation processes are situated. A grain mill is a producer of ground grain (matter), a steam engine produces energy, and a computer produces information.

'Information'.

Colin Cherry, *On Human Communication*, MIT, 1957, 221ff., notes the similarity and difference between 'pure' communication of information and control by means of information:

a. someone is afraid of me and I say to him: “Throw yourself into that pond!”;

b. I push him into the pond.

In the first case, I give him pure information; in the second case, being informed by the same information (“Throw yourself into that pond”), I act upon him physically: the result is the same, but the mechanism differs. The first case could be called 'suggestion'.

The tripartite division.

A dynamic system comprises three parts or phases.

1. An input (input, recording);
2. a “black box” the transformation: function or the inside;
3. an output (discharge, effect, result).

EO183

The famous “stimulus-response” schema suddenly acquires a cognitive or computational middle term thanks to the concept of an “information processing system”.

intake ----> black box (quasi-closed) ----> discharge

recording ---> self-regulating quasi-closed system --->
^ re-recording (feedback = adjustment) □ v

The diagram above clearly shows the similarities and differences between two types of dynamic systems.

With A. Virieux-Reymond, *L'épistémologie* 1966, 46/47 and 67, one can speak of a “retroactive cause,” i.e., a coupling of final cause and efficient cause. Indeed: the feedback acts as a cause but in the service of a teleology (final cause).

Archaic Greek thinkers such as Anaximander of Miletus, Puthagorus of Samos, Heraclitus of Ephesus, Empedocles of Akragas, and others were well acquainted with this scheme of self-regulation and gave it the name 'kuklos' cycle. Herodotus of Halicarnassus, the father of geography and ethnology, also sees it at work in nature and in humanity—on various levels.

Plato uses the term 'cubernetikè', the science of control. Aristotle, speaking of fundamental principles, distinguishes “telos (goal (direction)/ parekbasis (deviation)/ epanorthosis or rhuthmosis (restoration, adjustment)”.

Holistic.

The starting point is always that which reveals itself immediately ('fainomenon', phenomenon—object of phenomenology). The rest is transphenomenal—beyond the grasp of our immediate consciousness.

The unveiling—alêtheia, apokalupsis, 'truth'—of the concept of “dynamic system” as present in all layers of total reality gives us a sample that is revealing of the totality of 'being' or reality, the object of ontology.

'Being' is to a large extent 'dynamic system' or 'goal-orientation'.

The computer system.

Let us first note two major sections.

1. The actual computer with the keyboard at the front.
2. The background is peripherals.

Please note:

a. The keyboard is an input machine ; **b.** the 'monitor' (with e.g. the screen) and the printer are output machines. See the application of the diagram above.

EO184

Note : The floppy disk is a small disk on which countless 'data' (information, details, details) are stored (the data carrier). But at the same time, it is “the memory” (the storage place of data).

It is thus both an input and output unit. -- Input, memory, and output are the three 'functions' (roles) of the floppy disk unit. The duality “equipment (hardware, 'matériel') / software (software, 'logiciel').”

Two aspects determine working—calculating—with the computer.

a. Equipment . -- This is the totality of the material components: electromechanical and electronic parts, cables and circuits for electrical power supply and interconnections, -- a central memory and auxiliary memories, -- input and output devices for information.

b. Software . -- This includes the entirety of the programs and the associated documentation material (such as manuals, flowcharts for the operation of the computer).

Ph. Davis/ R. Hersh, *L'univers mathématique* , Paris, 1985, 365/369 (Modèles, ordinateurs et platonisme), points out that actual computer computing (working with a computer) encompasses both aspects: only if both equipment and software are perfectly in order—which is far from always the case—can one expect “the absolute truth” from a computer.

The five aspects.

According to Dr. L. Klingen (Helmholtz-Gymnasium, Bonn), computer science comprises five aspects:

- a** . insight into the use of the equipment;
- b1** insight into the core of the thought process, the algorithm;
- b.2.** structuring the data (information) to be entered;
- b.3** . applying to concrete cases (application models);
- c.** protecting the data against intruders.

The difference compared to the washing machine.

See EO 161. -- The automatic washing machine can serve as a model.

a. Similarity . - The computer also works according to that model: input / processing according to a program / output (dynamic, information processing system).

b. Difference.

- 1.** The automatic washing machine is highly pre-programmed.
- 2.** The computer is much less pre-programmed. In other words: the user can build a program themselves—to a certain extent—by programming based on a problem to be solved.

EO185

Programming.

Let us define 'programming' as: converting the given and the requested information—together called the 'problem'—into a logically correct sequence of elementary (irreducible) steps—understandable to the type of computer used.

In other words: forming an algorithm (EO. 160).

Practical: the entire process must be followed! From the moment we start thinking about the problem until the final program runs flawlessly on the computer.

The pure translation work into the programming language is only a small part of this (P. Heinckiens, *Programming is more than typing* , 69).

Programming is done primarily on paper.

One does not jump straight onto the computer! One first walks to the desk, takes a pen and paper. That, too, is already programming. This is done in a specific way called “structured programming.”

Note-- In other words: outside of all computer science, one begins by simply thinking logically about what is given and what is requested. As has been happening for centuries.

The Herodotian method.

In Herodotus' *Historia*, we identify two aspects.

a. History.

Latin *inquisitio*, investigation. -- This step yields the unformed substance, the loose materials or 'data'. In ancient rhetoric this is called 'heuresis', Latin: *inventio*, invention. Herodotus obtains the information from his own observation or from eyewitness accounts ("hearsay").

b. Logos.

Lat.: *textus*, text. -- This is the formed substance. -- In ancient rhetoric, two aspects are distinguished therein:

- i. 'diataxis', lat.: *dispositio*, arrangement; -- which is the structured ordering of the text parts - steps - (the plan of the exposition in the first place);
- ii. Lat.: *elocutio*, stylization, shaping; which is the polished formulation of what one has to say, the stylized 'message'. That is still the case with good programming!

Problem/ algorithm/ program. (185/187).

We explain this order.

a.-- Problematic.-- The given information present in the data elicits the query. It is analyzed.

b.-- Algorithmics. -- “Algorithmic thinking is the hard core of computer science” (H. Haers / H. Jens, *Informatics and Computer in Education* , 933).

EO186

An algorithm – we repeat – is a definition.

1. A definition is the articulation, long or short, of the content of a concept (EO 08). The rule, since the medieval thinkers, is: the entire content and only the entire content! In other words, to speak in such a way that the concept is distinguishable—discriminable—from the rest of reality. It consists in the enumeration of the essential characteristics that make up the concept.

2. The algorithmic definition takes the form of a scenario or sequence – an enumeration – which fully (entire content) but exclusively (only entire content) encompasses the irreducible events – 'assignments'. One need only be aware of the pair of “nominal and real definition” (EO 12), which is certainly relevant here.

One should also take into account “axiomatic definition” (EO 141: a small number of propositions concern a specific domain of reality that they 'define').

Decision . -- The steps of the algorithm are 'defined' as follows.

c.-- Programming.

That is the translation work into a programming language. There are several such computer languages. -- A 'program' defines what the programmer wants the machine to execute, namely a logical-strict sequence of 'commands'. (EO 182: 'information'), 'instructions' 'commands! The names of computer languages are, for example, Elan, Pascal, Logo'. The computer 'understands them', i.e., it is capable of using them.

Algorithmic types.

The “top-down” method regarding algorithms applies the Cartesian method (EO 160): the totality—all (set)/whole (system) in Platonic language—is split into a number of irreducible smallest elements and immediately formulated in such a way that a conclusive sequence of unambiguous instructions from the initial situation leads to the final result. -- The opposite method is called the “bottom-up” method.

Further structures. -- There are three such structures.

a.-- Iterative algorithm. -- The monotonous repetition of the same! Model: a, a, a, a, EO 141 (Mathematical definition by means of “mathematical induction”) gives us a small example of this: $1+1=2$, $2+1=3$, $3+1=4$

Applicable model

One wants to retrieve a list of twenty names from the computer's name supply—memory: one presses “enter a name” twenty times.

EO187

b.-- Sequential algorithm.

The non-monotonous order! Model: first a, then b, then c, ...

Appl. mod.-- Making coffee on the computer:

1. initial situation, 2. I go to the coffee maker, 3. take the coffee pot, 4. walk to the tap, 5. fill the pot with water, etc.

c.-- Selective algorithm.

A multitude of possible choices! Model: if model, then yes; if counter-model, then no.

Appl. mod.-- Pension calculation via computer.

Does the beneficiary belong to a category (worker, employee, self-employed, etc.) yes or no? If yes, then form. Does the beneficiary have a full or incomplete career behind them? If yes, then form. Edm.

Thinking skills question (187/189).

1 Dealing with a computer, -- especially programming, requires thinking skills, i.e. a form of applied logic.

1.-- The type of 'thinking skills':

According to E. De Corte/ L. Verschaffel, *Leren programma* , 12/14, programming is governed by three presuppositions. Solving a problem requires them.

1.1.-- Basic insights.

Substitutors call this “domain-specific knowledge”. That is: possessing the necessary and sufficient data concerning a domain. -- This is the 'historiè', the tracing of data, of Herodotus.

Applicable mod. Anyone wishing to resolve a legal matter (such as a divorce) via computer ought to be well-versed legally—in the domain: legal concepts, statutory texts, rulings, etc., must be known; the case file must be familiar. Compare this with the “true propositions” concerning “a domain” in the axiomatic-deductive method.

1.2.-- Order theory (harmology), logic, methodology.

In Herodotus, this is the 'logos', the orderly exposition. -- Proponents call this: 'heuristics'. They call proceeding methodically in the search for solutions 'search strategy'. For example, the “top-down” method or its inverse, the “bottom-up” method, which concern the totality and its parts (ancient stoicheosis). For example, using diagrams. For instance: taking an analogous problem as a model or, conversely, thoroughly investigating an aspect (the latter is generalization, system induction: EO 99; -- 95).

Incidentally : the “top-down” and the “bottom-up” are comparable to EO 81: the dieretic-synagogical method.

EO188

2.-- Self-knowledge (introspection).

Theorists call this 'metacognition'. 'Cognition' means 'knowledge'. This is, here, the data plus the structure given to the data (algorithm).-- EO 176 (Metalanguage; 173) taught us that 'metalanguage' is “language about language”. Thus, 'metacognition' is “cognition of cognition”. Loop-shaped or reflexive (EO 158) knowledge. Knowledge that knows itself. By “looking into one’s own heart,” as the poetess says.

“Am I, the programmer, truly a reality-faithful (“objectively oriented”) and logically acting human being? Or do I act irrationally? Do I have prejudices, - - 'axioms' “that cannot be touched”? How far does my memory reach? How far does my capacity for induction reach? In other words: to what extent am I master of the problem?”

The limited nature of computerism.

Bibl. st. : Cedos, *Cerveau humain* (“(maman, enco un miscui!”), in : Journal De Genève 19.12.1990.-- The Fact. --- A two-year-old baby recognizes in the blink of an eye a cookie that barely shows its edge - in the opened package. The most powerful computer - at least at this moment - fails to do so.

The interpretation. This indicates that the baby in question:

- a.** is a living being (living beings are very intuitive),
- b** . endowed with mind,
- c** . a mind that requires only a minimum of observational data to recognize something.

The computer is and remains a lifeless, soulless machine that lacks the intuition of life and spirit.

Amidst a number of computer drunks, a number of people remain sober! So says Prof. Weizenbaum (Massachusetts Institute of Technology).

Weizenbaum responds to the fact that at a number of 'universities' in the USA every student must have a microcomputer as follows.

1 .-- Not everyone in the USA agrees with that.

For example, the physics department at MIT has refused a major expansion of computer facilities for students. The reason: to emphatically prevent students from viewing the course material exclusively—note the modality—from the perspective of the question: “What can be programmed from this?” In other words: avoiding one-sidedness.

2 .-- A great deal can be learned very well without a computer. In particular: the subject matter does not need to be 'adapted' to the computer. However, the computer is used as an instrument—preferably where it is truly superior (EO 162: The Human Coordinator). Cf. H. Christiaen, *Computer in the Classroom* , 645.

EO189

D. Jeanmonod, *Le bluff technologique* in: Journal de Genève 18.03.1968, in a commentary on Ellul's *Le bluff technologique*, says: “One must think in terms of algorithms, i.e., in a set of unambiguous commands.

But, when one is so completely molded in that way of thinking, one is totally closed off to every other form of thinking.” Ellul calls this 'computer terrorism', which penetrates even into the unconscious and subconscious layers of the soul.

Once again: a warning against the one-sidedness of spiritual life!

Conclusion. -- Algorithmic programming is

a . one possible updating of an ancient method (the magic formulas are structured in this way),

b . but it must be aware of its limits.

There is system and system.

Works such as *Leo Apostel et al.*, * *Deenheid van de cultuur (Naar een algemeen systementheorie als instrument van deenheid van ons kennen en acties*)*, Meppel, Boom, 1972, attempt to unravel the very broad scope of the concept of 'system'.

Long before that, von Bertalanffy, Boulding, Gerard, and Rapoport founded The Society for General Systems Research in 1954. *Von Bertalanffy* had already arrived at the idea of “a general theory of systems” around 1937.

In his **Robots, Men and Minds (Psychology in Modern World)**, New York, 1967, he opposes the 'reductionist' view that attempts to interpret all systems

downwards as merely mechanical systems. That 'reductionist' view arrives only at “the robotic model of man”—so he says—not at man in his fullness.

Man can be described as “a system.” But then a 'system that knows signs based on agreement, -- with 'language' in the human sense, that knows conscious valuing, that knows conscious acting. Man is a system, yes, but then a system that stands far above purely biological systems (e.g. all plants and animals) and even more so above all inorganic systems (stones, purely chemical processes, -- machines of all kinds).

Conclusion . -- Von Bertalanffy's general systems theory recognizes levels or gauges regarding reality.

EO190

Retrosynthesis

We saw that stoicheosis or the analysis of totalities (sets/systems; EO 52; -- 45 (henology)) played a major role in archaic and ancient thought.

Bibl. st.: B. Feringa/ R. Kellogg, *Factoring* (Nobel Prize in Chemistry 1990), in: *Natuur en techniek* (Natural Science and Technical Monthly) 58 (1990): 12 (Dec.), 832/839.

The organic chemist Elias J. Corey, dubbed “the most prolific organic chemist in the world” by his colleagues, received the Nobel Prize for his 'retrosynthesis'.

'Retrosynthesis' is a chemical method that

a. from simple building blocks b. creates a complex molecule. In doing so, the chemist uses the computer to determine the most suitable formula for a sought-after molecule.

a.-- Synthesis.

Corey, with about twenty collaborators, worked on the formation of gibberellic acid (a structurally very complex plant hormone) from simple elements (often compounds with carbon atoms).-- Which leads to the manipulation of biological characteristics.

b.-- Retrosynthesis.

Corey broadened the synthesis method.

a . He methodically dissected complex structures into smaller building blocks. Cf. “top-down” (EO 186).

b. With such components, Corey then works in the reverse sense (cf. “bottom-up”): he resynthesizes.-- EO 160 (Cartesian stoicheiosis) taught us that scheme!

In this, Corey involves the computer, specifically the Lhasa type (Logical Heuristics Applied to Synthetic Analysis), widely used in university and industrial laboratories around the world (think of pharmaceutical research).

Since 1959, Corey has been actively working on this at Harvard University. It was precisely that computer logic—meaning applied logic—regarding synthesis that was one of the main reasons for his Nobel Prize.

Total synthesis.

The production of natural substances, starting from simple molecular constituents, is called 'total synthesis'. A 'natural substance' is an organic compound of natural origin. The atoms from which a hormone or an antibiotic is 'combined' (EO 46; 151; 157)—their mutual relations and interactions, the functional groups within them, the spatial structures—all of this is involved. Step by step—algorithm—one decomposes into 'synthons' (final building blocks).

EO191

That is 'retrosynthesis' -- The archaic-antique 'stoicheiosis' is apparently still a valid method.

Appl. mod.-- Corey thus synthesized ginkgolide-B, a complex compound found in the ginkgo biloba (the Japanese nut tree),-- used in Chinese phototherapy against asthma and inflammation. This was done in thirty-seven steps. Algorithmic!

Neuron network.

Since 1960, information scientists (USA, Japan, Switzerland) have been experimenting with a new type of ordination, namely neural networks. A 'classic' ordination contains a program (microprocessor), whereas a neural network does not.

1.-- Original.

The human brain contains about one hundred billion neurons (a 'neuron' is a nerve cell with a neurite and dendrites), which interact with each other, thanks to 'astrocytes'.

2.-- Model.

The neural network attempts to approximate that model (= simulation, imitation). The network contains no 'program' but rather a set of 'elements' – artificial 'neurons' – that interact with each other, electrical in nature. And this with a sensitivity threshold susceptible to fluctuations.

Appl. mod..

Given: a network; requested: as a task, 'instruction', or 'command', one gives “Look up the word 'cookie' in a text”. To this, the network responds somewhat like a human: the more a word it searches for resembles 'cookie', the more it becomes “electrically excited”.

Conclusion -- The algorithm, characteristic of the classical ordinator, is transparent. The algorithm in the neural network strikes electronics specialists, neurobiologists, and psychologists as bizarre and peculiar.

The neural networks are suitable for key phenomena of robotics – 'robot', a Czech word, means “artificial human” – such as the artificial viewing and processing of words.

Note-- EO 184 (Programming) and 185 (Programming) are hereby partially revised: one could speak of “flexible programming”!

The automatic washing machine is

1; the classical coordinator is

2 ; the neural network is

3 : Preprogramming, programming, minimal programming seem to be the correct terms for a non-static evolution in the systems engineering that builds computers.

EO192

24. Holistic Ontology: The Deductive Method. (192/208)

The beginning of all 'truth' is the direct manifestation of what is.

Phenomenology adheres to that beginning, for it reproduces what reveals itself directly to the conscious human being—i.e., the phenomenon.

The reasoning—deduction, reduction (the latter in the form of induction)—transcends, logically rigorously and thus 'real' (i.e., true to reality), all that reveals itself directly. It is transphenomenal. And indeed in the sense that our consciousness becomes aware of an initially transphenomenal reality. So that the reasoning actually turns something transphenomenal into a 'phenomenon', for through the reasoning it “reveals itself”.

We will now briefly examine this in the case of deduction.

The sentence (statement, judgment, proposition) in itself.

Bernhardt Bolzano (1781/1848) was a thinker who devoted himself intensively to logic and mathematics. He is known for his * *Wissenschaftslehre* *, 4 vols., 1837, with which he—along with George Boole (1815/1864)—became one of the founders of pure logic.

Logical thinking is not a matter of psychology, sociology, or cultural studies.

Proceeding logically is radically different from applying a set of presuppositions specific to an individual (psychology), a group (sociology), or a culture (culturology). Such a thing is, at best, applied logic!

On the contrary: with the great tradition dating back to Parmenides of Elea, Bolzano conceives of judgment as an operation independent of the thinking subject or thinking mind, whether that thinking subject be an 'I', a 'we', or a set of 'cultural values'.

For Bolzano, therefore, logic and, for example, psychology (sociology, cultural studies) are fundamentally different things.

Applicable model

“It is raining” is a sentence in itself, because there is a subject (original) and a predicate (model) such that 'it' is clarified with information (= model), namely 'raining'. Whether an 'I', a 'we', or a 'culture' thinks this or not makes no difference!

The structure “original (subject/model (predicate))” exists, exists in itself, independent of every other being. As Parmenides said: “It (being or reality) exists according to itself (not according to something else)” “Kath'heauto” in ancient Greek.

