10.1. ***Elements of philosophy 1996/1997***
First year: elements of thinking theory (logic)
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Preface.

1. ***The term "elements***
in ancient Greek 'stoicheia', in Latin 'elementa' - meant in ancient Hellas 'propositions' - in the form of loose aspects. This did not mean that there was no coherence: the theme or subject to be discussed was broken down into aspects (parts, sections) in such a way as to make the complex structure of the theme more accessible to a beginner. Only at the end of the exposition, when all (at least the main) "elements" had been discussed, does the whole, the totality, of which the elements are the constituent parts, become clear.

2. ***Problem/Solution.***
The thinking ancient Greeks - especially the mathematicians - took a "reasoned" - "logical" - approach. To this end, they described the reality they had to deal with in terms of "task/solution".

We are now applying this scheme to the first year's "philosophy" curriculum.

A. ***The task.*** This is broken down into
a. ***The given, i.***e. What shows itself immediately (the "phenomenon") and

b. ***The thing sought or asked for,*** i.e., What must be shown. -
In our case involving traditional or "classical" logic, the given (GG) is all that is available in the great tradition in terms of thought theory (textbooks, studies) and the requested is all that will make up the forthcoming text, i.e., a thorough introduction to classical thought theory (GV).

B. ***The solution.***
A sequence of small-scale texts which, piece by piece, clarify some 'element' (part, aspect) of logical thinking, in the classical style -- hence Given + Asked and an outline of the sequence.

Logic (dianoetics, theory of thought).
At the center of logical thinking there is always an "if, then" sentence. E.g., "If it rains and I walk in that rain, I will get wet". Reality (object of ontology) expressed in "if, then" sentences (object of logic): behold what will constitute the foreground throughout the first year. In other words, justifiable conditional sentences (whether or not) are the formal object of logic.

Sample 1.-- A propaedeutic course.

The term "sample"

Later we shall see that induction consists in dividing a totality (a collection or a system (system)) into one or more "elements" (specimens (collection)/components (system)) in order to gradually obtain a view of the totality.-- The chapters that follow are such samples in the totality of logic.

'Pro.paideia' or 'pro.paideuma', in ancient Greek, is "an education for the full education." In other words: introductory instruction. Propedeutic.

Information and Method.

Insights. That is what this introductory course provides.

1. ***Not in a dilettante sense!***

A dilettante(e) "knows something about everything". Loving. Superficial.-- Not in a (hyper)specialized sense either! The specialist "knows about everything". Thorough.

2. ***Well in a general-format sense.***

Reference is made to a famous example; namely Harvard University (USA). There it is called "the Harvard Principle". That university namely breeds (hyper)specialists,-- not generalists. But including general education. To avoid the graduates falling into what "the tender anarchist" Marshall MacLuhan (+1981) called 'professional foolishness'. After all, one becomes a professional fool for lack of a broader view of things and of one's own subject and of what that narrow subject exceeds.-- thanks to solid information.

'Philosophia'.

Harvard is traditional in this.-- The ancient word 'philo.sophia' meant, among other things, "general education" Sophia: wisdom, -- better "broad outlook on life." Was the commitment of many ancient Greeks.

Not fashion. not ideology. but method.

Fashion is invariably a passing, rather superficial phenomenon. It also exists in philosophy. Unfortunately.-- Ideology is invariably a set of axioms (presuppositions, "principles") that testify much more to the constructing mind that produces them, than to a sense of reality. This too one finds in some philosophical tendencies. Unfortunately.

No: philosophy, in the great tradition, was and is and will be its methodical, i.e. reasoned and justifiable, search for truth.-- Method is nothing but applied logic. So we are on the right track.

Sample 2. - Common sense and logic.

G.W. Leibniz (1646/1716; Cartesian) once said that "the laws of logic are only the rules of common sense in so far as they are orderly worked out into a text." In other words : in all people there is the basis of logical reasoning.

Common sense / unreal sense.

Platon of Athens (-427/-347), in his *Sophistès* 228d, says: "Untrue knowledge, compared to truth, is the fact that the soul strays to such an extent that it generates a judgment that deviates (from reality). Immediately she is nothing but 'para. frosunè', madness".

Platon assumes the systechy (opposites pair) "so.frosunè (common sense)/para.frosunè (deranged sense)". Literally translated, "para.frosunè" is to preempt reality.