The hypothetical sentence in itself.

a . The categorical sentence states something without a prefix, even without modality in many cases. Thus: “Four is; – in some cases (“e.g.”), one plus three”. Or: “Four is – in all cases – four”. The latter is a law (EO 25: Law of Identity), which, a sentence that knows no exceptions, is – universal, indeed, transcendental (all-encompassing). Unconditional and therefore a purely categorical

b . The hypothetical or conditional sentence is a full sentence, i.e., a main clause and a subordinate clause. As a model: “If $1 + 3$ or $2 + 2$ or $3 + 1$, then 4”. Understood: “If Peano’s axioms (EO 140), regarding 'sum', are true, then $1 + 3$ or $2 + 2$ or $3 + 1 = 4$ is also and immediately true.”

Reason: the sum of $1 + 3$, $2 + 2$, $3 + 1$ is in each instance an application of the general rule of aggregation or 'sum.' Or in terms of Jevons-Lukasiewicz: if A (rule), then B (application); well then, rule; therefore application. That is deductive thinking.

From the evidence or 'phenomenon' “general rule” one arrives at—from which one deduces—the initially transphenomenal 'application', which is thereby encountered as 'evident' or true ('apokalupsis' or 'aletheia', the ontological 'truth' or 'revelation'). Cf. EO 62 (Aletheiology).

Note : In colloquial language, in all natural languages the condition can be implied. For example: “In this case (= if such a situation arises, then) I will come”. Or even: “Then I will come”.

“Lying is being punished” is a subject clause (the infinitive 'liegen' is the subject), but in a number of situations (which are apparent from the context), a condition is latently present in the subject: “If you lie, then punishment will follow.” “Whoever lies gets punished”: the relative clause “whoever lies” covers a condition in a number of cases, namely “If one lies, then one gets punished;

Among adverbial phrases, the time-indicating clause can frequently cover a condition: “Whenever one lies, punishment follows” (= “If one lies, then ...”).

The participle (= having the value of an adverbial, in this case conditional, clause) often covers a condition: “The lying person gets punished” is: “If someone lies then ...”).

Conclusion. -- Well-trained linguistic insight discovers such things!

Prefix/constituent (prep./subordinate clause).

Bibl, st.: Ch. Lahr, *Logique* , 509. -- “The mental operation consisting in deriving one or more subordinate clauses from one or more preceding clauses—in a logical manner (Bolzano: as sentences in themselves)—is reasoning”.

EO194

It is clear: the hypothetical sentence, if interpreted as a logical operation of thought following Bolzano's method, is immediately a reasoning.

EO 73 demonstrated this phenomenon as fundamental to Platonic thought. Specifically: the preposition expresses a condition, a presupposition, a 'hypothesis' or 'assumption'.-- This is the core of all traditional, 'classical' logic: deriving from prepositions!

Unreal prefaces.

Even unreal clauses can be processed in logic (and in logistics) as “sentences-in-themselves”.

With Rescher (a logician), one can distinguish types.

1. The problematic prepositional clause.

If we assume, contrary to an established opinion, that ...”.

2. The paradoxical sentence.

If we, contrary to an evident opinion or one perceived as such, nevertheless assume that ...”.

3. The false clause.

If we nevertheless assume, contrary to the undeniable truth, that ...”.

Logic is, in other words, not epistemology: whether the antecedent clause is epistemologically (theologically) testable ('verifiable' in recent usage) does not interest the logician as a logician, for he takes the nominal definition (EO 12) of “the sentence-in-itself” and only of “the sentence-in-itself”. If all people are mad, what follows from that purely logically? This is how the pure logician reasons.

Deductive reasoning (194/195).

Let us take Peirce's famous example.

Prefix/Northbound. All beans in this bag are white and this handful of beans comes from this bag. Therefore, this handful of beans is white. -- These seemingly—logically speaking—categorical sentences cover a line of reasoning: “If all beans in this bag are white and (if) this handful of beans comes from this bag, then this handful of beans is white”.

Note-- Proof by contradiction.

In Aristotle's usage: 'ap.agogè', Latin: abduction. One also says “reductio ad absurdum”, reduction to the absurd (cf. EO 26: Law of Absurdity).

This is one type of deduction. Specifically: this deduction makes use of a dilemma, i.e., a line of reasoning that is twofold but leads to the same conclusion.

According to D. Nauta, *Logica en model*, Bussum, 1970, 27ff., the Paleo-Pythagoreans – between 560 and 350 – knew proof by contradiction: “The finest achievement of the Pythagoreans is that they proved that it is impossible – contradictory, non-existing, “absolute nothing” – to find a rational model (a fraction) for the square root of the number 2 (V2).

EO195

That is to say: for the number whose square (square) is 2. (...).

“The finest example of a proof by contradiction from antiquity.” Behold the applicative model. Now the regulative model. The author continues: “In a proof by contradiction, one proceeds from the Assumption – EO 194: Unreal clauses) – that a counter-model exists. That is to say: an 'instance' (example) that satisfies the data of the problem but not the requirement (that which is to be proven).

It is then systematically shown that such a counter-model cannot exist, because it leads to absurdity or contradiction.

This proves that every object that satisfies the data must also satisfy the requirement.” So much for what D. Nauta says about the essence or structure of proof by contradiction.

In other words: to demonstrate that the model—that which is to be proven—that which is real is real, one takes the detour of proving that the counter-model is radically unreal. Since only two choices are valid in this

regard—that is the dilemma—the unreality of the one (counter-model) entails the reality of the other (model). Now, demonstrating the reality of the other was what was required.

Note : An example can be found in Eo. 80 (Platon's historical dialectic): if the possessor is not of sound mind, then it is his duty not to return the weapon that is dangerous in his hands! Returning it, which implies a contradiction with Cephalos' definition of “conscientiously returning,” is ethically absurd. However, such an absurdity follows logically from the (incomplete) definition of 'justice' (= conscientious conduct) that Cephalos advocated.

Cf. also EO 64 (non-disclosure); EO 57 (Analogous reductio ad absurdum from “Expertise is good”).

Note-- The “*argumentum ad hominem*”.

An argument that is “played off against the person (the conversation partner)”.

Structure:

VZ 1: You claim p.

VZ 2: Well, p logically leads to unacceptable (sometimes absurd) conclusion(s).

NZ : So p (= what you claim) is unacceptable.

There is a structural similarity to the argument from contradiction.

LO196

Appl. Mod.: the computational account (196/197)

EO 183: the computer system and what goes with it are briefly recalled.

Bibl. st.: Ph. Davis/ R. Hersh, *L' univers mathématique* , Paris, Gauthier - Villars, 1985, 1131. --The text in question touches upon one of the basic premises of computational thinking.

1.-- The running or 'readable' mathematical text.

a. The premise of the current strictly mathematical text is that it is in any case formalizable (EO 161) in the form of, for example, at least one artificial language.

b . In fact, ordinary mathematics textbooks contain at most sections that are formalized, because “they are written in French, English, or other colloquial languages”! After all, they are meant to be read by “human beings.”

Indeed: a purely formalized text is invariably embedded in a natural language that, at the very least, clarifies what the signs might mean—what the operation signs might intend to say. The artificial or contrived language par excellence—according to its proponents—is Cantorian set theory.

2.-- The coordinator.

One application—according to Davis and Hersh—of formalized text is the program (EO 185) of an ordinator. To program an ordinator—to make it usable, for example, to test calculations in an enterprise—one must

a . . the graphic style (EO 156), di know the vocabulary (all possible characters) or vocabulary thereof and

b. master the syntactic rules (EO 161), i.e. the grammar that structures the vocabulary.

Appl. mod.: the simulation game.

Bible st. : A. Crattenand, *Colloque scientifique : Eh bien, jouez maintenant* , in : Journal de Genève 31.07.1987.

Trends follow one another rapidly in the computer world! After the audiovisual trend and the microcomputer trend comes the simulation game trend (especially in the USA). -- Economists, engineers, and military personnel practice it extensively.

1.-- The basics.

A small program to calculate logically strict probabilities. -- For example: the chances of a politician being elected.

2.-- Further conditions.

Preferably explicitly – the computer calculation does not recognize 'understood elements' – all factors (EO 53 (Factor Analysis); 67 (Element/ presupposition) or 'elements' that influence – 'determine' – an election, for example – such as the electoral district (city, municipality, etc.)), – the parties and their supporters, the role of women, of religions, etc.

LO197

Reread EO 94 (The Inductive Method) now.

If we consider the full number of elements or factors influencing an election: how many factors escape us? In other words, the eternal tragedy of our ontological or knowledge of reality is that we know only a sample of a collection (e.g., voters) and therefore must accept the risk of generalization. The holistic or total character is, in fact, never present!

Consequence : No matter how solid your computer's program may be, your knowledge of all factors creates a breach in the calculation of, for example, election odds.

Not without a touch of humor, A. Crattenand writes that the interested party only has to play, understand: to deduce. For (he says) the program is such that it presents the logically achieved results—if all factors, then the probabilities—as 'output' or discharge.

The name of the specialized science of such axiomatic-deductive 'calculation' is: audio-videomatics. Core: the hypothetical method applied to the relationship “factors/probabilities”. With the program, which operates axiomatically and deductively, acting as the middle ground between the two.

Appl. model: the axiomata of ethics. (197/208)

Reread EO 137 (the structure of the axiomatic-deductive method) just to be sure.

a . The defined area of reality is, here, conscientious or 'righteous' conduct.

b . All propositions relating to that ethical or moral domain must be 'true', i.e., exposed reality (not representing an illusory or apparent reality).

Bible st.: R. Van den Berghe, *Veritatis splendor (Presentation and evaluation)*, in: *Collationes* (Vl. Tijdschr.v.Theology and Pastoral) 24 (1994): 1 (March), 79/100.

Topic: the encyclical *Veritatis splendor* (05.10.1993), a highly controversial document dealing with the basic presuppositions or axioms of morality as the Catholic Church traditionally understands them.

EO198

The traditional Catholic position.

“According to traditional Catholic moral theology—note: 'theology', i.e. theology or theology insofar as it concerns itself with conscientious conduct—there are four 'sources' of morality:

- a. the object,
- b. the intention,
- c . the circumstances and
- d . the consequences.

When an act is to be judged on its moral content (understand: how moral or conscientious is it and in what way is it conscientious; EO 09 (Existence and essence),-- 25 (Is, is so)), one must take into account the contribution of each of these 'sources':

Note:

a. The term 'circumstances' is used here in one narrower sense, for, in a broader—more customary sense—the intention and the consequences are also 'circumstances'.

Incidentally : the traditional term 'circumstances' reappears in more recent usage under the name 'situation', for what is 'situation' other than the whole or the totality of circumstances?

b. The term 'sources' can be replaced by presuppositions or axioms. Indeed: from those four sources, the Catholic tradition deductively derives the morality—the conscientiousness—of an act.

c. The entire set of “object/ intention/ circumstances/ consequences” constitutes the commonplaces or recurring concepts of traditional Catholic morality.

A 'commonplace' (Latin: locus communis, Greek: topos koinos) is something to which one repeatedly falls back while thinking or acting.

d. If the sentence “An act is conscientious” can serve as the basic sentence regarding conscientious behavior, then the 'sources' or 'commonplaces' are the modalities within that basic sentence (EO 36): “An act, if object and/or intention and/or circumstances and/or consequences contain no reservation (restriction), is conscientious”. Subject and predicate change under the influence of one modality or another.

The decisive role of the 'object' modality.

“The first and foremost contribution – according to Van den Berghe, ac, 96 – always comes from the object. When this object is 'bad', neither the intention nor the circumstances nor the consequences can make the act 'good'”.

Appl. model. - The act of “killing someone” is 'bad' because of its object itself. Axiom supporting this: “Biological life is the most valuable thing par excellence,

EO199

(at least for most people, because there are exceptions: martyrs, suicides, suicides for a cause (think of the Japanese kamikaze pilots in WWII (1940/1945))).

One sees immediately that the axiom is not a radically universally accepted statement or judgment!

What the ecclesiastical authorities actually mean by the statement that “when the object is bad, neither the intention nor the circumstances nor the consequences make the act good”, is that, in principle—that is, purely abstract-axiomatic—man, insofar as he truly wishes to act conscientiously, is obliged in conscience (not merely externally) to respect (biological) life as inviolable (that which may be done but must not be violated), as 'sacred', as 'taboo'.

Put differently: denying that axiom in a principled-axiomatic way—consciously suppressing or unconsciously repressing ('parafrosune', in Platonic terminology)—is intrinsic, i in its deepest essence ('ousia' in Platonic, i in its existence and its essence), unscrupulous, 'bad', 'evil'. Whereas respecting life in a principled-axiomatic way is intrinsic, essential, good.

This entails a law of nature: respecting life insofar as it is life, as value in itself, is always and everywhere good; disregarding life insofar as it is valuable in itself is always and everywhere bad. Whoever might doubt this should put forward the counter-model, namely, to uphold as an axiom or principle that life represents no value from any perspective!

“Thesis/hypothesis” (John of Salisbury). (199/201).

This Latin humanist with very broad cultural and life experience lived around 1110/1180 and published the first comprehensive theory of the state of the Middle Ages (Policraticus).

None other than the (post)structuralist Roland Barthes, in his *L' aventure sémiologique*, Paris, 1985, 143 p., cites a system or duality that has

continued to live on in ecclesiastical circles and—what is more—which we will examine here as fundamental.

1.-- Thesis (positio, proposition - in - abstracto).-- That is the pure concept without any modality. Thus, for example - according to Barthes - “It is worthwhile to marry”.

2.-- Hypothesis (cause, singular-concrete situation).-- “Is it - according to Barthes - valuable for Anita to marry”?

EO200

One of the meanings of 'hypothesis' in texts about theatre is 'scenario', 'story' (in short). This is to inform the reader or viewer about the preliminary knot, i.e., the initial situation.

We will address that:

a . the modality-free sentence reads: “Marrying is a 'good'”; (EO 44 (Transcendentals); 49 (Transcendental 'goodness'); 56 (Being and the good); 69 (Axiology));

b. the ethical sentence provided with a modality reads: “Marrying – for Anita – is (possibly) good”.

The first sentence is a sentence of principle; the second an applicative or application-containing sentence.

Everything now depends on the conceptual content of the modality 'Anita! Suppose: Anita wants to become a nun! Suppose: Anita has an illness.' -- Such 'circumstances' are modalities that suspend the value judgment regarding the expediency or meaningfulness of her marriage.

In other words: forms of restriction or reservation belong to the singular conceptual content of 'Anita'. However good marriage-in-itself may be, as an abstract value: marrying-for-Anita is “good-with-reservations”, “good-with-modalities”. Marriage, abstractly, is good-without-further-qualification; marrying-for-Anita is good-with-restrictions.

The first case is applied transcendently to one category (marriage as a value); the second is also transcendental but applied to a category (Anita with her modalities) that makes a reservation regarding the category 'marriage'. Cf. EO 10 (Transcendental/categorical). So much for the purely ontological foundations.

Wandering conscience.

The ABC theory (EO 132) – if A (given) and (subjective modalities), then C (behavior) – can clarify here.

Suppose that Anita harbors a strong prejudice against marriage—possibly determined by her parents' failed married life. In that case, marriage will represent a lack of value to her. In this, she exaggerates and is 'unreal' (estranged from the intrinsic value present in marriage).

In ecclesiastical terminology, this is called a “erroneous conscience.” It sincerely believes that it is right. -- When such an erroneous knowledge is present—in B (subjective modality or 'prejudice')—then, so says the Church, such a conscience must be followed “in conscience.” At least, when this erroneous conscience is 'innocent' (we are jointly responsible for the formation of our conscience).

EO201

This does not mean that we equate a misguided conscience with a 'true' conscience: it is not equivalent to a 'true' or 'real' conscience. Hence the high duty to further shape our ethical concepts in a 'continuous' formation.

Biblical model. -- The biblical prototype of a misguided conscience is Abraham. -- Gen. 22:1/19. -- The scenario or 'hypothesis': 'God' (= Yahweh) commands Abraham to sacrifice his own only son Isaac; he departs for Moriyah, -- prepares wood and fire there, -- places Isaac on the altar, -- seizes the sacrificial knife, but “the angel of Yahweh”: (God himself in an appearance) cried out: “(...). Do him no harm! Now I know that you thoroughly revere God (...)”.

Abraham had to follow his untrue, unreal conscience “in conscience” (in vernacular: he knew of nothing better). This does not prevent the angel of God from pointing out the erring character.

Incidentally : what was Abraham's intention? To kill? No! To obey God by killing! Religious obedience was the true object of his will. Ritual killing—an archaic custom—was one modality: it functioned, normally, as a reservation, naturally—also for the rite.

But decisive for Abraham was to carry out God's will—the actual object.

It is evident that the correct determination of “the object”—when that object is not treated in abstracto—must take into account the other 'sources' of morality (intention, circumstances, consequences).

EO 81 (The diereitic-synoptic method) taught us that, in reality in full, concepts merge. That is the core of Platonic 'dialectics' (that stoicheiosis or analysis of factors that takes into account not only the abstractly isolated concepts but also the *sumplokè*; concrete reality).

In particular: without the modality “God’s will,” Abraham’s killing is killing—at most a ritual form of it; with the modality “God’s will,” that (willed) killing is an act of religion!

The sources of morality—object/will/circumstances/consequences—converge as soon as one enters the concrete reality of everyday life. Platonically: they are dialectically intertwined and determine one another. -- Which sometimes makes the matter extremely complicated, of course. Judgment can sometimes be impossible for our meager human mind.

EO202

The main intention is a deduction.

When Anita, ill, decides not to marry—for her, marriage is rather a worthlessness—then, upon logical analysis, it becomes apparent that this act of freedom in fact rests on a line of reasoning—however implicit (unspoken) that reasoning may be.

1. Life is, at its core, logical, applied logic.

J. Anderson/ H. Johnstone, **Natural Deduction (The Logical Basis of Axiom Systems)**, Belmont (Calif.), Wadsworth, 1962, 3, states: one way to study logic is to investigate—Herodotean 'historiè', Latin: *inquisitio*;—Platonic 'theoria', fathoming—how in fact our acts of life proceed logically. Especially—according to theorists—when we wish to prove something. “Generally speaking, we prove a (true) theorem regarding a domain by demonstrating—phenomenon—that it is a deduction from preceding theorems.”

2.-- The free or unfree decision is invariably a deduction, (202/208)

In the system of moral sources—object/will-intention, circumstances, consequences—the decision resides in the intention. There it reveals itself. But its presuppositions often remain hidden. Transphenomenal.

Therefore: let us briefly expose those hidden presuppositions through investigation (alêtheia, apokalupsis, revelation or 'truth').

a. Execution.

Whether civil for reasons of infringement of common law or military for reasons of desertion or espionage: execution is, among other things, killing. But the actual object of the intention is to safeguard community interests: some form of “general welfare” is meant. The mere means to that end is killing as the only way out.

Without the modality “danger to the community”, execution is killing; with the modality “danger to the community”, it is the safeguarding of the public welfare.

And now for the reasoning or logical proof. -- Judges act in the name of the public welfare and executioners in the name of execution. Or: if the public welfare is a higher value and (if) this man or woman poses a threat of a very serious nature to that same public interest, then a judicially regulated elimination by killing is an act justified in conscience. And thus morally 'good'. Even if those responsible do not make that reasoning explicitly, it is there in depth: expressed in a modal sense, this yields: “The killing of a human being, -- in principle (in abstracto) impermissible, -- is, considering his/her danger to the environment, in fact, permissible in conscience”.