Common sense / individual sense.

Cl. Buffier (1661/1737), in his *Traité des vérités premières* (Treaty of the first truths), (1717), reacts against R. Descartes (1596/1650), the founder of modern, understand: subjectivist, thought.

1. Descartes and all of modern philosophy after him emphasizes the inner life or "consciousness" of the single person as the preeminent source of true thought. This is what Descartes calls "le sens intime."

2. Buffier, a Jesuit, recognized that this does contain some truth but is very one-sided. Instead of withdrawing into the psychic-inner life (sens intime) - he said - we live together with all people (at least as far as their minds are still healthy) and we start from "le sens commun", the common mind.

From Buffier's work arose the Scottish school of commonsensism.-- Founder: *Thomas Reid* (1710/1796) with his work "*Inquiry into the Human Mind on the Principles of Common Sense* (1764).

Reid criticized Locke, Berkeley, and Hume (three Anglo-Saxon moderns), who also prioritized "le sens intime."

Among other things, the commonsensists argued that every human being possesses, in principle, basic logical and mathematical insights. For example, the sentence "The whole is greater than the part". Or: "Everything has a cause".

These basic insights are given immediately and well in life experiences of all kinds. They are presuppositions.

So that, for a commonsensist(s), our course is only the elaboration of common sense in its healthy form.

E. l. sample 3.-- Models of reasoning. 04

1.-- *The regulatory model.*

The sentence contains two parts, the condition or premise, expressed in the preposition (prep.), and the derivation (conclusion), expressed in the postposition (postp.) So the schema reads: "if prep., then postp.". In other words: if the preposition is put first, then the postposition is sensible, understandable, responsible.

2. -- *Application Models.*

After the rule (regulatory model) the applications or applicative models.

2.1. - *Mathematical model.*

Consider the well-known sum "2 + 2 = 4". -- We rewrite logic in such a way that the logical basis or reasoning (the conditional sentence) becomes clear here: "if 2 and another 2, then 4". In which one sees that a teacher who teaches children math is actually committing applied logic!

Note that a prepositional phrase has been omitted, namely "Two sums separately can be summed into a summary sum". This sentence is the rule of which" 2 + 2 = 4" is precisely one application. That sentence is the justification.-- Immediately we see that the complete reasoning includes not two but three sentences (syllogism).

2.2.-- *Day-to-day model.*

"If it rains, then by walking in it I get wet." -- Actually, that full sentence contains two conditional sentences. This is again shown by logical rewriting: "If it rains (expressed sentence) and if I walk in that rain (unstated sentence which read "by walking in it"), then I get wet". Thanks to such rewriting, the difference between the everyday formulation and the strictly logical language form becomes apparent.

Notice again: a preposition is omitted, namely, "For all cases, if one walks in the rain, then get wet." This is the wording of a law. This is a statement that applies to all cases (applications, applicative models) without exception. -- Immediately it appears again that the complete reasoning would include not two sentences but three sentences, namely, the rule (law) and its application.

Note.-- The sentence "The good shepherd pastures his sheep" contains a conditional phrase that also comes through in a rewrite, i.e., "A shepherd who is good (relative phrase), pastures his sheep." -- Who finds the hidden conditional sentence?

Sample 4.-- The reasoning as indirect knowledge.

Let's resume for a moment.--"If 2 + 2, then 4" or "If it rains and I walk in that rain, then I get wet". The prepositional phrase actually contains the given -- object of direct knowledge -- while the postpositional phrase contains the requested (sought) -- object of indirect knowledge.

Rhetoric.

The term is translated by e.g., "eloquence. Good. But 'theory of reason' would be equally good. The goal, i.e. the intended result, of the person who works 'rhetorically' or, in Latin, 'oratorically', is: to convince, thanks to reasoning especially, but also describe fellow men of a proposition (opinion, slogan, publicity and the like more .). Persuade.

In which **a.** the 'èthos' (ancient Greek for personal appearance, 'authority', influence) plays a role and

b. is acted upon intellect (reasoning), mind and will (in one word: spirit) of the interlocutor(s), the audience.

Communication and interaction structure.

GG.-- The one who recites a message (proposition); the message itself; the recipient(s) for whom the message is intended.

GV.-- To act in such a way that the message "gets across:" "goes in," is grasped and accepted.-- Think of a saleswoman advertising a commodity.