EO203

One sees that the systechi or duality of John of Salisbury – 'thesis' (principle, abstract value) / 'hypothesis' (actual totality of circumstances) – is a truly applicable duality.

b.-- War killing.

A bombardment—especially hand-to-hand combat with bayonet—a guerrilla war—they are deadly activities “in the name of” some general welfare or community interest. Determine for yourself exactly what the object is within such a dialectical framework.

c.-- Machiavellian killing.

Niccolo Machiavelli (1469/1527; prominent Renaissance humanist) is known primarily for his **Il Principe** (The Prince: 1532). **Il Principe** is first and foremost a positive or assertive description—not a moral treatise:

Machiavelli depicts how, in fact, many princes and rulers pursue the goal, the welfare of the state—assertive behavior—if necessary by eliminating troublesome individuals (by killing, e.g., by hired assassins).

But Machiavellianism is in fact much broader than mere state Machiavellianism: corporate bosses, party leaders, mafiosi, terrorists, fanatics in the service of one faith or another—they all occasionally permit elimination by killing.

Among the fanatics, one can count killing for blasphemy or apostasy as accepted in Islamic circles—as presumed to be permissible in conscience.

The killing then takes place “in the name of the group and its interests”. The sanctity of the life of one’s fellow man is sacrificed to the ‘sanctity’ (sanctification or Arabization, ‘absolutization’) of the group’s interests.

The three major forms of ecclesiastical inquisition (from the late Middle Ages, especially in modern times) apparently belong in this category: witches, heretics, dissenters, and those with different views were exterminated through (torture and) killing “in the name of the Catholic faith.”

Thus Jesus too, following in the footsteps of many prophets, was eliminated by countrymen and fellow believers “in the name of the Mosaic law” through killing.

Thus, Socrates was also eliminated “in the name of the public interest”.

EO204

Let us not forget, amidst these positive descriptions, the axiomatic-deductive reasoning.

Killing, by virtue of its abstract essence (disregard, on principle, of life as a high value), cannot be deduced as permissible in conscience; however, interpreted in its entanglement with circumstances and consequences (recognition of, for example, community interests, etc.), killing is indeed deducible as ethically permissible from that entanglement.

The first part is a principled or abstract deduction from the axiom that life is value, high value; the second part is a situational or modal deduction from

the intertwining of an abstract principle with singular-concrete circumstances (including the effects or consequences).

Naturally, especially in the case of assertive ('Machiavellian') killing, the question arises: "To what extent is a misguided conscience at work here, or rather a cynical lack of conscience?" In many cases, the answer to this cannot be given because we have too little relevant data (information) at our disposal (the inductive nature of our information).

We will skip the discussion regarding the 'reality' (understand: accuracy of reality, objectivity) of situational reasoning here.

d.-- The killing of lust.

The sadist reasons, consciously or unconsciously: "If the life of one's neighbor is sacred in itself, my sense of pleasure arising from the killing (including torture) is, in my eyes, so 'sacred' that I consider killing-for-the-sense-of-pleasure permissible." The sense of pleasure is of a higher value than the life of the (innocent) fellow human being.

Here, "the object," the basis of the ethical value judgment, is not the killing itself, but the feeling of pleasure in the killing.

Note : An old, scholastic-medieval system or duality reads: "material object/ formal object".

(i) Material object. -- Anything that is without any designation or interpretation (semantic zero stage (EO 173)) is a material, i.e., undesignated, object.

(ii) Formal object. -- As soon as our mind focuses on something indistinct, it introduces a viewpoint or perspective. That is then the formal object. -- Applied here: the killing itself is the material object; the hedonism (sense of pleasure) associated with killing is the formal object of the sadist. The formal object determines the actual and primary intention. The rest is "willed along with it".

EO205

Note: All cultures—from the archaic or primitive, through the classical-antique and the medieval, up to and including the (post)modern—reacted with horror to lust killing. It is described there as "a profound deviation of conscience and behavior or perversion," whether it is a misguided conscience

in an innocent manner (e.g., a perverse disposition) or in a guilty, cynical manner.

Apparently, only a certain video culture puts forward such a perverse axiomatics. From which it deduces that the shameless dissemination—in the name of freedom of the press and general communication—of filming (accessible in principle also to the immature) is justifiable ('conscience') in 'conscience'.

One who is certainly no stranger to this is the famous Marquis de Sade (1740/1814; a radical and ethically consistent materialist), who advocated lustful torture as one of the highest values. His works, although 'forbidden' by ecclesiastical and civil authorities, were in circulation on a large, albeit covert, scale and influenced many a 'modern' writer or artist.

For the French materialists of the 18th century, killing was “merely a premature form of what naturally becomes reality sooner or later anyway”.

The modal term 'merely' points to the ethical reductionism characteristic of consistent materialists: nothing is 'sacred'; why, then, should life be sacred? That is the nihilistic variant of materialism, which 'reduces' (simplifies) everything revered as sacred to 'banal'. Banalization is, therefore, the ethical characteristic of a certain video culture. The Austrian-French psychologist Diel denounced this.

e.-- The satanic killing.

Here is the axiom: “Satan and the satanic demons are the 'true' deity that governs the cosmos. Serving those invisible beings is of the highest value. Now, Satan and the demons regularly demand killings of a ritual nature. Thus, the Satanist deduces the moral permissibility, indeed, the duty of ritual killing.”

Anyone wishing to know more about this should read, for example, D. Cellura, * *Les cultes de l' enfer (Satan parmi nous)** , Paris, Spengler, 1993. A work that, on pages 183/186, provides a calendar in which killings occupy a regular place—heavily intermingled with erotica (which has the same 'intention', namely the worship of Satan). Not killing-in-itself—nor sex-in-itself—but the serving of Satan and his spirits is the formal object.

EO206

Note: - Incidentally: these barbaric practices, which have been spreading in recent years, support a Johannine text! Engaged in a discussion with Jews, Jesus says: “Why do you not understand my language? Because you are unable to listen to my word. The Father “from whom you are” (note: your giver) is the devil, and you choose to accomplish what “your father” desires. He was a 'killer of men' ('anthropo.ktonos') from the beginning, and he is not in the truth (note: God's insights) because there is no truth in him. When he lies (EO 173), he speaks from his own nature, for he is a liar, yes, the arch-liar.” (John B: 43ff.).

Incidentally : the expression “father of” is better understood if one starts from, for example, Genesis 5:1 (God creates Adam (and Eve) in his likeness) and 5:3 (Adam (and Eve) beget Seth “in their likeness, as an image (of themselves)”: the concept of 'toledôt' (history of descent) implies that “someone takes after his father”. In other words: the Satanists “fulfill the will of their father”.

f. The ethnic-racist killing.

Anyone with even a basic knowledge of the history of World War II (1939/1945) is still struck by the 'Holocaust', the brutal extermination by killing of Jews, Roma, and other 'races' by the Nazis. Millions of people were eliminated using modern means—in the midst of the 20th century—after twenty-six centuries of Hellenism and nineteen centuries of Christianity.

The “ethnic cleansing” in ex-South Slavia continues this brutal tradition in a re-establishing manner. -- In the name of 'Herrenvolk'..., 'Greater Serbia' and ... other entities! From which it is deduced that the killers have “justice” on their side.

g. -- The duel.

'Duel' is a duel to settle a matter of honor. The “American duel” entails that one of the two parties, designated by lot, commits suicide. -- “In the name of my honor,” says the dueling. Not without a good dose of 'machismo' (male honor).

h.-- Homicide in lawful self-defense.

The Church—all right-thinking people have interpreted something like “justifiable in conscience.” “My life as an innocent victim of attack is worth at least as much as yours”; therefore, I defend myself against you, attacker, by killing you first! Behold the reasoning. Both the equivalence of both lives and the inequality of those involved—one is the attacker, the other the innocent

victim of attack—play a role in that reasoning. As 'axioms' from which deductions are made.

EO207

i. -- Fetal death ('abortion').

We situate this extremely hotly debated theme here because, in the mind of many a woman in particular, it seems to be “a sort of legitimate self-defense” ... against an 'attacker', namely the conceived fetus. Yet manifestly, this 'attacker' is an innocent one who did not ask to be conceived!

In an analogous sense, this case merges with a duel: in many cases, it is the honor of the woman in question that is valued more highly than the biological (life of the unborn baby).

Even more dramatic is the case in which the woman became pregnant as a result of rape: there, a type of 'self-defense' seems to be at work, but in such a way that the fetus takes the place of the attacker and “pays the price” for him. Anyone well acquainted with the psychology of those involved—especially that of the pregnant woman—knows that a “misguided conscience” certainly plays some role here. For “that in the name of which killing is committed” is very complex.

j. -- Suicide.

There is 'ordinary' suicide (“One can't take it anymore”); there is ideological suicide (“I burn myself publicly to protest against (some injustice or other, -- perceived or real))” The latter is akin to the Japanese kamikaze pilot who goes to his death “in the name of patriotism.” -- A misguided conscience occasionally plays a role here as well, for “one means well.”

k -- The death of a blood witness.

Instead of upholding the axiom of self-defense, the martyr—who is held in such high esteem in ecclesiastical tradition (they are venerated as “healing saints,” especially in the Eastern Churches)—allows themselves to be killed. While they pray for their persecutors, who act “in the name of some ‘political theology’”! The axiom of blood witnesses is twofold: they allow themselves to be put to death for reasons of faith or for reasons of conscience or morals. The same reason why ordinary saints are venerated in the Church: they were 'heroic' regarding faith (religious axiom) and/or morals (ethical axiom). Faith and morals are higher values than biological life.

Incidentally: the term “political theology”, which enjoyed such a rise some time ago in left-wing, often gauchist circles (Dorothee Sölle), is in fact an ancient term. -- At a given moment, a distinction was made:

a. mythical theology

(EO 35: The Great Story), which expresses itself in myths;

b. political or 'political' theology

which is theology insofar as it calls into question the foundations or axioms of a state – e.g. a Greek city or the Roman Empire – whether or not in myths;

c. natural theology –

“Theologia fusikè”, Latin: theologia naturalis – which was founded by the thinkers on the basis of reasoning (without therefore denying the myths or the state traditions). – Christianity, for example, came into frontal collision with the political theologies of the then-existing pagan world, which did not like to see its world of gods denied by the Christians... who were willing to sacrifice their lives for it if necessary. The formal object of the persecutors was not life, but the lives of people deemed a threat to the state. Action was taken “in the name of the foundations or axioms of the state” – the religious axioms, that is.”

l.-- Ecological killing.

'Ecology' is the study of our living environment. -- Our - modern - environment can be deadly: workplace accidents, traffic accidents, and the poisoning of the natural and cultural landscape can potentially cause slow or rapid death.

Whoever is the cause of this acts “in the name of ... what?” -- Take the speeder: he reasons in such a way that he arrogates to himself the 'right', in the name of the pleasure of speed, in the name of a work assignment (“The boss says I have to be there on time”), to create risks.

The manufacturer who either produces or trades harmful products does so “in the name of money-making economic values”.

Conclusion .-- EO 202/208 shows us how complex the fifth commandment – “Thou shalt not kill” – is in its situational norm. Some cases are ethically sound and clearly assessable, but others are virtually impossible

to determine for people who possess only inductive information (EO 97 (Socratic dialectics)). Concepts such as “in the name of” and “formal object” appear to be of decisive importance in this regard. As does the contrasting pair “thesis/hypothesis” (Joh. van Salisbury).

EO209

25. Holistic ontology: the science of fate. (206/219)

Let us return to the constantly recurring (phenomenological) starting point, namely that which reveals itself immediately or directly, that is, without any intermediary between our mind and the reality that presents itself. In the mathematics of problems, this is the given.

With the science of fate or 'analysis of fate' (Leopold Szondi) it is no different: the given is time and again the situation in which we find ourselves—from moment to moment—(our 'thrownness' in the language of the existentialists); what is asked is our reaction or 'answer' to that situation that reveals itself again and again (our 'design' in existentialist language).

Incidentally : our life course is the collection of 'steps', or vicissitudes, that make up our life. In this, we once again encounter the formalism structure that we encountered in the sensible solution of a problem (EO 160: Algorithm). Indeed: reacting (sensibly) to some situation in life amounts to finding a solution to the problem.

In fact, solving a mathematical problem is one part of our life cycle that reflects its fundamental structure, namely proceeding in steps.

It had to happen eventually.

Or even: “of course it came to that.” -- We all know that phrase from colloquial speech.

Appl. Mod. One day, a strike breaks out in a workshop.

a. To outsiders, that may well be a surprise—an unpredictable event, because it cannot be deduced from axioms or presuppositions.

b . For the 'insiders', those directly involved, however, “the tension was palpable”! The boss, hard-hearted and stubborn, continued to refuse to reasonably accede to the legitimate demands of the staff. “The laid-off employees are staying out!” he said. But the comrades – led by the unions – “won’t take that.”

Consequence : from such presuppositions—in thoughts and facts (“historical dialectics” (EO 80))—a strike becomes deducible: one morning the picket lines are standing there! “it had to happen”.

Conclusion . -- The strike is derivable from its axioms: the unlawful dismissal, the dismissive reactions of the other employees, the 'agitation' of the unionists, the rigidity of the employer. The fate of the employer was predictable, for it was deducible.

EO210

Nevertheless, predictability is very limited. Reason: among the axioms lie “axioms with reservations”! Thus: the patron can reverse his rigid stance at any moment. Thus: a vote on whether or not to strike can turn out this way or another.

Note-- EO 164 (The lemmatic-analytical method) taught us to work with 'data' that are 'obscure' or 'x' (unknowns): the possible reversal of the pattern, the possible mood of the staff such and such are such 'x's' or unknowns.

With which, however, we can work as if we already knew them. At the risk of making a mistake when we 'deduce', or predict from what we know. -- That is precisely what distinguishes it from explaining or making things understandable after the fact: once the dispute has been settled and someone wishes not only to describe “the history” of the strike in a purely positive light but also to explain it thoroughly—to make it understandable in a logically rigorous manner—then the unknowns are known and the deduction after the fact can proceed perfectly.

That is what historians continuously attempt to do. They demonstrate that, given the data, the facts “had to happen”! We call that “predicting in hindsight”.

Note - The concept of 'fate analysis' originates from Leopold Szondi (1893/1986), a Hungarian psychoanalytically oriented psychiatrist. He came up with the concept following a reading of the works of Dostoevsky (Russian novelist) and a very personal war experience in 1916 (in Volhynia he was shot in the back, but the book *Traumdeutung* (Freud), which he carried on his person, saved his life).

Main work: Schicksalsanalyse, Basel, 1944. Main thesis: the fate of an individual is determined to a large extent by the family tree figures (ancestors)—what he calls the “family unconscious”—which impart a mysterious purpose in the depths of the soul. Profession, marriage, and friendship are determined by them—or at least partly determined by them. So that Szondi seeks the axioms primarily in a person’s family tree and deduces from there.

Note : The difference between the axiomatic-deductive method regarding abstract, universal, particular, or singular signs ('symbols', EO 156 (The graphic preposition)), on the one hand, and the same axiomatic-deductive method regarding fate and decisions, on the other, is certainly striking.

EO211

Calculating with signs—'symbols'—is, if necessary, a purely axiomatic-deductive enterprise; dealing with situations has a very clear axiomatic-deductive slant, possibly regarding the structure of those situations and the reactions to them (even 'irrational' reactions have their own 'logic', understand: applied logic), but they are not as arbitrarily 'tradable' ('manipulable') as signs.

Consequence: signs can be traded in a purely formalized form (EO 161, 5 196). Life situations—fate events—cannot. Pure calculating thinking has its limits: in mathematics, for example—even when the baker behind the counter calculates how much your bread costs—this works; in singular, concrete life, however, this “calculating thinking” forms the impact structure but nothing more.

Applicable model: Thukudides van Athens (-465/-401). (211/212).

We stated above that historians—preferably in retrospect—articulate “the logic”—understand: the applied logic of the facts, insofar as they have been handed down and are known—and thus make them “understandable, because deducible.” So did the greatest positive-scientific historian of ancient Hellas, Thutmunds—in his Peloponnesian War.

Bible st. : JP Vernant, *Mythe et pensée chez les Grecs* , II, Paris, 1971, 55.

Steller asserts: just as their technical thinking is, so too is their historical thinking. Namely: both are indebted to logic and dialectics.

He refers to M.I. Meyerson, who says: “The order of facts – 'kinesis', Latin: motus, process (movement, event) – in Thucydides is logical (...). Time (understand: of historical facts) in Thucydides is not merely chronological: that time is, so to speak, a logical time”.

Meyerson, in turn, refers to Jacqueline de Romilly, who claims that “in Thucydides, the story of, for example, a battle is in fact a 'theory'; understand: an axiomatic-deductive exposition”. In other words: the victory achieved, for example, is a confirmed reasoning.

To which Meyerson adds: “The world of Thucydides is a world reconstructed in thought ('re-pense'); his historiography is a dialectic turned into action”. (*Meyerson, Le temps, la mémoire, l'histoire* , in: *Journal de psychologie* (1956), 340).

Maw: Thucydides relates it in such a way that the end of a historically narrated event “is something that had to happen”.

EO212

Appl. model: G.Fr.W. Hegel (1770/1831). (212/219).

Let us first situate.

a. Modern, 'enlightened' rationalism.

a EO 13 (Three types). -- Characteristics: a. individualism; b. rationality (reason is central along with the radical preference for the common understanding); c. “mathesis universalis” (EO 157: Combinatorial thinking); d. undeniable tendency towards materialism and secularism.

b. Romanticism. (212/214).

Romanticism, especially in Germany, reacts against rationalism while simultaneously re-establishing it.-- Thinkers who clearly held romantic views: Friedrich von Schlegel (1772/1829; brother of August Wilhelm),-- known for his * *Vorlesungen über die Philosophie des Lebens* *, founder, with his brother, of *Atheneum* (1798/1880; journal),-- of the Romantic circle of Iena (Novalis, Schelling, Tieck, Wackenroden)-- influential on the historical thought of Hegel (“Everything becomes”); Fr.E. Daniel Schleiermacher (1768/1834; the hermeneutician);-- furthermore: Fr.W. Schelling (1775/1854) and even to a great extent G.Fr.W. Hegel (1770/1831).

Opposed to the individualism of rationalism, Romanticism posits a sense of community—'the people'; opposed to excessive rationality (conceptual thinking), it posits life—encompassing reason (but reinterpreted), temperament (emotion), and imagination; opposed to the materialistic tendency, it posits the higher and the ideal; opposed to the aversion to the Middle Ages, it posits a revaluation of medieval reality and a sense of tradition and the historical past.

Here are some key features! Let no one confuse this, then, with a false image of Romanticism ("vicious Romanticism")! The lifeblood is and remains a vitalism or philosophy of life that posits biological life as the model (what is then called 'organicism'). This quintessential axiom of (organic) life governs all cultural domains with which Romanticism concerns itself (language, politics, economics, etc.).

"The idea of a 'mathesis universalis', a 'scientia generalis', fiercely opposed by I. Kant (1724/1804; leading figure and critic of rationalism), was taken up again by J.G. Fichte (1762/1814), Fr.W. Schelling (1775/1854) and G.Fr.W. Hegel (1770/1831)". (EW Beth, *De wijsbegeerte der wiskunde*, Antw./Nijmegen, 1944, 141).

Maw: a comprehensive 'science' concerning all that is real but stochiastic (understood as stoicheiosis (EO 46 (Combinatorics); 52 (Stoicheiosis))), in which one attempts to dissect the main structures of reality and put them back together (harmology, theory of order).

EO213

Note : The three – Fichte, Schelling, Hegel – are also called "the German or absolute idealists". The term "German idealism" points to a way of thinking that, in an anti-materialistic manner, places the 'idea' or "the world of ideas" at the center – somewhat in a Platonic sense. The essence of all that is reality or 'being' is the idea. Thus, the German idealist ontology.

"The rejection of mathematics as a paradigm has, however, led Fichte, Schelling, and Hegel to employ a style of argument that can never be satisfactory for a reader familiar with exact methods of proof (EO 101 (Operationalism); 169 (Logistics))". (EW Beth, op. cit., 141).

We said:

a. Romanticism – especially German Romanticism – rejects (the exaggerations of) rationalism;

b . Romanticism—especially German Romanticism—re-establishes rationality.

The two together only honestly and realistically portray true romance—not vile romanticism.

I. Kant erected a dividing wall between philosophy and mathematics (mathematical logic, that is), although Leibniz (1646/1716; *De arte combinatoria* (1666: introduction to logistics)) - EO 157 - had attempted to remove such a dividing wall under the profound influence of scholasticism (800/1450) (he remained too misunderstood).

Kant immediately rejected the axiomatic-deductive approach to philosophizing advocated by Leibniz.

As Beth, oc, 169 om, notes, Kant, by his rejection of the mathematical method of philosophizing, strongly influenced German idealism.

Whether that Kantian anti-mathematical influence had “such fatal consequences” (Beth, oc *ibid.*) on German idealism, as om Beth claims, is another question.

Prioritizing life, in the fundamental sense, as a basic axiom—instead of mathematical thinking—has, besides disadvantages, also great advantages: may life not, then—for exact scientific reasons—stand central to philosophizing? The strong one-sidedness of Enlightened rationalism provoked, in the first place, the “anti-mathematical tendency”! Yet let us now look at Hegel.

In summary, one can say that he introduced a new Stoicism—different from the rationalist one.

EO214

Note --- For Bible believers, life is a self-evident fundamental value. We briefly touched upon this in EO 199 (Life intrinsically inviolable).

The classical philosophical basis for this was: all reality is, as non-nothing, 'good' ('value'), -- at least in principle or merely axiomatically (as we demonstrated).

Well then, life—organic (plant, animal, human) or psychic or purely spiritual—certainly as a higher being or reality than mere inorganic matter—is most certainly non-nothing, reality—thus fundamentally inviolable, sacred. As a value-in-itself.

This explains why or how all that lives does everything to survive and to live a better life! If life, in itself, were worthless, then all living beings would do whatever it takes to get rid of it!

The Decalogue or “Ten Commandments” clarify this: the fifth commandment commands that life—biological or higher—be respected in principle; the sixth and ninth commandments command that all that is sexual (and thus newly connected with the origin of life) be respected in principle; the fourth commandment commands that communal life (cradle of life) be respected in principle; the seventh and tenth commandments command that all that is economic property (and thus infrastructure of primarily biological life) be respected in principle: the eighth commandment compels respect for the truth, the basis of life;—while the first three commandments—encourage the divine source of all that is—in particular of all that is life—to the principled respect for God—Yahweh, Holy Trinity—as “the living God” (Deuteronomy 5:26) who grants life, yes, eternal life (1 John 5:20).

Romanticism, averse to arid rationalism, has reminded us that life is central, even if that does not appeal to calculating thinkers!

The Hegelian Deduction . (214/219)

Bible st.: HA Ett, edited, EA van den Bergh van Eysengha, *Hegel* , Kruseman, sd, 67ff..

A certain Mr. Krug had accused Hegel. Krug had indeed understood that axiomatic-deductive thinking was central. But he had understood this purely rationalistically: Hegel – so he said – deduces from 'a priori' (EO 13), those abstract-general 'principles' or 'principles' everything, the totality of all that is, – rationally!

Krug challenged Hegel: let Hegel 'deduce', for example, the existence of every dog and every cat or the existence of his pen holder in that a priori manner!

EO215

(1).-- The correctly understood Hegel. -- Dialectics.

Hegel is known for his rabid dialectical thinking.

a. Platonism.

As we have seen several times, Plato was a dialectician. This entails two things:

1. The precedence given to all that is 'totality': 'all' (collection, -- metaphorical connection) and 'whole' (system, -- metonymic connection) are the constantly recurring main concepts of his 'stoicheiosis' or doctrine of order.

2. Attention is paid to change ('kinesis'), history (all that was, is, will be; EO 32). This second point may cause wonder. But look:

a. Plato, in his sketch of the Republic or (city-)state, outlines the essence of contemporary society based on the formation process of the state! What we, with O. Willmann, call the genetic method ("methodos gennetikè").

b , Platon, EO 80; 209), in his ethical evaluation of justice (the return of a borrowed weapon), reasons historically: by becoming insane in the meantime, the possessor of the weapon loses his right to possess it; in other words: the 'eternal' right to possession changes with changing circumstances! Platon clearly situates eternal principles in time and the passage of time.

c. It is not without reason that Plato was the pupil of Cratylus, a follower of Heraclitus of Ephesus (-535/-465), the ancient philosopher who emphasized change.

Incidentally: 'process' (Greek: kinèsis, Latin: motus) means "(ordered) change". AN Whitehead (1861/1947), *Process and Reality (An Essay in Cosmology)*, New York/Cambridge, 1919, is actually an ontology that places strong emphasis on 'process' (hence: 'process thinking'),-- this in a critique of Descartes and Locke, two rationalists.

b. Hegelianism.

With Romanticism, Hegel likewise places totality and time (history) at the center. And he is consciously more of a 'dialectic'. But not in a Platonic sense, but in a 'new', modern sense. Hence, Hegel is categorized as part of the "new dialectic".

(2).-- The correctly understood Hegel. -- Historical dialectics.

Hegel reasons, yes, but 'historically'; calculating with “all that was, is, will be”.

(2).a.-- Inductive thinking.

As we saw - EO 14 (Schelling's positive thinking) - Schelling, the romantic, knew “positive Philosophy”.

EO216

So too with Hegel: in 1802, Hegel responds to Krug's objection. With this answer: “existence is not proven—it was about dogs, cats, pen holders—for it is a given”.

This implies that Hegel's totality, however rationally conceived (and Hegel was very rational), is inductively colored. The actual existence of, for example, dogs, cats, or pen holders cannot be deduced from abstract-general concepts. Not even from “the concept.” All that was, is, and will be comes to consciousness, in Hegel's conception of things, in “the spirit” (of which the singular-concrete spirit of, for example, 'I' and 'thou' are merely offshoots), which forms “the concept” of being or the totality of reality.

In other words: through “the concept” (in the transcendental sense), we become aware, with the cosmic spirit, of all that was, is, and will be.

Well then, even that concept par excellence—the concept—is no sufficient presupposition for the deduction of cats, dogs, and pen holders! After all, it is empty without inductive data!

Incidentally : Aristotle, for whom Hegel held great reverence, also thinks in an analogous sense. “‘Being' ('un') is not a (categorical) characteristic ('semeion') of anything (categorical). Also: when one says 'un', being, reality, of anything (categorical), then this is (provisionally) an (categorically speaking) 'empty' term ('piston'), for he means nothing (categorical).”

Only in connection with something else (categorical) does 'un', being, reality, acquire (categorical) meaning. Without such a connection, nothing (categorical) is thought”. (Peri herm, 3, in fine).-- Cfr EO 10 (Transcendental / categorical).

Conclusion . -- Krug erred! Hegel is rational, even highly rationalistic! But at the same time expressly attuned to positive existence.

(2).B.-- Totality thinking (dialectics).

Not only does Hegel say: factual existence is given inductively! Krug indicates precisely: that same factual existence is

a. non-existent (impossible; EO 36) and even

b. unthinkable (falling outside “the (all-encompassing) concept”) without the totality of all that was, is, and will be.

To understand or comprehend something in the Hegelian sense is to situate it within the totality (in “the concept”). Thus, dogs, cats, and pen holders are merely moments (movable elements) within the totality of reality.

EO217

That is the Hegelian form of stoicheosis, the doctrine of order: everything that is actually given is somewhere either the totality of all that was, is, and will be, or a part thereof. That is Hegelian dialectics.

Hegel, in his exposition against Krug: “From the concept of the living (EO 212: Philosophy of Life) whole or totality, to point out the meaning and the place of, for example, the dogs, the cats,-- the penholders and concepts is something quite different from proving their existence”, especially something quite different from proving existence based on abstract principles alone! -- Here we become aware of the abyss between barren rationalism and the philosophy of life of Romanticism.

'To deduce' in the strict Hegelian sense thus means “to make clear(er), understandable, or 'explain' the place and meaning of something (a given based on induction) within the totality of reality, having become conscious in the conception thereof.”

In other words: prioritizing the totality of all that was, is, and will be (and the concept thereof in our mind) as an axiom, together with prioritizing some given fact (= second axiom), is to bring the axioms from which “place and meaning” are deduced to the fore.

Note . -- Hegel's adage: “Everything, was wirklich ist, ist intelligent. And everything, was wirklich ist, is wirklich” (Grundlinien der Philosophie Rechts).

Translated: “All that is real is 'reasonable' ('rational'). And all that is reasonable is real”.

Friedrich Engels, *Ludwig Feuerbach und der Ausgang der Klassischen deutschen Philosophie*, Stuttgart, 1888-2, in initio, teaches us to understand that Hegelian saying well.

In Hegel's usage of language, not everything that actually exists is immediately 'real', for 'real' in one of the meanings implies “what fits as a solution to what is given”.

Or again: what can be derived from the data as the true solution, fitting the reality of the data, to the problem present in the data. -- In that well-defined sense, everything that is rationally justifiable is also 'real'. For it follows necessarily from the data themselves. At the same time, 'real' is also, in Hegel's language, 'necessary'.

EO218

English provides examples.

One government measure or another—e.g. a tax measure—is, once issued, only 'real' insofar as it fits into the totality of the state—especially the economic and social state.

The then Prussian state was only “according to reason, – in the Hegelian sense – “insofar as it is ‘necessarily’, rationally justifiable, – insofar as it also faithfully solves the problems present in the data”.

If it turns out that he is 'bad' yet that this badness persists nonetheless, then the badness of the government finds its 'justification' (rational account or justification), for example and even primarily, in the 'badness' of the subjects who are jointly responsible for the order, which manifests itself therein—revelation, alêtheia, apokalupsis: the then Prussian government followed 'necessarily', with necessity, from the totality of the data of that time.

Note : In the Bible, we encounter something analogous. The pre-Noahic covenant of Yahweh with humanity before Noah (Noah) became 'unreal' at a certain point (no longer solved the problems): Yahweh replaces it with the covenant with Noah (symbolized in the rainbow).

In the days of Abraham, it became apparent that the Noahic covenant was becoming unreal: Yahweh replaced it with the covenant with Abraham and his descendants.

In the days of Jesus, the 'old' covenant became unreal and no longer (fully) resolved the outstanding problems: Jesus replaces it with the “new covenant” (in the Easter event).

A revolutionary theory.

The Marxist Engels interpreted Hegel well: Hegel invariably speaks with enthusiasm about the French Revolution (1789/1799)! For – according to him – the French monarchy had become unreal “by God’s grace” (= a sacredly founded monarchy), which was once 'real' (problem-solving), “deprived of every necessity”.

So 'unreasonable' ('irrational') and no longer justifiable that it had to be 'destroyed' by the French Revolution. In that case, the monarchy was “the unreal” and the revolution “the real”.

From this, the Marxist Engels derives his revolutionary interpretation of Hegelianism: “Thus, in the course of development—note: all that was, is, will be—all that was former becomes unreal, loses its necessity, its right to exist, its rationality,—in a peaceful manner when the former is sensible enough to make way (for what is rational),—in a violent manner when it resists that necessity.” --- Thus Friedrich Engels.

EO219

Engels continues: “Just as the bourgeoisie, through big industry, competition, and the world market, shakes all firmly established, traditionally revered institutions to their foundations in practical terms, so Hegelian dialectical philosophy shakes all concepts claiming definitive, absolute truth and the absolute human situations corresponding to that truth.”

For her, nothing exists that is definitive, absolute, or sacred: she demonstrates the transience of everything and in everything, and, according to her, nothing exists except the uninterrupted process of becoming and passing away, of the endless evolution from the lower to the higher. Thus, once again, literally in English.

Note : Marx and Engels turn the Hegelian spiritualist-idealist dialectic on its head: matter, clarified by means of the economy and the social conditions connected to that economy, contains the axioms of “all that Hegel calls spirit and spiritual, immaterial, idea and ideal”. That, then, is the materialist dialectic: it attempts to expose the axioms in Hegelian philosophy, namely “the bourgeoisie”, the ruling class with its own 'ideology' (system of concepts). From those axioms, Marxism deduces the evolution of bourgeois society.

Note : The dialectical idealism of Fichte, Schelling, Hegel (especially the latter) – from a religious standpoint – is a pantheistic idealism (EO 16). The 'spirit' that thinks and even is the concept of totality coincides both with God and with the spirit of all thinking beings.

Something that is radically unbiblical, for in the Bible God, Yahweh/Holy Trinity, although omnipresent, is nevertheless radically transcendent and transcending all finitude (as S. Kierkegaard emphasized), with “an infinite qualitative difference” between creator and creature.

Conclusion . -- Behold what is revealed—truth, alètheia—when one delves into the science of fate: our fate, individual and collective, human and cosmic, is one long series—algorithm—of events and reactions, in which an applied logic is at work. We saw a few samples of this.

EO220

26. Holistic ontology: crisis of 'ontology: (220/225)

The fundamental schema of our ontology—it aims to be as classical and 'traditional' as possible without 'repristination' (the will to remain outdated)—comes down to the duality of “given/requested”.

Whoever concerns themselves with “reality” or “being” is repeatedly confronted with “all that is (already) given (and therefore known)” and with “all that is (not yet) given but is sought (asked)”. The latter is also called “the question” or “the problem”.

Expressed in aletheiological terms: the duality “all that is (already) exposed, revealed, 'true'” and “all that is (not yet) exposed, 'true'”.

Now read EO 62 (Ontology of Truth). -- In phenomenological terms: the duality “phenomenon (all that (already) shows itself because it is (already)

immediately given” / “transphenomenal data that do not (yet) show themselves directly”.

Read EO 120 now. Also EO 126 (Phenomenal/transphenomenal).

The Austrian school (EO 154: Bolzano/ Brentano), with the medieval concept of 'intentionality', essentially did nothing other than renew the ancient doctrine of truth (“Is true all that is revealed or exposed as reality”) from an 'intentional' psychology.

In summary : the ancient couple or systechi of the ancient mathematicians proves to be the condensation of all ontological behavior.

The problem in life and in the rational-theoretical life is the fact that notwithstanding that we have a view of the totality or “the holon”—the whole (collection and/or system) of reality (the basis of all ontology)—we nevertheless possess only induction or samples from that totality.

The basic industry is the duality of “given/sought”! The given is invariably a sample viewed against the background of the whole that encompasses both the given and the asked or sought. -- Which was the reason why Husserl wanted to give the sciences a solid phenomenological foundation: if you wish to think properly, begin by examining what you already know, i.e., starting from the phenomena that reveal themselves directly, without given information!

A provisional way out of this is called “the lemmatic-analytical method!” EO 164 taught us that this consists of calling the requested 'x' and working rationally with such an 'x' or unknown (transphenomenal) nonetheless.

EO221

Thus, one acts as if the unknown (transphenomenal) was already known (phenomenon)! That method, which the ancients claim Platon first formulated, proves to be extremely fruitful: think of modern algebraic mathematics, for example!

Systems construction and ontology. (221/222)

Ontology as conceived in this introductory course is radically holistic, a totalitarian way of thinking. And yet: it radically dominates induction, in the Socratic-Platonic tradition. Read EO 97 (Socratic Dialectics) and especially EO 138 (Axiomatic Induction), without skipping Hegel's inductivism (EO 215)!

Conclusion : holism and induction!

The systematists.

No one has ever been able to uncover a coherently developed system in Plato's texts; his dialogues provide only samples (which, in the aporetic dialogues that lead to no solution whatsoever, end in question marks—problems without solutions).

Aristotle, his most brilliant pupil, was already different: he was the great systematist in antiquity, as he fills the voids of ontology with categorical data that together constitute a worldview and philosophy of life—a filled-in stoicheosis.

St. Thomas Aquinas (1224/1274; leading figure of medieval scholasticism and ontology) pursued a (filled-in) system, like many ecclesiastical thinkers of his time.

Franciscus Suarez (1548/1617; leading figure of modern or Spanish scholasticism) was truly systematic in the modern sense: *Metaphysicarum disputationum tomi ii*, Salamanca, 1597. Suarez possessed a very broad range of information. He was a balanced thinker. His influence was immense; although the work of a Jesuit (since 1564), his work became commonplace as a textbook even at Protestant universities during the 17th century.

Hegel was truly systematic, although very inductively oriented (EO 216: Totality Thinking)! To the point of being encyclopedic!-- The inclination towards an ontologically colored worldview and philosophy of life 'filled' with categorical data was therefore extremely strong among the systematists.

The inevitable crisis of the 'filled-up' ontologies.

Categorical data accumulate as cultural history progresses! The consequence: ontological treatises filled with such changing data immediately become obsolete and must be 'refilled' time and again.

EO222

Today, information is massive, via all kinds of information channels (think of the media), and especially via the multitude of positive sciences (there are hundreds of them). And yet: the yearning for a filled-up worldview—'Weltbild' to use Heidegger's terminology—continues to live on.

JK Feibleman, A System of Philosophy”, The Hague, 1963+.

It's like a one-man encyclopedia! "Logic, Ontology, Metaphysics (some distinguish ontology and metaphysics), -- Epistemology, Ethics, Aesthetics, Psychology, -- Politics, Sociology, Anthropology, Philosophy of Life, Philosophy of Nature, Philosophy of Language, -- Philosophy of Science, Cosmology; Philosophy of Law, Philosophy of Education, Philosophy of Religion'.

In fact, the eighteen parts amount to a. a general or transcendental ontology and b. a number of particular or categorical ontologies.

The nuanced judgment of H.-H. Holz. (222/223)

Library st.:

H.-H. Holz, *The Actuality of Metaphysics (Contributions to the History and Systematics of Philosophy)* , Kampen, Kok, 1991. -- 'Geschakeerd' means “provided with reservation or modality”.

a. For a few centuries (think of the 18th-century materialists, for example), a number of intellectuals—a part of the 'intelligentsia' or intellectual-artistic vanguard—have made a great effort to criticize “ontology”, often contemptuously called “metaphysics”, indeed, to build or 'deconstruct' it (J. Derrida). Holz connects with this fact.

To begin with, he outlines the history of ontology “from Plato to Hegel”—always that series. Then he outlines the criticism leveled against that ontology (Schopenhauer, Nietzsche, Dilthey, Bloch).

b. Holz then describes what 'metaphysics' actually is. He considers the problematic, i.e., the set of questions that metaphysics attempts to answer.

Things like “the absolute or complete being”, “the totality of all that is” and the like are discussed.

Holz observes: ontological problems can be criticized and updated, but not swept off the table! Even in our intellectual climate, which is quietly beginning to be called 'postmodern' ("the post-ontological era"), the questions of ontology remain!

EO223

Main causes of the “crisis of ontology”.

We have already indicated one: the changes in the categorical 'fillings' of the inherently empty concept have occurred in the course of cultural history.

Holz formulates it as follows:

a. the problematic state of the definite or positive sciences which provide us with ever more data concerning “being” or the totality of reality;

b. the changing view of that same 'being' or totality because we live time and again in a cultural context, -- whereby we can cite multiculturalism or the multitude of cultures that sometimes differ fundamentally from one another, either diachronically (antiquity, the Middle Ages, modern times, the current postmodern era) or synchronically (Catholics, Protestants, Muslims, -- atheists).