1.-- *Describing what shows up.*

This describing can be a real description. But it can also be a story or a report or a treatise. As long as the text reflects what shows itself immediately,-- without reasoning. Instantly knowable. The phenomenon.

According to R. *Barthes, L' aventure sémiologique*, Paris, 1985, 85/165 (*L' ancienne rhétorique*), the ancient Greeks called what was presented to showable things speaking "pisteis a.technai", proofs without reasoning.

This decays into two spheres:

a. that of which the recipient(s) is already convinced (the mentality of an audience,--what in a class the students already know);

b. that which one can immediately show (such a known legislation; a testimony given in the presence of the recipient(s)).

Such 'proofs' convince without reasoning. Without artifice,-- in Greek 'a.technös'. By virtue of obviousness. For one is directly confronted with the fact. It has only to be mentioned, described in some form.

2. -- *To demonstrate by reasoning.*

The systechie "showing/proving" contains the two basic variants of the root 'showing': the given shows itself; the reasoning shows. -- Reasoning, then, is one type of 'showing', namely, the mediate (indirect, indirect) form of showing. 'Medium' because "by means of" reasoning! Thereby starting from what shows itself immediately.

The ancient rhetors (experts on rhetoric) called this "pisteis en.technai", lat.: probationes, i.e. proofs in a stricter sense.

'Techné: lat.: ars, skill, ability, is contained as a language root in the terms ' a. technos' and 'en.technos'.

***Note.*-- a.** To describe is to represent the given, because the given is (metonymically) the demanded.

b. In reasoning, the requested is connected to the given but it is something other than the given.

Consider "2 + 2 = ..." presented by a teacher on the board to students "for solution". The task is that given and wanted (requested). GG + GV = OPG.-- The requested is galvanized on the board by an agreed-upon sign, viz. " ...".

Aristotle on 'signs' and their evidential value.

Aristotle of Stageira ("the stagirite" (-384/-322), stydent of Platon) saw three types of reference, i.e. indirect knowing.

a.1.-- ***Tekmèrion, the unified sign.***

"If pregnant, then (show of) conception". -- The Concealed Law: "If cause (conception), then effect (pregnancy)".

a.2.-- ***Sèmeion, the many-sided sign.***

"If fertilization, then either natural intercourse or artificial insemination." The cause is multiple possible.-- Other model: "If blood traces then (evidence of) either injury or fall or killing or whatever either in animal or human." What a multitude of interpretations! This is: reasoning that can be valid.

b.-- *Eikos, a rule with exceptions.*

"If a parent, then (demonstrate) child love." -- This is not a universal but only a statistical (percentage) certainty.

a. Parents generally see (rule) children happily.

b. But there are exceptions (infanticide, child neglect). 'Eikos' is therefore a 'likely' sign.

E. L., 07.

Sample 5. -- Phenomenological method.

The term “phenomenology” means “representation of what shows itself (immediately). In other words: description. The term consists of two roots: ‘phenomenon’ (what shows itself, phenomenon) and ‘-logy’ (bringing up).

Husserlian phenomenology is the best known, present. -- Edmund Husserl (1859/1938), following in the footsteps of B. Bolzano and especially his teacher, *Franz Brentano* (1838/1917; *Psychologie vom empirischen Standpunkt* (Psychology from the empirical point of view), (1874)) who founded the Austrian school, founded a new form of mere description. To be distinguished from his previously subjectivist philosophy.

Two main rules govern his method.

1.-- *The phenomenological reduction (reduction).*

Husserl reduces what interests him as merely descriptive to the pure phenomenon. Hence the name ‘phenomeno.logy’. All that does not immediately show itself is ‘eingeklammert’, put in brackets, yes, eliminated as “irrelevant”. Who, therefore, in the mere rendering of a fact, brings up more, commits - what is called in the great tradition - “ignorantio elenchi”, rendering beside the fact (which is actually the stake, misunderstanding). One thinks of the maxim of St. Augustine of Tagaste (354/430; the greatest church father of the West), where he says, not without irony: “Bene currunt sed extra viam”, “They walk excellently but off the road “.

2. -- *The eidetic reduction.*

Usually, when describing the given in a pure way, phenomenologists have in mind not one singular or only several instances of the given but all possible instances.