The latter even involves an educational aspect: the culture of today's youth, thanks to the media, can sometimes differ fundamentally from the culture of parents and educators!

Every culture can be defined as a “categorical filling of the empty transcendental concept of being”.

What exactly does the crisis refer to? It certainly does not refer to the transcendental or all-encompassing concepts—being, truth, unity, goodness (value)—; it does, however, refer to the categorical fillings or interpretations of those empty but transcendental concepts!

In terms of logic or theory of thought (meaning the traditional).

The essential core of traditional logic, as we have incorporated it into its main features—namely, concept and judgment as presuppositions of reasoning (if-then relationship)—is immutable. But the cultural—understand: categorical—presuppositions to which that logic is applied do change! For general logic, traditionally understood, is a transcendental and therefore universally valid doctrine that never enters into 'crisis'.

On the contrary: if (justified or unjustified) criticism is leveled at the actually existing anthologies, it is done time and again in the name of transcendental logic!

From architectural to network metaphor. (223/224)

Bibl. st.: G. Lernout, *Postmodernism*, in: Streven 1986 (Oct.), 33/44.
Lernout's two-part theorem amounts to the following.

A. The architectural metaphor.

Just as a pedestal, a “solid base,” foundations, or 'bases' support a building, so too does a sturdy pedestal, the 'foundations,' or bases support our thinking (sciences, philosophy, rhetoric). Behold the metaphor or model/original relationship.

A certain 'classical' tradition is, to begin with, thoroughly logical, in which the question of the presuppositions—the foundations or the pedestal—takes center—whether deductive or reductive (especially inductive).

The foundations can be distinguished into:

a. strictly provable and eternal and **b.** probable and time-bound.

Note : Postmodernists like to call that type of ordering of insights 'fundationalism' or even 'fundamentalism', while usually adding a pejorative connotation of “dogmatic and self-assured thinking”. Thinking that offers “the absolute truth” for sale once and for all.

B.-- The network metaphor.

Just as a weaver weaves a bird's net that floats in the air, so too does he who thinks: we constantly 'weave' worldviews and philosophies of life of all kinds—we constantly 'weave', in the course of cultural history, philosophical systems of thought that come and go, scientific theories that arise and disappear—detached from every reality outside us.

In other words: the thinking is anything but logical in the classical sense (pedestal/superstructure). Moreover, it lacks all solid foundations.

What is it, then? Proceeding 'logically' amounts, in fact, to “combining (EO 157) ideas ‘floating in the air’, like a bird net, into a network”. Proceeding logically amounts, in fact, to constantly absorbing changes, since the 'reality' within and outside us (the entire moving cosmos) is constantly subject to change—up and down, for example. That is then called 'postmodernism'.

Note : In a multicultural environment like ours, “network weaving” most certainly corresponds to an initial impression: every worldview combines a number of presuppositions into its own 'little world' which, in a closed environment, threatens to come across as the only valid (dogmatic) one. The

postmodern thinker then sees himself as a Konstantijn Guys (1805/1892) and Charles Baudelaire (1821/1867; *Les fleurs du mal* (1857)), who, amidst floating ideas, considered themselves uninvolved wanderers.

EO225

Philosophical 'endism'.

The term 'endism' (cf. the English 'end') is in: ever since Francis Fukuyama published his “ *The End of History ?*” in National Interests in 1989, the term has been vulgarized! But here we are talking about philosophical endism.

Bibl. St.: D. De Schutter , *Derrida on the End of Philosophy* , in: Streven 6 ((1993): 2 (Feb.): 146/156.

Hegel announced “the end of philosophy.” (Fukuyama builds upon this). Heidegger took this assertion very seriously. “What comes after Hegel has, according to Heidegger, attempted in vain to escape Hegel. In this regard, he thinks very explicitly of:

1. Schelling's philosophy of existence,
2. to Kierkegaard's description of the religious man,
3. to Marx's dialectical materialism,
4. to the philosophy of life of Dilthey and
5. to the existentialist humanism of Jaspers and Sartre.

For Heidegger, these are all failed attempts to escape Hegel. These attempts failed because they did not get any further than an inversion of the philosophical system. (...).

The history of philosophy has ended because the program devised by Parmenides of Elea has been completed (...). (Ac, 149).

Derrida (Jacques Derrida (1930/...)) follows in the footsteps of Heidegger. However, he deviates on several points from Heidegger's critique of traditional philosophy (Heidegger wants “a destruction” of it),-- especially where Heidegger thinks too Hegelianly.

Derrida, a deconstructionist or dismantler, emphasizes what is new to be seen after Hegel: 1. Nietzsche's desire to parody, 2. the ethics of Levinas (the face of the fellow man), 3. the dismantling of everything called 'word' in Joyce's and Mallarme's work, 4. the 'parable' of Kafka and Blanchot, 5. Saussure's

semiology, 6. the description of 'mourning' in Freud, 7. the concept of 'gift' in Mauss, 8. Gödel's concept of 'indecisibility'.

Derrida claims that these things disrupt traditional philosophical, ontological 'logic' in such a way that philosophy must also accept things outside its domain to which it can give “no place or meaning” (EO 217) in the whole (the concept of the totality of all that was, is, and will be)! -- Something with which Derrida risks himself very far, for being, the idea of 'reality', is an empty (from a categorical point of view) “place for meanings” in which literally everything fits.

EO226

27. Holistic ontology: being over-complex. (226/339)

Let us summarize for the umpteenth time. -- Phenomenologically, that is, in terms of phenomenon, the given is the first and the starting point. The sought or requested, which is transphenomenal and not yet revealed, belongs somewhere to the given. As its dark, opaque side. But in such a way that that dark, opaque aspect shines through. So that the given and the requested actually merge.

Ontology is more than mere phenomenology:

a. For the phenomenologist, the given coincides with what is requested, for he wants the accurate description of the given. Nothing more.

b. Ontology, however, is holistic—focused on the totality of being—not merely that which presents itself immediately.—Behold the pedestal.

The Eleatism of Zenon of Elea (226/227).

Bibl.: st.:

-- Cl. Ramnoux, *Parménide et ses successeurs immédiats*, Ed. du Rocher, 1979, 151/166 (Zenon);

-- EW Beth, *The philosophy of mathematics*, Antw./Nijmegen, 1944, 18ff. (Zenon).

Parmenides (-540/...) upholds the axiom: “Everything that our thought grasps is.” Outside our thought there is “nothing,” which for him was both becoming and multiplicity, whereas “being”—in his interpretation—was unbecome and one.

His pupil Zenon of Elea attempted to “prove” Parmenides’ axiom with arguments against both creation and multiplicity. This was the background of the time, which was very religious: all that is divine is uncreated ('eternal') and one.

Zenon's method.

Logic was the basis (in its then-primitive form). Applied logic or method shows the logic regarding real being at work.

A.-- Zenon summarizes the opponent's proposition (axioms) in the simplest possible sentence introduced by 'if' (the essential core of traditional ontological logic, which sees connections between reality and reality that proves derivable from it). For example: “If becoming, or multiplicity, exists, ...”.

From this, Zenon draws contradictory conclusions introduced by 'then'. Thus: “If becoming, or multiplicity, exists, then this leads to a contradiction”. -- From which Zenon concludes: the sentence introduced by 'if', since it leads to absurd conclusions, expresses a presupposition (axiom) that is unreal,-- indeed, unreal in the form of 'impossible'.

EO227

Logic, even back then, was: deriving other realities from presupposed realities (if a presupposed reality, then a derivable reality).

Zenon himself cherished his own axiom: the presupposed reality, if it wishes to be truly real and not apparent, must not lead to contradictions. – In everyday language: “Do not contradict yourself!”

B.-- Aristotle, addressing the Zenonic method, establishes.

Zenon is aware of the limits of ontological or reality thinking, which was put forward by Parmenides as the main axiom. His own thinking does not go very far. Nor does the thinking of his opponents—in other words: under A, above, we saw the structure of the method; now, under B, we see the result of that same method.

Aristotle summarizes Zenon's arguments: you, just as I, do not prove your thesis (axiom) in a conclusive manner.

In other words: your assumptions, like mine, are not such that the conclusions drawn from them lead to irrefutable reality. They are at least provisional and/or partially unreal.

To put it another way: there are arguments for, but there are arguments against! Indecisiveness. Yes, perhaps even indecisiveness.

Conclusion —All that our thinking grasps is! But our thinking grasps too little to arrive at conclusive proofs regarding the main points. The first foundational crisis of thought occurred with Zenon. The presuppositions of our thinking—the inductive presuppositions in the first place—are insufficient or even unreal.

Platonism. (227/229)

Bibl. st.: W. Klever, *Dialectisch denken*, Bussum, 1981, 22ff..

In his early period, Socrates paid much attention to the 'natural philosophy' of the time; he considered it “something sublime” because it examines the 'causes' (presuppositions) of all that exists.

Later, he evolved towards ethical-political questions. -- But Socrates could never refrain from leading the conversation back to the presuppositions of the explicitly discussed propositions. Which contains “if ..., then .”, of course.

Platon adopts this Socratic backward analysis to the 'hypotheses'—the presuppositions—in all his dialogues. In other words: eleatism that takes a logical approach!

EO228

Applicable model .-- “You claim that your husband is a better citizen than mine”. -- 'Well done! But let us then analyze what we understand by “a good citizen”.

In other words: the presuppositions of the conversation are already contained in the definitions! Socrates forces his conversation partner to become aware that he is proceeding from presuppositions—often unconscious—when he opens his mouth and asserts something. The definition therefore plays a central role in the Socratic method, as it forces one to penetrate to these presuppositions.

Unreasonable necessity/reason.

Bibl. st.: GJ de Vries, *Plato's image of man*, in: *Tijdschr.v.phil.* 15 (1953): 3, 426/439.

Plato, like Parmenides, wants to permeate the data of experience as much as possible with 'spirit' and 'reason'. If only by investigating whether teleology can be found in the data. That was anaxagorean.

Thus in the cosmological dialogue *Timaeus*.-- The composition of the universe is indeed constructed from 'regular' bodies in a strict mathematical structure. That is 'reason' or 'spirit'.-- But Platon makes no attempt to 'deduce' matter, for example: an inexplicable fact remains an inexplicable fact. That is reason-free necessity.

de Vries: Plato speaks of two 'forces' (prepositions) in the universe:

a . de nous, mind (rode), the insight that is endowed with purposefulness;
b . the ananke, irrational necessity, which is and remains opaque but is nevertheless a co-presupposition of the cosmos.

Conclusion —All that our mind grasps is (reality)! So said Parmenides. So Plato would have wanted it too. — But our mind faces 'ananke', opaque, over-complicated, 'complex' data which, without seeing through them, it must accept as an irrational necessity.

Note .-- 'Violence ('bia'), fate ('heimarmenè'), strict order ('taxis') are related words (according to E. des Places, SJ, *Lexique de la langue philosophique et religieuse de Platon*, Paris, 1989-3, 38/39).

We also immediately understand why Plato wrote aporetic dialogues: 'aporia' is a situation without a way out, data without a solution; 'aporein' is hesitation because one does not see how it should be done. Thus des Places, *oc*, 69.-- Our mind has limits, rock-hard limits.

EO229

In other words: 'being' is somewhat phenomenal, immediately accessible to our mind, either as given or as elucidated by reasoning, but it is above all transphenomenal, hard-and-hard transphenomenal, for for the most part it does not reveal itself, not even through reasoning of all kinds.

Note : O. Willmann, * *Abriss der Philosophie* *, *Wien*, 1959-5, 366, cites John Locke (1632/1704; founder of the Anglo-Saxon Enlightenment): the goldsmith knows better "what gold is" than the philosopher! To which Willmann replies: indeed, if "what gold is" means the piece of metal that is

distinguishable and workable according to the methods of the goldsmith, then the nominalist Locke is right.

But, if “what gold is” means that which makes there such a thing as the piece of metal that is distinguishable and workable according to a goldsmith’s approach, then it is the philosopher who possesses the ontological insight. Specifically: the properties exhibited by gold have not come together by chance but form a system with its own essential nature.

Now, it is the case that we usually approach that essence through the day-to-day manipulation of gold, whereby the essence itself remains transphenomenal. Willmann: “Insofar as the essence (of gold, for example) is an x, a ‘qualitas occulta’, i.e., a hidden, unrevealed property.” Notwithstanding this, both the goldsmith and the thinker handle gold! As if they somehow knew “what gold is.” This “as if” behavior has a name: the lemmatic-analytical method, which acts as if the questioned (unknown) were given (known).

Conclusion . -- With Zenon and Platon we establish: the logical method is a valid method, but it is limited: its results show its limits.

The way out. -- Just as a moment ago, in the case of (the essence of) gold, so too in all other situations without a way out: the lemmatic-analytical method (EO 164 (73); 210; 220).

We learn to live with strangers (those sought, those asked)! But in doing so, we act as if we knew them. -- We place those strangers—as a given—first and deduce from them in order to live, to act alive.

In antiquity, Plato was regarded as the first to consciously introduce that method. -- After what we saw about the ananke and the aporia, with which Plato had to live, this is not surprising.

EO230

Sample 28. Holistic ontology: being over-complex (230/239)

Overly complicated.

a. The 'triumphs' of the sciences prove every day that our reasoning faculty, through induction (facts, material) and hypothesis formation (reasoning), can handle even the very complex. But—unfortunately for our

'reason'—there are overly complex realities that we cannot rationally handle. Let us delve into this further, for Zenon and Platon showed us the way.

How things can turn out differently.

The folk saying is well known: it expresses the outcome of an event in its unpredictability, -- in its non-deducibility. Well, since +/- 1970, physicists and other specialist scientists have been discovering that the unpredictably rolling coin might be the model of the fundamental structure of the universe.

That would be the scientific confirmation of what Platon called 'ananke', inescapable fate, opaque but rock-hard real necessity.

Traditional determinism.

'Determined' is 'predetermined'. I. Newton (1642/1727) -- emphatically Pierre Simon de Laplace (in short: Laplace (1749/1827)) defined 'determinism' as follows.

A.-- given.

A system that is known exactly with regard to a state in which it finds itself. This state is understood as the initial conditions (= presuppositions) of a scientific study of said system.

B.-- Requested.

Flawlessly deduce, and thus predict, what the subsequent states will be based on the initial conditions or presuppositions. This is possible if the system in question is a deterministic system. Otherwise, it is not.

Note : Modern rationalism, which conceived of the universe—concerning the human body and even the human soul—as an instrument or machine, is naturally deterministically inclined. This applies up to and including A. Einstein.

The science of lot. (230/231)

None other than Karl Löwith, for example, stated in his philosophy of history: “The fate of a philosophical event—if it occurs in a truly historical manner, at least (and is not limited to ‘mere academic stuff’)—becomes, against its will, something other than what its originator originally envisioned.” -- Who among us, while alive, does not regularly observe something like this: our words, our deeds, once in our immediate surroundings, become alienated from us!

Note : In the religion of all archaic peoples, in the religion of the ancient classical peoples (such as the Greeks and the Romans), in medieval religion, in what is now called 'New Age', predicting – 'prophesying' – the future occupied a major place.

Applicable model. -- The great humanist M.T. Cicero (-106/-43) devoted an entire book, * *De divinatione**, to the phenomenon of “foretelling the future.” Cicero, in a dialogue with his brother Quintus, who defends divination, criticizes, indeed, ridicules it! Yet he himself was once a member of the college of 'bird diviners'. Nevertheless, he by no means wishes to see divination abolished.

The reason is clear: our existence-in-the-world is future-oriented; well, that future “comes toward us” (i.e., we do not simply force it) as a largely unknown (= sought, requested); thus, that future is, in mathematical-logical terms, a question, an ongoing problem whose solution we wish to know, if necessary by means of 'irrational' methods—which are each, without exception, “lemmatic-analytical methods.”

Chaology . (231/234)

Theory of disorder. R. Lewin, Complexity, Amsterdam/Antwerp, Contact, teaches us what follows.

Scientists of all kinds establish that 'simple' and “although complicated, yet manageable” elements can—the modality: possibility—lead to the most opaque states, called 'complex' (overly complicated). This is discussed in chaos or disorder theory.

The comprehensive theory on the subject is called 'complexity theory',

who studies the over-complex in all kinds of domains. Consequently, it is becoming a principal theory in almost all specialized sciences! Expressed in Platonic terms: specialized scientists, paragons of logical-rigorous rationality, heroes in the eyes of enlightened rationalism, learn to live with unknowns of all kinds—compelled to the lematic-analytical method.

Library st.:

-- David Ruelle, *Hasard et chaos* , Odile Jacob (the work (studies “the sensitive or unpredictably sensitive response to stimuli” in which the initial conditions are responded to in more than one sentence with unpredictability as a result);

-- J. Gleick, *La theorie du chaos (Vers une nouvelle science ,)* Paris, 1989
(l'omoc, 25/51 l'effet papillon.

EO 232

Fifty years after Henri Poincaré (1908), meteorologist Edward Lorenz conducted an experiment demonstrating that the weather, complex as it is, resembles a chaotic phenomenon; the flapping of a butterfly's wings in Sydney Bay (Australia) caused a cyclone over Jamaica a week or more later; hence the metaphor 'butterfly effect', which sees a large reaction follow as a consequence of a small cause acting as a harbinger.

Bibl. Sample

-- PC de Gennes et al., *L'ordre du chaos* , Paris, Bibl. pour les Sciences, 1977/1984 ;

-- Ervin Laszlo, *La grande bifurcation (Une fin de siècle crucial)*, Paris, 1990
(// *Design for Destiny (Managing the Coming Bifurcation)* , New York, 1989
(work that extends the idea of chaos to cultural phenomena);

-- Ilya Prigogine/ Isabelle Stengers, *Order from Chaos (The New Dialogue between Man and Nature)* Amsterdam, Bakker, 1987 (the work of the famous School of Brussels).

-- P. Darius, *How chaotic is chaos?* in: *Onze Alma Mater* (Leuven) 1991: 1, 31/49 ("Gradually a little structure is emerging in the chaos, but numerous questions remain unanswered" (ac, 31)).

Main characteristic of disorderly systems.

Whether it concerns a group of animals or birds in biological nature, or the weather, an embryo, or phenomena in the cosmos, disordered systems—despite the fact that they obey determinism to a certain extent and are therefore to some extent deducible and predictable—apparently also behave haphazardly. Like a coin that can roll a certain way.

Consequence : such systems are transphenomenal in terms of their long-term behavior, -- escaping the (mathematical) grip of specialist scientists.

Like Lorenz's waterwheel, for example, where it proved impossible to predict when it would change direction. Like the swirling smoke cloud of a cigarette regarding the precise shape the cloud will assume. Like the jet of water from a tap and the 'erratic' shapes and movements it will take on.

'Disorder' ('Chaos').

A dynamic system (EO 180) exhibits disorder when it becomes 'destabilized' and thus 'oscillates'. Traditionally, 'chaos' usually means 'confusion', an absence of order. -- The new meaning re-establishes the older one: 'disorder' signifies a new type of order(ing) such that a stimulus is reacted to in a hypersensitive—confused—way.

EO233

So it is not complete disorder! But a kind of order for which, at least for the time being, no exact mathematical 'model' has been found. Hence the impression of overcomplicated, 'complex' (in a new sense).

Crossroads.

'Bi.furcatio', fork-shaped structure -- The splitting of a given into at least two givens is noticeable in dynamic systems that exhibit a "state far from equilibrium", under 'overpressure' and immediately display disorderly behavior, -- with at most limited deducibility from the initial conditions and corresponding predictability.