In other words: not the proper name of the individual; not the limited generic name of a number of specimens; but the generic name without more.-- For example, not this beautiful girl; not these beautiful girls either; but all beautiful girls. Or more logically expressed: the beautiful girl without more. Or: the generic term.

Well, ‘eidos’, among other things in ancient language usage (with Platon e.g.), meant “the general understanding” of something.

It is obvious: whoever wants to work strictly logically, starts with the most purely descriptive representation of the starting point of all valid reasoning, namely The Given (Given). Only then can the requested (Asked) - in its wake - be correctly understood and found as well.

Sample 6. -- Sample phenomenological description.

Let us dwell for a moment on one phenomenon, at least within a certain religious tradition (the Catholic among others), namely repentance.

Briefly referred to:

a. regret occurs when one regrets something one did for purely "earthly" reasons - e.g., loss of health, loss of fame - ;

b. remorse arises when, with regret, a question of conscience arises, "Have I done moral wrong, committed moral wrong?"

c. repentance comes through when, apart from regret and remorse, one comes to repentance, yes, conversion, and rearranges one's life in a more conscientious sense.

Max Scheler (1874/1928).

Influenced by R. Eucken and especially E. Husserl, Scheler committed phenomenology. At one time he was a convinced Catholic. In this spirit he describes, among other things, repentance.-- Let us listen to a rendering of it.

Bibl. sample: *J. Nota, Max Scheler* (*A Struggle for the Being of Man*), Utrecht/Brussels, 1947;-- J. Nota, Core Thoughts of Max Scheler, Roermond, 1971, 114/120 (*Repentance and New Birth*).

1.-- ***The Catholic representation.***

Our conscience is characterized by impulses, i.e. by spontaneously arising permeations, experiences. We do not choose these: they impose themselves on us. They are a given which we experience.

Among such spontaneous outpourings, repentance stands out.-- This exhibits, according to the Catholic Scheler, two main features which he characterizes as not chosen but imposed, as showing itself (phenomenon, given).

a. Repentance is warning, admonition, yes, condemnation. In no uncertain terms, conscience says that what one did is not "ethically" (lat.: morally, i.e. in conscience) right.

b. In the process, an "agency," i.e., a warning, admonishing, yes, condemning "being" or "authority" intrudes, -- an "invisible, infinite judge" (according to Scheler). This is perceived with the eye of faith.

"These stirrings are a.k.a. :

a. a wordless language of nature,

b. language in which God turns to the soul".

Thus Note.-- For Scheler, this is the essence (eidos) of all possible (Catholic understood) repentance.

In other words: that which eidetic phenomenology discerns when, unbiased, 'pure', it opens itself to the given.

2. -- *The hangover theory.*

One does not find this interpretation of (Catholic) repentance so often in philosophical circles as in everyday life (all the more so).

As an aside, the dictionary says that "hangover" denotes an unpleasant state, indeed a period, the day after a drinking binge. Which is then applied metaphorically to e.g. repentance.

Two features typify the eidos of the (ethical) tomcat, according to Scheler:

a. repentance is experienced as a dejected (depressed) state, the source of which is

b.1. a reduced energy to act (one is discouraged concerning oneself) and

b.2. eventual unpleasant, yes, harmful after-effects of what one did.

Of course, then, "repentance" - in that interpretation - would become ethical in retrospect by providing a conscientious interpretation of the hangover - in retrospect, not in the act of living through it itself.

Especially excesses concerning gratification of "sensual" driven, as concerning eating and drinking, sex, etc., and the associated depressive states as outgrowths of them would be the reason or ground of a sad mood, in which we, in retrospect, reject these excesses.

A Latin proverb expresses this as follows: "Omne animal post coitum triste" (Every animal is overcome by hangover after sexual intercourse). Or are we thinking of the maxim: "Young prostitutes, old chicks"

The undoubtedly correct observation that, beyond this sphere of that which damages health, other misfortunes also give rise to repentance, seems in turn to justify this hangover theory.

In other words: Scheler recognizes that the hangover description does touch on the real phenomenon somewhere. But the being that shows itself in the (Catholic) perception, sensation, concerning repentance, does not come up unless sideways and then even caricatured. "They walk well but off-piste"!

Consequence.-- Those who adhere to the hangover theory come to reject real repentance either as useless or even harmful (to what Scheler calls "vitality" or zest for life).

The reverse of the ethical-religious interpretation. Ignoratio elennchi, insofar as one believes to correctly interpret (Catholic) repentance with the hangover theory.