Applicable model

Let us think of the Russian Empire in 1917. The system underwent

- a.** an external overpressure, because it lost the First World War,
- b.** an internal overpressure, for society burst apart in a social struggle between the conservative system and Leninism.

Consequence : 'destabilization' or "state far from equilibrium". Anything could still happen: holding its ground (branch 1) or collapsing (branch 2) – which is what the crossroads entails. Overall impression: chaos.

The Tsarist system finally collapsed—out of 'unreality' (according to Marxist dialectics: EO 218)—which constitutes one branch of the crossroads.

Note: in Marxist-dialectical terminology, one speaks of 'unreality' (no longer solving the problems); in chaological terminology, one speaks of a "state far from equilibrium".

'Crisis'.

Bible st.: Ch. Zwingmann, Hrsg., *Zur Psychologie der Lebenskrisen*, Frankf.aM, 1962.

Thirty-two specialists discuss the crises or "states of imbalance" that occur in human life.

'Crisis' (ancient Greek) means 'judgment'. With a crossroads of either survival or perishing. -- It is noted that during a crisis, the doctor, the neurologist, the psychiatrist, and the therapist establish unpredictability—lack of diagnosis: “Anything could happen!” In other words: what natural scientists and biologists have recently discovered has long been known in human affairs!

Archaic cultures, too, know the crisis perfectly: Arnold van Gennep, *Les rites de passage (Etude systématique des rites)*, Paris, 1909-1, 1981-3, teaches us that decisive transitions, in which “everything is possible”, can be averted thanks to sacred methods.

EO234

Pregnancy, birth, engagement, marriage; -- illness, dying; -- travel, pilgrimages, etc. constitute, in primitive cultures, “a crisis” in many cases.

Such problems are, within the presuppositions or axioms of the archaic religions, solved thanks to rites, actions charged with life force (in which the word plays only a partial role). The 'dunamis' (Greek) or 'virtus' (Latin), life force, bestows something that causes the “state far from equilibrium” to tilt towards survival.

Note -- Psychotherapeutic chess game theory (284/285)

Bibl. st.: K. Soudijn, *Untangling (Psychotherapies)*, in: *Nature and Technology* (Scientific and technical journal) 62 (1994): 3, 192/203.

Everyone probably knows that psychotherapies—and there are many of them—have been booming over the last few decades.

1. The axioms or assumptions are very often depth psychology (Freudian or other), Rogerian client-centered treatment or one or another behavioral therapy.

2. Now a very peculiar “cause/effect” relationship (EO 100: Baconian induction) presents itself. As axioms, there are sometimes very divergent, indeed, sometimes contradictory propositions (EO 137: Propositions) that cover the same phenomenon—e.g., depression (domain). As results, there are to a large extent exactly the same solutions: “The effect (of the various proposed methods) need not be any different,” says Soudijn.

Conclusion . -- The expressly advocated axioms cover, in fact, a hidden premise, for the result is, despite all differences in method, the same (to a large extent).

Note : -- Perhaps operative (operational) induction applies here, in its educational variant (EO 101). Or even in its operationalist variant. -- Perhaps this points to the 'dunamis' or life force continuing underground, but displaced or suppressed by a narrow-minded modern-enlightened rationalism. As stated above.

Perhaps it is the 'ethos' or individual radiance ('aura') of the addressee, as ancient rhetoricians noted when a speaker persuasively influences his audience.

Incidentally : consider the title of Tobie Nathan , **L'influence qui guérit **, *Paris*, Odile Jacob, 1994 (of the ethno-psychiatric school in France, under the direction of Georges Devereux)! Which 'influence' exactly solves the psychological problem, in fact, and is therefore 'real'?

EO235

Soudijn continues. -- The question of success.-- Not every helper succeeds. Not every patient succeeds.

a. If the complaints are detached from the rest of the total personality, then there is in principle a possibility for diagnosis and predictability regarding effectiveness: In that hypothesis, psychotherapy resembles a “single medical intervention”. In which case the axioms cover the domain perfectly.

b. If, however, the complaints are interwoven with the total personality (EO 88: Dialectical connection)—with the whole of 'existence' (living in the world as an actual human being), then there is a chess game process. In this process, not all axioms are known, and thus the domain is vaguely defined.

Model . -- In the course or process of a game of chess, there is no unambiguous rule to predict whether a move or countermove will succeed ('effective'). Reason: the opponent keeps their set of moves (or countermove) internalized (EO 155: Mutual intentionality).

Original .-- That is also the case in psychotherapeutic treatment. Sometimes a practitioner knows very well what answers or reactions to expect

(sample). Sometimes, however, he/she hardly knows or does not know at all (sample). Then he/she is dealing with the unknown (what is asked for, what is sought). The only way out: the Platonic lemmatic-analytical method (= pretending that he/she has already found what is sought and, prioritizing this, deducing what he/she has to do, -- often haphazardly. Not knowing how the coin of his/her deed might roll).

An economic model of over-complexity. (235/236).

Bible st.: Chr. Roulet, Hervé Sérieyx, *le chantre de la pensée complex* , in: Journal de Genève/ Gazette de Lausanne 10.03.1994.

Based on a book by the former leader of the Lesieur group (oils), namely * *Du management panique à l' entreprise du XXIe siècle* *, Ed. Maxima. It deals with 'chaos management'.

Introduction . -- Since 1989, enterprises, primarily the 'patrons' or 'managers', have been confronted mainly with a proliferation of undermining facts regarding traditional certainties (predictabilities).

Consequence : they have to deal with 'complexity' or over-complication. The thought models of the past no longer fit the facts: the axioms no longer apply to the evolving reality.

EO236

Which facts in particular have made the axioms of the patterns 'unreal' (no longer solving problems)?

1. The revolution regarding all things information technology (let us think here of, for example, the Internet, originating in the 1970s+, the largest set of information networks, of which more than thirty million people were using in 1994);

2. the global ramification of economies (let us think of the GATT – negotiations leading to the WOH (World Trade Organization), after forty-seven years of negotiations) – ramification that manifests itself in 'internationals' and 'delocalizations'.

3. the collapse of the major ideologies (especially the socialist ones: meeting on a global scale in Stockholm in 1988, the socialist parties admitted that a purely socialist economy is, primarily due to bureaucracy, at least in

the economic sphere); – in its wake, the dual liberal, indeed, downright 'capitalist' global economy which creates on the one hand a small number of privileged people (the filthy rich) and on the other a growing, indeed enormous number of unemployed (Reich's theory of the dual economy), resulting in a growing number of applicants for a diminishing number of jobs ('jobs').

As an example of global information: the American CNN (Cable News Network) literally transforms the entire planet into a village with its daily TV news, where everyone knows everything about everyone else—in a minimum of time.

Hervé Sérieyx, meanwhile, places the greatest emphasis on the constant changes in the global situation—primarily in the technical field: one innovation or invention after another emerges, forcing entrepreneurs to make continuous adjustments of all kinds. The result: increasingly short-term prospects. The result: the constant hesitation of bosses to venture onto the market with a product or service. These last two characteristics typify a company as “below its level” ('unrealistic', 'outdated').

Incidentally : we are in full dialectical structure (EO 215ff.: Hegelian dialectics), for the economy resembles “an ever-changing totality”. Which creates prolonged 'crisis' (“Anything can always happen”) and states far from equilibrium.

EO237

An outdated interpretation.

If one interprets the reality of our economy, both now and in the near future, based on axioms that have held true until now, this leads to panic regarding management (= economic policy) – resulting in the current economic drama – of which the following signs bear witness.

(1) The massive layoffs that further accelerate the spiral of declining consumption (and thus of the economic recession or downturn).

(2)a. The irresponsible 'lopezomania' (Lopez, from Galicia, becomes VW pattern) which, like a waterfall, is driving the entire system of small and medium-sized enterprises (SMEs), subcontractors and suppliers toward a dead end.

(2)b. The revival of outdated forms of hierarchical 'violence' that discards without batting an eye. -- In other words: managers (business leaders) who only work on a short-term basis are ruthlessly destroying the much-needed forms of partnership between economic actors (people who act) who need each other, and killing all ingenuity in the bud.

A new interpretation.

H. Sérieyx proposes a new type of economic policy in place of that outdated conception of management. -- It will, according to him, arise from the natural selection currently underway. Sérieyx calls this "over-complex thinking".

From the top of the inherited hierarchy (ranking) that leads down to the employees standing on the front line, economic thinking must undergo a transformation so that the complex or over-complicated type of thinking is exposed.

From complicated to overly complicated.

1. The Western enterprises that exist today were designed during a time of economic growth. They can handle even a somewhat complex order structure, thanks to scientific methods.

2. However, those same companies cannot yet/no longer handle the current, overly complex structures.

Appl. model.- A Boeing 747, once disassembled into all its elements, consists of approximately 35,000 parts. -- Traditional thinking regarding complexity can handle this perfectly: the aircraft can be reassembled perfectly.

EO238

Appl. model. -- A bowl of spaghetti, however, is so 'fluid' that separating its parts so that they put back together as they were arranged is impossible: "Il ya dans les spaghetti's une logique du chaos non predictable". (There is in spaghetti an (applied) logic regarding disorder that is not predictable).

Thus Sérieyx literally, in the interview. -- well, the situation of the entire 'original' planet resembles spaghetti (model), which is over-complicated or complex.

Transition model

IBM. -- December 1991 ends with a loss of 2.7 billion dollars.

1. John Ackers splits the board into nine and then into thirteen departments: IBM loses another 5 million dollars the following year. Ackers was the man of the strictly controlled hierarchical order.

2. Nabisco is appointed in place of Ackers, -- a man who knew nothing of computer science but who was at home in managing—with good results—a set of mutually different activities. The man of “living life” (“live and let live”)! He introduces more autonomy, -- more freedom for all who participate.

This IBM model leads Sérieyx to propose a new type of corporate policy. He is convinced that this will emerge from the natural selection currently underway. Such management will be at home in (the thinking of) the over-complex (economic life). From the top of the traditional policymakers—the ‘hierarchy’—to all those standing on the front lines as employees, thinking itself must undergo a transformation or reshaping so that, thanks to over-complex thinking, enterprises becoming ‘unreal’ become ‘real’ again (able to solve the new problems).

Lematic-analytical basis.

The changing situations constantly confront managers with strangers, ‘those asked’, ‘those sought’. Our mind, however, is so transcendental or all-encompassing—whatever a Derrida may say of it (EO 225: “outside the domain”)—that it turns unknowns into lemmas or as if knowns, and works with them as if they were already ‘given’, ‘knowns’.

The phenomenon is one; the transphenomenal domain is two! In all that reveals itself directly, there is the transphenomenal that reveals itself only indirectly, which is precisely the way out for our mind!

EO239

Note: What is known as “Princeton Gnosis” is a group of scholars in the USA who uphold as their main axiom the fact that the axioms of the entire cosmos are subject to constant change. As a model of that original universe, they play a particular type of card game (// EO 235 (Chess Game Process)): the players can each, in turn, set the rules of the game themselves, which the others must guess time and again by actively playing with a portion of unknown card rules,

That card game—so claim the Princeton scholars who advocate a new kind of ‘gnosis’ (paranormal knowledge)—reflects where we stand in the overly complex universe: from epoch to epoch, from individual to individual, in that whole of contradictory factors (stoicheiosis), we must guess which laws govern us!—It is abundantly clear that such a philosophy entails lemmatic thinking!

Note ; -- WB Kristensen, *Collected Contributions to the Knowledge of Ancient Religions* , Amsterdam, 1947, 272, writes the following.

Babylonian mythology, like other ancient mythologies, articulates very sharply the contradictory nature of the factors that together constitute the totality.

Note: -- what stoicheiosis is -: in Anu all 'divine' (understand: demonic) energies (life forces) are united, for he is the all-encompassing determiner of destiny such that both good and evil emanate from him simultaneously. That duality is reflected in what is called “(black) magic”: a black magician does both good and evil! Just as Satan (in the Bible) unites good and evil within himself.

Morality.

What man dreams of as an ideal destiny, rightly or wrongly, leaves the 'divine' (demonic) world cold: an Anu, a Satan are 'demonic,' according to Kristensen, who is a connoisseur of great stature—incalculable, derivable or inducible from nothing, immediately unpredictable. And thus unfathomable-mysterious. “Mysterium tremendum-et-fascinosum,” says Rudolf Otto, the phenomenologist of religion.

Such demonic deities are not conscientiously just: by their actions they deny the laws (presuppositions, axioms) which they nevertheless impose on, for example, their followers! “The ancients were fully aware of this contradiction” (oc, 273).

Consequence : the opaque 'ananke' of such deities necessitated lemmatic thinking.

EO240

Study notes (240/ 264)

Preface . -- The terms 'real' and 'reality' appear countless times in the text. They mean two things that are, incidentally, closely related.

1. Anything that can be found, located, or determined, in any way whatsoever (in imagination, outside of us), is called 'real'.

2. Anything that, starting from the given, is capable of solving the question asked, is also called (metonymically) 'real' (whereby we refer especially to Hegel, who uses the term 'wirklich' (EO 217; text that must be well known) in that very ontological sense). Why is that second meaning so ontological? Because ontology is the 'study of reality'. Because we engage with reality thanks to our insight into the truth, i.e. reality insofar as it has been exposed (revealed, -- apokalupsis (= revelation, exposure, 'revelation'), -- aletheia (= truth, being revealed).

Because we 'see' reality—our own and that around us—with our mind as given and as sought (asked), we are 'real' in the second sense. In other words: we do not float with our (wandering) mind—far away from all that is.

1.-- Existence/way of being.

When the question is asked, “What is that 'reality' or, as has been said since the ancient Greeks, 'being'?”; then the answer, since Plato, is clear: everything that stands (is in fact there, is given, is even observable and verifiable) and everything that, precisely because of this, exists in one way or another (mode of being), is 'real' (first meaning).

Note : Ontology has existed since the Eleatic Parmenides. But from the very beginning, it has merged with logic (theory of thought)—theoretical and applied. Why? Because, at least in the Eleatic interpretation, reality bears thorough witness to spirit, insight, and sensibility. Because everything that is real is immediately also 'logical,' and thus susceptible to logical reasoning.

Incidentally : there are four major types of “if then” relations (the core of all ontological and traditional logic.)

These are: a. deduction (deriving flawlessly from presupposed data); b. reduction (attempting to return from data to the presuppositions upon which those data depend); -- c. induction, one type of reduction (concluding from samples into sets (classes) and/or systems), -- d. lemma (as if data with which one works logically).

EO241

-- Traditional theory of thought consists of two parts.

1. Pure or theoretical logic.

She treats a. the concept (term) and b. the judgment (sentence) as c. elements comprising the reasoning. The reasoning itself is a conditional or hypothetical sentence: “if (all that is, is susceptible to value judgments), then also because of this given here and now”.

2. *Applied logic or methodology (methodology).*

As just mentioned: four main types of “if-then” sentences govern applied logic (deduction/reduction (induction, lemma)).

Why is logical reasoning so central to traditional ontology? Because “logical reasoning” is: deriving another reality from a given or presupposed reality! “If reality 1, then reality 2; Reasoning is exploring being(the) in a responsible manner—orienting oneself in reality with intellect and insight.

Remember above all that every concept has both content and scope. This duality or systemechy is expressed in the phrase “all that is something”, where “all that is” represents the scope and 'something' the content. Cf. EO 08.

2.-- *Pre-ontological/ ontological language use.*

Even intellectuals, even high-level intellectuals, fail to grasp sufficiently that ontology has its own, strictly definable language.

Contrasts such as “becoming/being”, “dream/reality”, “pleasure experience/reality”, “sign/reality” are characteristic of pre-ontological language. Ontology sees one kind of reality in the first terms of those pairs. Nothing more,

Above all, remember very well the pairing of “literal (nominal) / factual (real) definition.” Why? Because words only acquire meaning, ontologically, when, after a precise dictionary definition, they are also and especially defined on the basis of all kinds of tests against what they are supposed to correspond to. Science, for example, is more than words!

Also remember the two meanings of 'nothing' very well.

a. The complete or absolute nothing is complete or absolute nothing (no tangible definition is possible).

b. The relative or relative nothing is some reality that exhibits a void.

EO242

3.-- *Theory of negation.*

This chapter unfolds what has just been said.

(A) *Absolute nothing.*

It is the absolute absence of all reality. Being is transcendental or all-encompassing (there is nothing outside being). Consequence: everything that falls outside being is absolutely nothing. EO 18/20.

(B) *Relative nothingness.* This means void or absence of reality within all that is. -- The “nil negativum” is purely descriptive.-- The “Nil privativum” is value-judgmental.

4.-- *The laws of being.*

A 'law' is a generally applicable ruling. It tolerates no exceptions.

Identitarian law (all that is (so), is (so); contradictory law (all that is (so) cannot simultaneously and from the same perspective not be (so)); law of the excluded third (outside of being and (absolute) non-being there is no third term). -- Actually, these are three formulations of the same concept of being: “being is itself and nothing else”. That is the identity of all that is.

5.-- *Ontology/ metaphysics.*

The term 'theory of reality' is the only indisputable term. For the terms 'ontology' and especially 'metaphysics' have more than one meaning.

6.--*Transcendental ontology.*

That is the strictly general ontology applying to every reality without any exception. -- The terms “all things”, 'everything' - synchronically - and “all that was is will be” - diachronically - express the all-encompassing, nothing—but then absolutely nothing—character of the concept of 'reality' or 'being' that tolerates nothing outside itself.

The science of lot goes hand in hand with the diachronic concept of being, for our fate is a part of “all that was, is, and will be”.

7.-- *Modal ontology.*

The term 'modality' has more than one meaning. -- Either it expresses a mode of being of something (Hegel's phenomenology) or it expresses a reservation or restriction. -- The differential “necessary/ non-necessary/ necessary-not” contains the strictly ontological modalities.

Remember very well (EO 37) that deduction entails the modality of necessity or impossibility (= necessarily not), whereas every reduction exhibits the modality of possibility (so the induction, so the lemma).

8.-- *The Transcendentals.*

being or something, -- truth (revealability), value (goodness), unity (= connection: resemblance/ coherence).

EO243

Transcendentalia are necessary conditions or presuppositions for:

a. the ability to grasp reality ('being'), b. the ability to grasp truth ("revealed being"), c. the ability to make value judgments (based on the ability to grasp value or 'goodness'), d. the ability to see connections (either of similarity (metaphorical or set connections) or of coherence (metonymic or system connections)). -- In ordinary, pre-ontological speech, these all-encompassing concepts go submerged (because they are, as it were, innate).

9. -- Unit (connection).

The Paleo-Pythagoreans are the first—perhaps after Thales, who defined the concept of 'number' as “monadon sustèma” (a collection, or system, of (punctual) units)—to uphold a henology or doctrine of unity of a comprehensive nature.

Note : a quantity expressed as a number was, for the ancient Greeks, primarily a configuration, i.e., a set of places in which the (punctual) units were placed. See EO 47 (triangular and square numbers).

Note : The term 'unit' is ambiguous: on the one hand, it denotes the small or specific unit (“The number five contains five units”); on the other hand, it denotes the large or comprehensive unit (relationship) (“The number five is the unit of five units”).

Incidentally : when we say “That is a twin,” this can mean the two together or just one of the two!

Conclusion . -- From an ancient numerology (arithmology), the Paleo-Pythagoreans came to observe, except in quantities (expressed in numbers), in all beings either the punctual or the comprehensive unity (thus they created a transcendental concept).

Note : Let us now return to EO 23 (Theory of Judgment).

There we saw the pedestal of ancient and medieval anthologies, namely the doctrine of identity. -- Now there is punctual identity (“I am myself”) and all-encompassing identity (“I am only myself when I see her”).

'Number' and 'number' - in ancient language - is always to be understood broadly and thoroughly. -- A judgment is one application of the theory of identity.

1 .-- "I am myself". -- This judgment expresses the fact that I totally coincide with or am identical to myself.

2.-- "I am a teacher." -- This sentence expresses the fact that I am partially identified with my profession.

EO244

Incidentally: partial identity is 'analogy'. All judgments are instances of identity, whether they exhibit the verb 'to be' or another verb. We call this "the identitive character" of all insight into the relationship between the subject 'original' and the predicate 'model'. Even negative judgments are still a matter of identity, but then in the negate (negative form) thereof: "I am not the teacher who was meant."

Note-- Tropology.

The doctrine concerning the tropics. -- KA Krüger, *Deutsche Literaturkunde*, Danzig, 1910-12, 115, says the following.

a. The metaphor.

It is "a brief comparison" pointing to a similarity: "The lion is there!". Understood by this: through his decisive action, he brings to mind a lion that is also capable of acting 'decisively'. The comparison becomes a metaphor through abbreviation: "He who is just like a lion is there".

b. Metonymy.

It too is a brief comparison, but one that points to connection: "The healthy apples" (Aristotle's example). Understood by this: through their effect, once eaten, apples cause health. The comparison becomes a metonymy thanks to abbreviation: "The apples healthy thanks to their effect".

Association theory.

If one thinks of b while considering a, then b is an association of a.-- Therein lies the rule.

1. Metaphor.

With Mr. X, one thinks of his resoluteness, which is reminiscent of that of a lion, and so one says, in short, "The lion is there."

2. Metonymy.

With those apples, one thinks of their effect which suggests the result 'health', and so one says, in short, "The healthy apples".

Both the trope and the association—they are identical in some way—are the application of the transcendental unity-in-a-multiplicity or the transcendental identity. In particular: both the metaphor and the metonymy are examples of partial identity or analogy (proportional (metaphorical) and attributive (metonymic) analogy).

Note: The synecdoche. -- Krüger, oc, 115, translates this as 'Mitbezeichnung', co-signification. -- What exactly is co-signified?

EO245

1. Metaphorical connotation.

"A female teacher is never late," says the inspector. Co-included in "a female teacher" are all (other) female teachers (one instance stands for the entire collection or class).

That is tropological. -- Now associative: when explicitly mentioning an instance of the general term 'female teacher', the inspector actually thinks of all (the others).

2. Metonymic synecdoche.

"We offer hospitable shelter," says the friendly man. In "hospitable shelter," "co-" means that being a part of the whole house, which is the totality or the system that the house is. In other words: all (other) parts of the house are understood to be co-!

So much for the tropological aspect. Now for the associative aspect: when explicitly mentioning a part (the shelter) of the system concept 'house', the friendly man is actually thinking of all (other) parts.

The synecdoche also exists in reverse:

"All female teachers are never late" (so not here and now), says the inspector. Or: "The whole house is one hospitable shelter," says the friendly man. -- In those cases, one thinks of one when referring to 'all' or of one part when referring to all parts.

Now read the beginning of the chapter on induction (generalizing or metaphorical and generalizing or metonymic) - EO 94/95 - , and one will soon see that the tropes and associations actually rest on inductive reasoning.

In metaphorical induction—generalization—one starts from, for example, a single instance in order to arrive at the entire set (all others).

In metonymic induction—generalization—one starts from a single component in order to arrive at the entire system.

Metaphorically : “This is a pen” (co-signified, associated): “Thus all (other) pens are about the same”.

Metonymically : “This is now the Meir” (co-meant, associated: “This is the living center of the (entire) city of Antwerp”).

Note: a. the allegory is merely an elaborated trope; b. the personification is merely a trope that identifies inanimate things with living ones (“The clouds preach storm”). -- Always analogy or partial identity!

It is immediately clear: the concept of 'being' or 'reality' is a tropological or associative concept. -- precisely that is what the ancient Greeks expressed through the term 'stoicheiosis'. The transcendental doctrine of unity is the unshakeable, eternal pedestal.

EO246

Two basic forms ('modalities') of identity.

1. The systems.

This is the opposite pair or couple. For example, “master/slave” or “father/son”. Likewise, the “content/scope” of every concept. Or: the categories (EO 85) such as “thing/relationship” or “quantity/quality”, etc.

The term 'systechia' comes from “su.stoichia”, whatever is a collective element/factor.

2. The differential.

This is a system with at least one middle term. Thus: all yes/ some yes/ some no/ all no (= none). -- thus: wholly yes/ partly yes/ partly no/ wholly Cf. EO 24. -- It is seen that identity constitutes one aspect of non-identity or opposition: both master and slave belong to one identical social context; both 'yes' and 'no' belong to the same identical context of affirming/confirming.

Conclusion . -- The ordering of data, on the basis of comparison, apparently relies on identity and its modalities or forms.

10.-- Goodness.

Plato is the first who, alongside Stoicism or the theory of order, grasped the all-encompassing nature of value. -- Everything that ever was, is, and will be, is susceptible to value judgments because, as soon as something is something, it represents value somewhere.

Stoicism/ theory of value.

That the integration of things—beings—is fundamental is already evident from the fact that whatever can be called good must also be wholly good; otherwise, it is called “good-with-reservations.” “Bonum ex integra causa, malum e quocumque defectu” (Is (truly and unconditionally) good whatever is wholly good; is not good whatever shows any deficiency anywhere). Totality is decisive.

Differential .-- Typical social criticism! Take a look:

incompetent	expert	incompetent	expert	cf. EO 103:
unscrupulous	unscrupulous	conscientious	conscientious	structural

It is immediately apparent that a differential – just like a systechi – is a configuration (EO 46) and therefore a matter of combining.

11.-- Transcendental ontology: subdivisions.

This short chapter organizes what preceded.

A. General ontology:

essence form (ousia), that by which something is itself and immediately distinguishable from the rest. -- Do not confuse the ontological form with the geometric 'form'.

EO247

In other words, a given either exhibits 'ousia' ('ont-sia', being-ness) or it is absolutely nothing!

B. General ontology

1. Aletheiology theory of truth.

'True' - a.lèthès - means unhidden,-- unhidden from our mind and thus true in the current sense.

As soon as something is something, it is: possibly unconcealed, exposed, revealable, understandable, meaningful, etc. One of the properties that

immediately accompany exposure is the fact that everything—as soon as it is something—must have a necessary and sufficient 'reason' or 'ground' either within itself or outside itself (stoicheiosis).

That is the basis of every reasoning: if ... then... In Jevons Lukasiewicz's version, this is abundantly clear: if a then b (= principle of reason or ground applied); well then, a; therefore b (= deductive model). - if a; then b. well then, b; therefore a (= reductive model).

The principle or axiom of reason or ground is the same as the basis of the hypothetical method (the core of Platonism, for example). -- This is simply Stoicism, for as soon as something is something, it becomes observable both in itself and in relation to something else (EO 85: thing/relation). Thus it is exposed, revealed, 'true' in its totality.

2. Harmology (theory of relations).

See above regarding identity. See also EO 158 (joints).

Element/front arrangement.

Stoicheiosis is working with this primordial pair that can in some ways serve as a summary of all Greek thought. -- Stoicheion te kai archè! Elementum et principium! The one applies to ordering as seeking sets and/or systems; the other applies to applying the axiom of reason or foundation. Now, it turns out that these two are distinguishable but not separable.

3. Axiology. -- Theory of Values

The fact that, as soon as something is something, it is susceptible to valuations of all kinds, leads philosophies—like every human being—to establish scales of value time and again. These are merely variations on the one, absolute concept of 'goodness' or value, namely thanks to stoicheiosis or the mutual ordering of goods.

11.bis. -- The hypothetical method.

Platon originally started from the mathematics of his time. This prioritized axioms from which brilliant deductions were made (theorems). However, this was done in such a way that the axioms themselves were not investigated. -- Platon engages in the foundational investigation of mathematics and thus lays the foundation for every possible philosophy.

EO248

Namely, by tracing not only the axioms of mathematics but the axioms of all possible human activities. The axioms of all that is—the axioms of all that was, is, and will be. That is the definition of philosophy, which, properly understood, is merely ontology.

Transcendental/categorical ontology.

Just as the all-encompassing being (or being reality) differs from all that is within this all-encompassing being(th), so the transcendental ontology differs from the categorical.

The two often merge in the sense that philosophers believe they can speak with sufficient authority about any category without delving into it—e.g., mathematics or politics or whatever—! Aristotle, however, emphasized this point: 'being' is, without categorical definition, an 'empty' concept. Conversely, scientific specialists often believe they can theorize about reality in general (= the all-encompassing being) without seriously delving into the domain defined by ontology. -- Between being-in-general, however, lies an abyss. Only this: general or transcendental ontology acts as a light that illuminates. Nothing more! That is precisely what is meant by 'light metaphysics'.

12.-- The dieretic-synoptic method.

With the theme of the hypothetical method, we are in the domain of the archè, principium, presupposition (axiom).

With this theme, we find ourselves in the domain of the stoicheion, elementum, element. Classifying data, summarizing it is naturally stoicheiosis: diairesis/ sunagogè (sunopsis)! The interrelationships of the data are discussed in the form of catagoremes (dealing with concepts in a classifying/summarizing manner) and categories of Pythagorean-Platonic and—later—Aristotelian origin.

Note how these commonplaces do not work in isolation but are intertwined (= stoicheiosis for the umpteenth time).

Conclusion -- the hypothetical and the dieretic-synoptic method form a diptych as archè, preposition, and stoicheion, element, which themselves belong together!

Platonic dialectics stands or falls with this diptych: it distinguishes but never separates.

13.-- The inductive method.

It stands or falls with the theory of order or stoicheosis, as briefly explained above—regarding the tropes/associations.

Generalization relies on stoicheiosis, which, based on at least one example, reflects upon the class or general concept (Socrates' concern) or collection.

Generalization rests on the same stoicheiosis or ordering of data that, following at least one component, penetrates into the collective concept, constitution, or system.

Peirce's positioning of induction.

Deduction/ induction/ hypothesis. -- The diagram is a configuration (EO 46). Look:

Deduction. All beans in this bag are white. Now, this bean/these beans come from this bag. So this bean (singular), these beans (particular) is/are white.

Induction. This bean/these beans come from this bag. Well, this bean/these beans are white. So - possibly - all beans (universal) in this bag are white.

Hypothesis. This bean/these beans are white. Well, all beans in this bag are white. So: possibly - this bean/these beans comes/come from this bag.

One sees that Peirce posits a schema of commonplaces—two antecedents/a consequent (typical of every syllogism)—as a configuration within which to move the fillings! Remember at least a few types of induction, Socrates' masterpiece.

In the first place, the systechie or couple “summative/amplificative induction”, for this couple or opposite pair is fundamental.

In short: “from all individual to all collective (summarizing induction” and “from at least one instance/ part to all instances (collection)/ all parts (system) (knowledge-expanding induction)”.

The Socratic-Platonic dialectic.

Studying together was the golden rule of all ancient schools of philosophy (except, for example, the Cynics).-- Why? Because the axiom of study was: not merely reasoning, but dialogical reasoning! See EO 49 (“living together

intimately, suddenly grasping the idea”). --- Immediately, we see Athenian democracy depicted in that method.

14.-- Types of induction.

A. Inducing the “summative/amplificative” couple is fundamental. Demonstrate this using EO 114 (Statistical induction).

B.-- Baconian (cause/effect), operative (educational, operationalist) -- Bridgman --, structural (configurative or combinatorial), similarity -

or analogical (purely inductive and hypothetical), cumulative or convergence - (idiographic), statistical and induction of authority.

15.-- Holistic ontology.

Totalities of all kinds—collections and systems—occupy us.

EO250

Above all, however, the totality (the system that gathers all beings) of reality as the whole of all possible beings or realities is the object of philosophy or ontology.

However, specimens and/or parts of totalities are within our reach. The inductive method revealed this. Practically speaking: only through the very limited and finite channels of categorical realities do we have access to transcendental reality. -- The finitude of our categorical world, in which we are, in fact, at home, therefore weighs on the possibilities of transcendental ontology.

That problem—the problem par excellence—of current ontology will now occupy us until the end of this course.

Given/ sought (requested).

Because we explore the totality of everything in a finite manner (inductively: we explore the totality of everything), we live in a field of tension that simultaneously contains the given (= phenomenon) on the one hand and the sought (requested) (= transphenomenal domain) on the other. -- Until the end of this course, we will take a closer look at that basic systemechy—not only of problem-solving mathematics but of every human activity, -- including ontology—(what is called 'theoria' in Platonic language).

Appl. model . -- If - in paleopythagoreic premise $1 \times 1 = 1$, $2 \times 2 = 4$ (or : $1 + 3$), $3 \times 3 = 9$ (or : $4 + 5$) etc. is (see EO 47), what then will e.g. 7×7 be? The if-then clause splits given and requested. Splits phenomenon - that which one perceives, because it is directly given, and transphenomenal sought, because it is only indirectly perceived.

Incidentally : the series of Paleo-Pythagorean square numbers (1, 4, 9, 16, 25, 36, 49, 64, 81, ...) runs parallel to the series of odd numbers (3, 5, 7, 9, 11, 13, 15, 17, ...). This is implied as known (= given) in the little problem. So that a child, knowing the rules, can say that $7 \times 7 = 36 + 13 = 49$.

In Hegelian terms: the child's actual or problem-solving response!

EO251

The diagram above implies that, when one begins the solution, i.e., the step-by-step solution, one is actually operating within an axiomatic-deductive scheme.

That this is the case is indirectly evident from proof by contradiction: the premise is that there exists a solution that 'corresponds' to the given but not to the requested (D. Nauta, *Logica en model*, Bussum, 1970, 27), -- a solution, however, which is then shown to be impossible, unthinkable, or absurd because it leads to contradiction(s).

Which then amounts to an entry that is pure 'fiction', an absolute nothing. Such an entry does not logically follow the extension of both the given and the requested! Solves nothing! Is 'unreal' (Hegelian speaking).

Pay close attention to the transition from phenomenon to the transphenomenally sought: Herodotus, Anaxagoras, and others—following in their footsteps Socrates, Plato, and others, begin with the immediate given in order to transcend the logically strict and reality-faithful!

- a.** the inductivist to arrive at generalization/generalization;
- b.** the hypothetical method of arriving at decisions deductively or hypotheses reductively;
- c.** the lemmatic method to arrive at a hypothesis via reduction, which must then lead to deduction(s) as a lemma.

Whereby the diereitic-synoptic method actually entails an induction (generalization or reverse splitting). See EO 116 (More than one way).

Conclusion . -- Our strictly logical thinking and living are situated in tension between the immediately given (phenomenon) and the indirectly given (what is sought, what is asked, what is a problem), both of which together constitute the totality or “to holon” of reality. That is the holistic nature of ontology and of (applied) logic.

This defines Platonic theory or fathoming, the thorough (seeking the 'ground') entry into all that is. Cf. EO 117. -- The rest of the course illustrates that.

16.-- Phenomenological method.

Not the phenomenology of a Hegel (the modalities of “the spirit” in the course of (cultural) history), -- nor that of Teilhard de Chardin (the modalities of “life” in the course of (even cosmic) history), -- but that of Edmund Husserl.

Definition: the given is what is requested, but in its form described as accurately as possible!

EO252

Note that the ancient Greek 'rhetoricians' (teachers of eloquence) knew a form of collective given: the given which they, as proof, labeled 'a.technos', without any intermediate term, and which was simultaneously immediately given and 'evident' for both the speaker and the audience. -- From this, as from a logical presupposition, conclusions (of a practical nature, for example) could be drawn in a logical manner. See EO 123 (The Greek Rhetoricians).

17. The distinction “phenomenal/ transphenomenal”.

Two thinkers are mentioned briefly. -- A.-A. Cournot (1801/1877) and especially Hans Reichenbach. -- 'Testing' is a deliberate contacting of reality as reality. Or: to examine something in its something-ness, that reality.

Reichenbach is a (neo)positivist. Therefore, he will first prioritize sensory perception as the basis of 'reality'. Preferably by means of instruments: using a thermometer or heat meter on a sick person is something different—more solid—than feeling their cheek by hand or seeing the red color of their face! Even though such an instrument is already an indication! Namely, perceiving through the 'lens' of the instrument is no absolute guarantee of radical and, above all, complete objectivity. It is, however, a single sample—with inductive value. Thanks to the thermometer, a vague data point becomes a more precise data point. It is more 'data'!

Note -- A proposal for 'transempirical' testing is very remarkable for a neopositivist. In his view, the proposition "Cats are divine beings" might, perhaps, one day be tested! This is a transgression of traditional enlightened rationalism, which is very closed to such matters. -- This demonstrates how phenomenological Reichenbach was and how phenomenological he was (EO 09: Essence/existence):

a . he saw no rationalistic evidence against the divinity of cats (rationalism, if it adheres to the given, has limits: and

b . He had not yet seen a single piece of evidence that directly demonstrated that divinity!

This excludes both the refutation and the proof in favor of the belief that cats are divine beings—for lack of proof on the part of both the refutors and the adherents. A proposition in the style of Zenon of Elea: neither you nor I (proves it)!

EO253

16. -- ABC theory.

In fact, this is the very useful schema of hermeneutics, or the theory of interpretation. The impetus is the psychiatric theory of Ellis/Sagarin, which uses it to explain both common sense and neurosis (the nervous mind). Namely, in one type of nervous disease, nymphomania.

Remember this schema very well! 'A' is the given. 'B' is the method of approach, specific to the subject or I (possibly we), such that it engages in 'projection' (believes it sees its own prejudices in the given itself). 'C' is the final interpretation.

Phenomenologically, 'B' is a disturbance in the perception of the given and, at the same time, in its correct, faithful representation. A typical phenomenological disturbance in the first place. One does see the phenomenon—the given—but one sees it from a sample or perspective in such a way that pure seeing or perception is disturbed.

This is very clear in nymphomania, for example: instead of viewing the phenomenon—a miscalculation (especially regarding sexuality)—purely (as it is), the neurotic deludes themselves regarding the given situation, but which is not necessarily to be found in the situation itself.

Transphenomenal, the 'B' is likewise a disturbance, but now in reasoning! One sees things in the given that are not there! From there, one continues to reason.

19.-- Axiomatics.

This is, in a sense, the heart of the entire course. Why? Because a theory of definition is finally at work here.

Ch. Lahr, SJ, *Logique*, Paris, 1933-27, 496/499 (La définition); 620/622 (La définition empirique).

EO 08 (Content/scope of a concept) teaches us that the content of a concept refers to a scope (a set of data) expressed within it. Anything that constitutes concept content, a set of things, is represented in a definition.

Fundamental rule

De omni et solo definito. So said the medieval people! To represent the defined subject in its entirety and to represent that defined as distinguishable from the rest is to represent the whole defined and only the defined.

Whether that is the meaning of a word or a reality encountered outside the verbal domain makes no difference.

EO254

Reread EO 12 now: "From the nominal (literal) to the real (substantive) definition" counts as the work of science! But it is also our daily life's work! Otherwise, we will not achieve a good understanding with our fellow human beings, -- let alone a proper understanding of reality itself.

Original and model

The subject of the sentence is the original, that about which the predicate provides information. The predicate is the model, that which clarifies, defines, and characterizes the information-seeking original.