Sample 7.-- The construction (structure) of traditional logic.

The contents.

One type of logical language employs the term "entailment" ("implication") to denote "if, then sentences. Indeed, "It is inherent in raining and walking in that rain that one gets wet, in that raining and walking in that rain involves (implies)". The terms "own to" and "include (imply)" are equivalent but linguistically reversed.

Thus: "preposition (prepositional phrase (pr)) implies / implies postpostion (postpositional phrase, po)". Or : "po is inherent in pr". -- Logic is thus the study of implication,--at least in traditional logic.

Comprehension.

The concepts of 'rain', 'walking in that rain' include the concept of 'getting wet'. Or : "The concepts '2, '+', '2 + 2' involve the concept '4' ". And as equivalent. Hence "2 + 2 = 4" (which includes the concept '=').

Doctrine of Judgment.

The aforementioned concepts - either everyday (raining, walking in that rain, getting wet) or mathematical (2, +, =, 4) - are incorporated into judgments (propositions, sentences, statements, assertions).

As we shall see, a judgment is a sequence of terms (= concepts) in which **a.** of a subject ('subject'), the 'original' (that which asks for information)

b. a saying (predicate), the 'model' (that which provides information) is said.

Reasoning Theory.

The aforementioned judgments are contained in reasoning, i.e., sentences -- full sentences -- that take the "if, then form" (derivation,-- entailment (implication).

Spoken: conditional sentences. This is because the prepositional phrases actually articulate the (necessary, preferably the sufficient) 'conditions' (reasons, grounds, justifications) so that the post-sentence comes across as understandable, logical, justifiable.

Note.-- Logic is not epistemology.-- Fundamentally, the conditional sentences of logic are the only object. Whether it rains, outside the stated sense, and one walks in that rain and thus gets wet, has, for the logician, no importance. He is only interested in the logical connection. - More clearly (as will appear later): no categorical sentences but hypothetical sentences.

Categorical: "A girl is beautiful. So it attracts".

Hypothetical: "If a girl is beautiful, it attracts". Whether that is true (epistemologically) or not has no importance (logically).

Sample 8.-- logic relies on ontology.

The notions, worked into sentences of conditional nature in judgments, denote realities. Yes, are realities. Or they are - to use an ancient term - 'being'. -- Ancient Greek: 'Onta', lat.: entia.

So that logic can be articulated as the study of the thought operation that from one reality or being, articulated in a preface, concludes to another reality, articulated in an afterword.

We are going to explain that now. For, if logic is "ontology in terms of 'if, then-sentences' (implications)": then an accurate knowledge of what is real-world theory or ontology (metaphysics) is vital.

Reality and Word.

Reality theory is an ancient reality! -- To prove it.-- *Father Pl. Temples*, missionary in what was then called Belgian Congo, published in 1946, in Antwerp, a book entitled: "*Bantu Philosophy*". Translated into French: *La philosophie Bantoue*, Présence Africaine, 1949.

Here is what the missionary who worked his way into the Bantu conceptions says at the end of the first chapter: "Animism, dynamism,-- primal monotheism,-- manism, totemism, fetishism, magism,-- all these religious practices, -- like, for that matter, the judicial conceptions and the political organization of Bantu society, make up, in the 'mentality of the Bantus, a single logical whole.

This diversity of realities is explained and justified by the Bantus on the basis of their one and only philosophy, the Bantu ontology! -- The approval, - the reception that Father Placied Temples garnered with his thorough and still valid work, proves that he is far from alone with this view of primitives and their ways of thinking.

The term "ontology".

Reality is ancient. The term 'ontology' is young: it was introduced by the Cartesian Joh. Clauberg (1622/1665). It consists of two parts: onto, being (reality) and -logy, bringing up. In short in good English: reality theory. This is the core of all philosophy worthy of the name: ontology looks at everything insofar as it is 'something', being, reality. And thus tries to find a definition for what we call 'reality'.

Sample 9.-- The term "reality" in reality theory.

What follows is a sample definition of the term "reality

The given (Given) is "all that is called being (reality)". The asked or sought (Asked reads, "What exactly does the ontologist/ ontologist understand by the word 'being', 'being', 'reality'? "

1.-- *Conceptual content.*

Is real all that is something, i.e. non-nothing.-- Conceptual scope or domain.-- That content applies to all that is something, i.e. non-nothing. In other words: to all that exists no matter what.