We saw in ST 05 (Tropology/Associative Theory) that there are two basic types of information: a. information based on similarity (metaphorical); b. information based on coherence (metonymic), both of which are inductively conveyed in the synecdoche or co-signification.

The definition.

The definition is a mutual judgment in which subject (original) and predicate (model) coincide, such that they are interchangeable (convertible).

When I say, with Aristotle, that “man is an animal endowed with spirit, 'logos',” then 'man' and “animal endowed with spirit” must be interchangeable. For they refer to the whole of being human and only to the whole of being human. “De omni et solo definito.”

Axiomatics

We adhere to the Aristotelian view. -- Look closely:

A. -- there is a well-defined domain or area of reality (such as the digits of our number system; such as the ideas of a political party);

B. -- there are a number of judgments (statements that apply to that domain. - Do you see the original (the domain) and the model (the statements that represent it)? They - those statements - apply to the entire domain and only to the domain. Otherwise, they define something else!

Deduction.

That—domain expressed in theorems—is presupposed in order to deduce from it. Whether those presuppositions—axioms—are proven or not is neutral for the deducer as deducer. -- Which is not the case for the foundations researcher, of course: he clings precisely to the testability of the presuppositions, just as Platon did with (the presuppositions of) the mathematicians of his time who, once they started with axioms, merely deduced!

EO255

a. Phenomenological.

The given or 'phenomenon' here is first and foremost the domain insofar as it is expressed in “true propositions” ('true' insofar as they reveal the domain).

b. Transphenomenally requested.

What is sought is a set of theorems deducible from that presupposed 'phenomenon' or given, namely the axioms.

They are the algorithm or the true propositions revealed step-by-step that prove deducible from the preconditions. -- They extend the phenomenon to the transphenomenal domain that is initially given vaguely, as the question asked or the problem.

Thus, in the elaborated axiomatic-deductive system, the domain becomes increasingly clearly a 'phenomenon' to the eye of the logical mind at work.

In other words: a totality of true propositions is initially partially present as a given, -- only to become increasingly present as 'evidence' during the elaboration of the system.

Note-- Axiomatic induction.

This is one application of ABC theory. Why? Because whoever invariably posits—axioms—selects only a sample (a part) of all possible presuppositions. That finite number of propositions defines the domain, which is represented in its entirety but as distinguishable, indeed, separate from the rest of the all-encompassing 'being' or reality that includes all possible domains. Of the total reality, one sees only what the propositions concerning a number of domains allow one to see! The rest is transphenomenal: an 'X', an unknown! Not revealed by true propositions.

The positive integer.

Peano has uncovered the domain, namely the positive integer, within a finite set of true judgments. His definition—understand: the finite number of axioms—does not extend beyond that domain. The rest is not (yet) a phenomenon! Transphenomenal.

Study that very well. For it teaches how to define correctly. This is: to describe a phenomenon correctly—only that phenomenon—and the entire phenomenon (de Omni et solo definitio).

This is seen very clearly in EO 141, where, by dropping exactly one axiom, the domain (the scope) changes enormously: all negative numbers come into view, are exposed in a number of “true (understand: exposing) theorems”!

EO256

20.-- Fellow man.

Once again the duality “given/asked”! But now from the perspective of the individual consciousness (life) that is, of course, immediately given to us. At least insofar as we experience it. For much escapes us. That is the 'phenomenon' here. -- Everything that takes place outside our individual consciousness seems transphenomenal—however peculiar it may be! -- So that there may be two worlds:

a. our inner world, as a direct given;

b. the external world as a given but not immediately experienced as our inner life and therefore 'requested'.

This is how modern philosophy, following in the footsteps of Descartes, views those two worlds. It starts from “le sens intime”, the inner experience (understood as a world in itself).

Claude Buffier (1661/1737), a Jesuit, responds to this division of worlds. Instead of “le sens intime” (the individual inner life), he prioritizes “le sens commun,” the common experience. Also: the common understanding (as opposed to the intimate-individual understanding). -- Following in this footsteps is Scottish philosophy (Thomas Reid et al.).

The division into the inner and common (shared) world still exists in this interpretation of matters, but it has been all but scrapped. Here, it is not “the thinking I” that is central, but “the thinking we-in-the-world”.

At the very beginning, common-sense philosophy stands much closer to the ordinary person who, unlike a hyperrational Descartes, does not attempt to prove to himself that he exists—that, besides his (initially doubting) consciousness, there is also an external world and even a god: the ordinary person lives “for himself,” not skeptically (EO 147). From the outset, the ordinary person lives together with others in the same (external) world.

Mediatism (indirect knowledge) / immediatism (direct knowledge).

Mediatism is that philosophical tendency which assumes that our knowledge, at least fundamentally, has indirect knowledge of matters, because we have 'contact' with the given only through intermediaries.

Immediatism, on the other hand, asserts that we have, fundamentally at least, direct contact with reality.

One sees that, for example, commonsensism is convinced that we know our fellow man directly, even if that knowledge is based on a sample (as we saw on EO 121: one knows Tina Turner superficially at first and then more thoroughly).

EO257

Now, it is true that, to the extent that a Husserl deviates from the Austrian school, he introduces a kind of new “sens-intime thinking”: he nails himself

so firmly to phenomenological reduction (EO 121: everything is reduced to that which is immediately given to my individual consciousness while “the rest” is bracketed) that, in the long run, only the data of that type of inner perception count as given. The rest automatically becomes transphenomenal, of course.

To transcend that individual, phenomenologists then call upon a 'transcendental' subject (preceding all possible individual subjects or 'selves') that is then deemed to be 'present' somewhere in every individual self or subject.

Conclusion.-- The intimism of a Descartes still lives on!

Language analysis.

Learn well EO 150/152. Because with Bochenski's text on language analysis we end up in semiotics (Peirce, Morris) or semiology (de Saussure, structuralism).

Three types of relationships—which is essentially *stoicheiosis*—are discussed:

- a.** signs, in their mutual relations (syntactics)
- b .** signs, in their relation to that which they denote (semantics) or signify,
- c .** signs, in their relation to the one who makes use of them (pragmatics).

With the latter, we enter the realm of *significa*, the 'study of understanding', which studies the meanings of signs as a means of communication. -- Semiotics, or the study of signs, is fundamental to phenomenology.

Intentionality.

The slogan of the Austrian School (Franz Brentano: *psychologie vom empiricalen standpunkt* (1874))! But, in fact, a medieval concept.

All awareness of something is intentional: something becomes the object of my attention (consciousness), which focuses on it precisely because of this. That focus is 'intentionality'. Everyday: paying attention to something!

The fellow human being emerges in the mutual orientation between me and him/her: mutual intentionality! “I ensure that he/she pays attention to me and vice versa.” In this, we make direct contact with our fellow human being. As a result, we are a we-in-the-same-world, -- even though we each

have our own inner, individual world. -- Commonsense philosophy—the Scottish school—captured this well in its time.

EO258

21.-- Formalism (formalization).

One application of the first branch of semiotics, namely syntax.-- What are the axioms?

1. Semiotics.

- Peano's pasigraphy says it: “blackened paper”! Graphic reduction reduces everything to begin with to 'graphism', written sign.

- Syntactic reduction: the written sign reduced once again to the 'suntaxis', the mutual concatenation, without regard for the meaning or the use value.

2. Combinatorics.

The configuration counts: signs interconnected by conjunctions. -- With this, formalism establishes its own stoicheiosis (reflexive and non-reflexive conjunctions; add to this the relation to ambiguity).-- In this respect, formalism clearly resembles arithmetic with signs, and indeed purely 'syntactic'.

3. Logic (applied logic).

In the form of an algorithm or step-by-step reasoning. -- Structure: given/requested. See ST 11/12 above. “If given, then requested”. -- Remember mental arithmetic as a small example.

The lemmatic method.

EO 164ff..

a . A lemma or "as if" unknown arises through reductive reasoning – which leads to a hypothesis.

b . Lemmatic reasoning begins when one treats that hypothesis or unknown as if it were already known (and thus already given).

Which points to hypothetical-deductive behavior: one acts as if the unknown was already known (as-if-known) and reasons deductively with it.

The core is therefore an analysis or reduction that uncovers an unknown, followed by deductive behavior, with that unknown treated as known. —Cf. Black box method.

From numerical arithmetic to algebraic arithmetic.

Francois Viète (1540/1603), Platonically oriented, applied lemmatic reasoning by calculating with unknown letters instead of known (given) digits. As if they were 'digits' already known somewhere. -- This letter behavior is very common in modern formalism.

Remember the distinction between a syntactic rule and a law: both are universal; but the syntactic rule is a rule of method.

22. -- Formalism

Algebraic calculation is calculating with universal concepts, represented in letters.

EO259

Function theory, analytical geometry, and infinitesimal calculus developed from Viète's algebraic calculation. Not least strictly logical arithmetic or logistics.

Note : The adherents of logical 'calculus' are increasingly calling their discipline 'logic'. That is possible, of course, but with the understanding that traditional, ontologically justified logic is something else entirely! The concept of 'reality' (as all that is ascertainable, in whatever form) governs traditional logic as an axiom. Even the signs of logistics are realities, subject to ontology and ontological logic. Insofar as they are 'something' (that is, something real). However, you will regularly hear the logisticians say that, due to the fact that only the syntactic aspect applies, "the signs they employ have nothing to do with reality (as they conceive it, -- in everyday language)". This alone reveals the difference.

Three notable phases:

logical algebra (1847+),

logic (especially since Principia mathematica (1910/1913),

metalogica.

The semantic degrees.

Behind the term 'metalogica' lies the doctrine of the stages, in semantics (which, with reference to 'reality' outside the sign, resides as the theory of meaning).

A. Zero step.

This staircase moves before every semantics. This implies that it is a purely ontological term! For there is not yet a thought, speech, or writing sign!

B.1. First semantic degree (object language).

The one who uses signs—linguistic signs—intends (= intentionality: called “intentio prima” or “first intentio” by the medievalists) the (ontological) reality: “I see that little squirrel over there picking apart a pine cone”.

B.2. Second semantic degree (metalanguage).

“I tell you that I see that little squirrel over there picking apart a pine cone.” Language talking about language. The one speaking does not mean (= intentionality: in medieval usage “intentio secunda”, “second intentio”, paying attention to what is said (better yet: “I pay attention to the fact that I pay attention”)) reality—called 'object' by the semanticists—but the linguistic signs that are pronounced regarding that object.

If one wishes: “direct red” (language speech, then) is object language; “lateral (language) speech” is metalanguage (for it cites language).

EO260

The liar's paradox.

Here we enter the domain of and the doctrine of semantic degrees and the doctrine concerning intentiones! EO 173 + EO 177.

What does “I lie” mean? As long as one knows only the idioms, that meaning is an x. -- However, when both the inner intent (that upon which I focus my attention) and the externally observable language are known simultaneously, then the sentence “I lie” means something. That is to say: only then does it reveal information, a true statement that exposes reality.

For whoever lies exhibits 'antiphrasis' (an inner contradiction): what he/she says (to the outside world) is accompanied by what he/she says (internally: “I do not mean it as a representation of reality”). In other words: the inner sentence is a metalanguage – but purely internal: about one’s own language.

This aligns with the traditional teaching regarding the “inner restriction or reservation” (EO 176).

23.-- Computer technology.

Basis: the concept of a “dynamic system” that processes matter/energy/information. When information is processed, we are in

information theory (resp. computer science). Computer science teaches us a threefold structure in the operating system: input “black box”/output. But in such a way that, if necessary, self-regulation is activated, whereby the result of the output re-enters the input. EO 163 (Diagram).

The computer system.

With its equipment and especially its software, this type of dynamic or goal-oriented system encompasses five aspects:

1. insight into the use of the equipment;
2. insight into the core of the thought process, the algorithm;
3. structuring the information ('data') to be processed;
4. application to concrete cases;
5. Protection against intruders (computer crime).

Programming.

That is: converting the given and the requested into a logically flawless sequence of irreducible steps. That is: forming an algorithm.

Just as in all formalism (Cartesian analysis and synthesis). -- See ST 16 (Deductive algorithm). - Now see especially ST 14: definition theory. The entire given and only the (whole) given is “put into the computer” (= programmed). - The algorithm is the true kernel because it is a definition.

EO261

Life as an algorithm.

Formalism contains algorithm. Computer technology contains algorithm. -- EO 179 teaches us that this twofold fact is no coincidence: the basic structure “given/requested” governs reality as a process in both cases. But life, too, can be interpreted as a “given/requested.”

Formalism in computer technology, yes, life, is working out the solution. This proceeds algorithmically, in steps. -- It is that similarity between life, formalism, and computer technology that is ontologically revealing; all three are problem-solving.

24.-- Deductive method.

Basis: the hypothetical or conditional sentence in itself with an “if-then” structure. With antecedent and consequent clause (predicate/conditional).

Reduction (regarding induction and hypothesis formation) is actually possible deduction. Deduction is the fundamental type of thinking concerning reality. In which induction and the formation of hypotheses (e.g., lemmas) exhibit the same fundamental form, but restrictively, with reservations.

The reason is: the axiom of (necessary and) sufficient reason or ground. -- In deduction, that reason/ground is presupposed. In reduction (induction: generalization/generalisation; hypothesis formation, if necessary as a lemma), that reason/ground is assumed. -- In the formulation of Jevons-Lukasiewicz: $A \rightarrow B$ (if A, then B). With two variants: well then, A; therefore B (deduction); well then, B; therefore A (reduction).

Two applications.

a . Computational calculation. Deduce correctly (logically) thanks to the data entered into the computer,

b . Ethical calculation from axioms. In the latter, we examine the over-complexity or—as is now recently said—'complexity' of the deductive processing of axioms.

25.-- Lotology.

The given is the fact that we are situated—thrown into life. What is required is the fact that we must commit ourselves ('engagement') to the solution of what is required (the problem), by designing our lives.—Behold the central theme of logically rigorous fate.

It had to happen.

This everyday, indeed, colloquial expression captures the deductive nature of our fortunes. It means: actual fate was deducible from the presuppositions (axioms). Predictable (for those who know all the data).

EO262

A strike is – with reservations (given the assumptions – with – reservations) – predictable, because it is deducible.

Thucydides of Athens, in his historiography, a. presents the facts, b. but comprehensibly, i. made deducible from presuppositions.

Hegel . -- Hegel is a rather complex figure: he is thoroughly rational but is also profoundly romantic. Hence, history is central (romantic) but thoroughly rational, because it has been made deducible.

So take note: the Hegelian deduction of fate is not abstract reasoning! -- The totality of all that was, is, and will be stands central (as “the concept” of total reality). Thus Hegel arrives at his historical dialectic, which makes history (the collection system of destinies) deducible.

Induction, the taking of samples based on experience, plays a fundamental role in this. For one does not prove “pure existence” from mere abstract data: existence is a given. -- What, then, is deduction for Hegel? “To ‘point out’ and ‘understand’ the meaning and place of something from (the concept of) the living whole.”

All that is 'real' is 'reasonable' and all that is 'reasonable' is 'real'.

This axiom means: whatever solves the problems and can thereby be labeled as 'real'—that which profoundly impacts reality—is immediately 'reasonable', that is, justifiable by reasoning. Indeed, derivable and deducible from what is given and what is asked. Cf. EO 11.

Thus, a government that does not solve the problems—what is being asked for—is 'unreal' and therefore 'unreasonable' (not rationally justifiable, not deducible from the data and the problem). -- That is the dialectic of fate.

26.-- Crisis of ontology.

System building was once a hallmark of a number of prominent ontologists (Aristotle, Thomas Aquinas, Suarez, and Hegel). In fact, this amounted to developing a worldview and philosophy of life, on an ontological background, using the means of the period in which the great system builders lived.

But, as Hegel put it, in time they become 'unreal', no longer in touch with the problems of the time!

Root cause: those systematists fill the empty concept of being with purely categorical data that are time-bound and thus become obsolete—becoming unreal.

Hence the predominantly postmodern crisis with its endism (“The end of philosophy”).

EO263

1. Substituting the concept of 'network'—as something weaving a figment of the imagination and hanging in the air—in place of traditional ontology and

logic, as we outlined above, is a form of nominalism that eschews the factual definition (EO 12) in order to merge into a sort of “virtual reality” (EO 153) and mediatism. -- A concept that seems to attract quite a few intellectuals today.

2. The concept of 'déconstruction', as formulated by J. Derrida, reckons with the Greek, Christian, and modern (especially German-idealistic) traditions. In particular, the universally valid character of every traditional ontology and logic is 'déconstructed'. Yet, a Derrida, in a moment of clarity, will admit that he cannot do without those traditions!

This demonstrates the dual nature of the tradition:

- a.** an eternally valid core (which we have attempted to expound) and
- b.** a time- and period-bound shell (filling, as we saw).

The first is eternally 'real' (problem-solving); the second is 'real' for a time (solving time-bound problems).

Incidentally : R. Bakker, in a brief review of S. IJsseling, ed., *Jacques Derrida (An Introduction to His Thought)*, Baarn, 1966 - in *Tijdschr.v.filos.* 46 (1986): 4 (Dec.) - says: “Undoubtedly, Derrida has made an undeniable contribution to the technique of philosophical writing and reading. But, if a student were to ask me which philosopher he could study to resolve his existential questions, I would advise him against Derrida.”

27.-- Being overly complicated.

'Complex', which until recently meant merely 'complicated', means, in a disorder-doctrinal or chaological framework of thought, 'overly complicated', not – unravelable. Not susceptible to 'stoicheiosis'.

Zenon of Elea is perhaps the first to articulate, in a strictly logical manner, the opaque and overly complex nature of reality.

a. He eliminates the opponent through an “if-then reasoning” that leads to absurdities.

b . The result for him, however, is: “neither you nor I” are unequivocally right.

This proves that reason faces not only unresolved but perhaps insoluble questions. -- In Plato, we find this in the form of 'ananke', the unraveled, indeed unravelable fact (hence the aporetic dialogues).

The practical way out: introduce a lemma or "as if" data and work with that as a hypothesis.

At the time, Willmann called this “the lemmatic-analytical method.” EO 229: what remains transphenomenal and yet imposes itself as “somewhere real” is processed as an assumption. -- We do not know what the metaphysical essence of gold is: yet we work with it!

28.-- Being overly complicated.

Pure determinism has been the rationalist premise until now (including Einstein). A system can be predicted from initial conditions (deduction).

The science of fate has long known that our future cannot be deduced from the initial conditions of our life, except by groping.

Reason cannot predict perfectly deterministically how a coin might roll! The complexity! Theory (chaology) is meanwhile becoming an encroaching element of virtually all specialized sciences. For the relationship between omens (causes) and consequences (effects) is 'sensitive', i.e., disorderly – capricious. This is called the 'butterfly effect' (EO 232).

Disorderly systems.

They are rolling pennies. - Fluctuation, destabilization, - crossroads destabilization, (surviving/enduring fork-shaped possibilities), - crisis (lack of diagnosis) are characteristics.

The psychotherapeutic link game theory: different presuppositions yield the same result!

The economic chaos theory or chaos management theory (e.g. H. Sérieyx):

The economic facts since the late 1980s have invalidated established economic axioms! For example: the information revolution, global delocalization, the collapse of major economic-political systems (socialism, capitalism) together with continuous technological changes!

The stoicheiosis of phenomena creates a spaghetti! Inextricable!-- And yet the entrepreneurs live within it! With lemmas of all kinds.

Conclusion . -- Plato's philosophy is twofold: a. it contains an eternal core; b. but it also reflects the elements of the time.

Our solution is found in EO 34: updating in accordance with tradition. In ancient Greek terms: paraphrasing, repeating! The course has attempted to expose the eternal core, reflecting contemporary life as much as possible.