2.-- *Exemplifications.*

Examples will illustrate the abstract but very correct formulation above - All that is something is true of all reality and of all realities.

2.1. - *Dream/reality.*

It is said that a dream, a day or night dream, is not reality. In the language of daily life, which is not the language of the theory of reality, one simply means that, apart from the dream, nothing corresponds to the dream. But one does not deny the dream as a real fact! Therefore the ontology says that the dream represents its own kind of reality and is therefore a being or real thing.

2.2.- *Utopia/ reality.*

Utopias are usually purely in the mind of the utopian inventors, often idealized descriptions or even predictions of a society. One thinks of *Thomas More's Utopia* (1516). It is said that utopias are not real.

By this, one only means to say that outside of its text, nothing corresponds to it in extra-mental reality. Therefore, ontology says that utopia is its own type of being.

2.3.-- *Science fiction/reality.*

'Fiction' is invention. Science fiction, in particular, captivates intellectuals by being a text that speaks, to a high degree, a vocabulary of science and technology that the intelligentsia is drawn to like a child to candy.

It is said that such fictions are "not real". -- this is only to say that outside the text of it, at least for the time being, nothing corresponds to it in extra-textual reality. Therefore, ontology says that fiction, especially science fiction, is its own type of being.

One will already understand that ontology develops its own language as any science does.

Sample 10. - Lust principle / reality principle.

Another example of distinction between subject science and ontological language.

S. Freud (1856/1939) is the founder of one type of depth psychology, namely psychoanalysis.-- It is well known that one systechy, (a pair of opposites), namely "Es/ Ich" (It/I), dominates Freud's entire thinking.

1.-- *The "it".*

If the sex drive drives us, then we act - seemingly consciously directing ourselves - according to - what Freud, in natural law jargon, calls - "a determinism" i.e. a causality resembling a natural law.

Cfr. *E.L. 04* (The determinism that, if it rains and I walk in that rain, I will get wet).-- The Es that 'shows itself', among other things but very strongly predominant (at least' according to Freud) in the sex drive, i.e. is guessed at by reasoning, is the set of 'primal drives' (one sometimes says, not rightly, 'instincts') at work in our 'depths' (hence 'depth psychology').

Ideologically, that Es is even, according to Freud, the essence of man himself.-- The great axiom (premise) of all that in the Es drives us (motives), Freud calls "das lustprinzip" (the lust principle).

2 -- *The "I".*

This denotes, in Freudian language, all that is conscious life.

a. *The preconscious life* that comprises our memory (that which is in hiding but lives on in our depths: e.g., a sad memory of a grievous humiliation).

b. *The ordinary conscious life* that includes all that situates us in the cosmos, in society as they are. Freud also calls this "the perception and sensing consciousness". Through it we realize what is happening in and around us.

c. *The behavioral rule consciousness.* Freud calls this 'Ueber-Ich' (higher self). The rules for living out the primal urges of the Es, which society imposes on us, are situated in the higher consciousness.

The great axiom that governs the plural conscious life, Freud called "das realitätsprinzip" (the reality principle).

By 'reality' Freud means here the set of rules that society, in fact, imposes on our drift life, if we are to achieve an orderly society with such drift heads as we are.-- That is Freudian, psychoanalytic language. For ontology, however, 'lust' is its own kind of being!

Sample 11. - Sign/reality.

Re-reading *E.L. 06* (Aristotle on signs as references) -- A sign does refer to a reality indicated by it but is not itself that reality. Yes, it is sometimes said, "Signs are not reality".

Freud, just mentioned, saw through the signs, within the perceptual consciousness, the unconscious Es (at work). That is where the non-psychoanalyst perceives 'nothing'! So e.g. a slip of the tongue like "Da ersch(w)eint er" (There he fades away,-- understand: there appears who I, unnoticed, call "das Schwein").

A map is a (metaphorical) sign that represents a landscape by resemblance, 'describes' it! A signpost is a (metonymic) sign that orientates within a given landscape on the basis of cohesion.

Both signs provide information. E.g. when we are traveling in e.g. the south of France. We look at them as if they were the landscape itself. And yet: what a distance between the sign and the indicated!

Note.-- The term "really" in Hegel.

G.Fr.W. Hegel (1770/1831) is known for his maxim: "All that is real ('Wirklich') is reasonable and all that is reasonable is real." How to understand this statement? For Hegel, all that is reasonable, i.e., justifiable, is 'real! Why? Because our reason attunes itself to what is real. This is to the given and the demanded. All that really finds the demanded,--all that really solves the task (Given + Asked), Hegel calls 'wirklich', real.

Thus the use of a map and the reading, on a journey, of a signpost - two signs that refer to realities - are justified because the map and the signpost depict or orient in reality. In Hegelian language: using a map and reading a signpost is 'real', i.e. solves a problem, namely finding the right way on a journey.

Note- Becoming / being.

It is sometimes said "Becoming is not being." But in that case everyday language confuses "non-being" with "being without being", i.e. one type of being with the general concept of being. In other words: ontologically, becoming is precisely one type of being, i.e., becoming, arising, being!

Conclusion.-- If ontology is the basis of traditional logic, it is because the term "reality" is used in a purified way and not confused.

Sample 12.-- Characters syntactically.

That ontology is really the basis of logic is very clear from mathematical or logistic arithmetic.

Applicative model.-- ***Bibl. sample:*** *J.M. Anderson/H.W. Johnstone, Jr., Natural Deduction* (*The Logical Basis of Axiom Systems*) Belmont (Calif.), 1962, 6.

There, theorists develop a pure logical-mathematical reasoning as follows.

1.-- ***Axiomatic section.***

Seemingly ‘arbitrarily’ (in fact, the axioms or general prepositions, prepositions, chosen reflect very useful data), proposers set forth the following axioms.

Ax. 1.-- If a and b are unequal, then a < b or b < a.
Ax. 2.-- If a < b, then a and b are unequal.
Ax. 3.-- If a < b and b < c, then a < c.
In doing so, it was agreed that ‘<‘ means ‘less than’.

2.-- ***Deductive section.***

Theorem to prove: a < a is unthinkable (= impossible, incongruous, absurd, utterly nothing). To be proved solely based on previous axioms. One stays within the small ‘system’ or coherent set of axioms and their strict applications.

We replace in ax. 2, b with a.
This gives: if a < a, then a and a are unequal, which is absurd.
Behold a small-scale example of axiomatic-deductive reasoning. -

Ontology.

Please note that all the characters entered (a, b, c,-- < (less than), etc.) are non-nulls! They are expertly “blackened paper” (I.M. Bochenski) to begin with. Blackened paper is distinguishable from all the rest. And certainly from utter nothingness!

More to the point, they function (play a role) within an axiomatic-deductive system that operates strictly logically. What would strict logicalists like proposers do with ‘nothingness’? It is because they are things that things like a, b, c, < (less than) and such more . Can be used within strict reasoning behavior.

Working with signs, purely syntactically, i.e. without looking at the content (what a, b, c, e.g. could denote), is applied ontology, because in the pure nothingness one no longer reasons.

Sample 13.-- Identical ontology.

We are all familiar with the term 'identity' (singularity). 'Identitive' is "all that has to do with identity (in all its forms)".

Logic relies on identitarian ontology, i.e. that theory of reality that deals with identity and its variants .

The Identity Act.

"For Aristotle, the premise that logic has ontological scope makes sense in that (...) the first laws of logic, i.e., the laws of thought, are the same as the laws of being." (*R. Jolivet, Les sources de l' idéalisme*, (The sources of idealism), Paris, 1936, 136).

Note.- Note the laws of being(de) as we have explained it just above. Do not confuse 'being' or 'reality' with "reality outside the mind".

A "law" is a rule that does not tolerate exceptions. - Cfr. *E.L. 04; 13*. There we already saw examples of lawfulness.

The law of identity reads, "all that is, is" This is the honest and reverent recognition of what is provable, are(s), is.

Existence / essence.

We saw, *E.L. 12* (*something*), that one can define being or reality as "all that is non-nothing, i.e. something." We now take this a step further: all that is something exhibits two sides, namely actual existence (given being), existence, and one or another mode of being, essence.

Already Platon distinguished the two inseparable though distinguishable aspects of all that is reality, in the sense indicated above.

Indeed: What something is and that something is are related yet distinct.-- The questions "how real is something" and "how is something real" are related yet distinct. - What / that and how something really is / how real it is, aim at essence and existence,-- the two sides of reality or 'being(de)!

Corollary. -- The identity principle or identity axiom exhibits two articulations: "All that (actually) is" and "All that is so". Thus, "All that (so) is, is (so)". Behold the two variants of the identity law.

The identity or singularity of something, if confronted, is to be affirmed. Not to be denied. This on pain of dishonesty and disrespect to all that is given.

Sample 14.-- Once again, the identity principle.

One understands well what "identity" of something is! It is that something - unquestionably itself. Something is totally identical with itself: after all, it coincides entirely with itself. When one establishes - finds - this, one stands for being as being, reality as reality. This is something insofar as it is itself. With parenthesis of all the rest of the whole reality.-- In the great tradition this was called "the substance" (hè ousia). Without the incidentals ("accidentals").

The axiom.

'Axiom' in ancient Greek, meant "that which is of such value that one takes it for granted." Indeed: without the axiom of identity that "takes something to be what it is," not even an ordinary observation is possible, let alone valid reasoning.

This explains why all manuals of mathematics and of logistics (mathematical logic) formulate the axiom from the beginning as follows: "A is A". Or also: "if a, then a".

This is not a vain tautology, i.e. saying the same thing twice! When someone says "A is A", he puts his whole honesty and reverence into what shows itself or what is demonstrated - *E.L 05v*. - , because "if A (as given, as proved), then (honestly (I say) A".

The first A is original. The second is model! And that model is the one which fits that which makes something - A - distinct from all the rest of reality (the essence, the essence of something, of A).-- Cfr. *E. L. 10* (*original = subject; model = saying*).

Consequence. -- If what precedes is true, then what follows is two other formulations of the identity law.

1.-- *Contradiction principle.*

"Something cannot be itself and something else at the same time". Or : "Something cannot be (so) and not (so) at the same time".

2.-- *Principle of excluded third party.*

"Something is only itself" means "that something is either (so) or not (so) that a third possibility is excluded." - "Either not (so)" means "the rest of the whole being or reality". For beyond all that is, there is nothing! Absolutely nothing!

Paradox.-- Whoever wants to prove the law of identity (and its three formulations), i.e. deduce it from a preposition, necessarily presupposes the law of identity!

Sample 15.-- Old. Yes. Ancient Greek ontology.

Although rather groping, intellectually speaking, very early on with the ancient Greeks there is talk of 'being'.

1.-- Homèros and Hèsiodos.

Homer (lat.) - 'homèros' meant "blind man" - lived somewhere between -800 and -700. He is the originator of the *Iliad* and the *Odusseia,* two long epic works. Remarkable: he reports himself as the 'revelator' or interpreter guided by Mnèmosunè and her muses who reveals "all that was, is, and will be" (reality in diachronic order).

As an aside, the muses, under Mnèmosunè, understand "expanded consciousness," are intellectual-artistic introducers.

Hèsiodos of Askra (tss. -800 and -600).-- *Erga kai hèmerai* (*Works and days*), *Theogonia* (*Origin of the deities*) are works to his name.-- He too is inspired by the muses and considers himself their interpreter, when they proclaim truth but also falsehood.

2.-- Parmenides of Elea (-540/ ...).

The founder of the eleatic school. -- He too is still in the great sacred tradition: his teaching poem speaks of a "soul journey. After all, he meets "a goddess who shows him the way to 'the other world' ". What is now called "apocalypticism. But he is already clearly a sage and not just a poet-revelator.

Statements such as "It is a necessity to say and think that being is" (i.e., the principle of identity) are clearly more philosophical than what Homèros and Hesiod proclaim concerning "All that was, is, will be" (a sequence also found in Hesiod (lat.)).

Already Parmenides stresses the objective character of being as being. -- He emphasizes that one must "conceive of being according to oneself. I.e. not according to us e.g.. "Being after all is itself ('tauton')", i.e. coincides with itself. Being thus possesses an identity that one must honestly and with due reverence conceive of.

As an aside: that very thing makes the difference between 'alètheia', truth, and 'doxa', 'opinion'. 'Doxa' is also revelation of being or reality but ambiguous: one does not know if it is true.

Already Hesiod had pointed out the fact that muses proclaim both true and false so that one did not know what was right.

Sample 16.-- The second ontological axiom.

This time it is about the principle of (necessary and sufficient) reason or ground.

H.-J. Hampel, Variabilität und Disziplinierung des Denkens, (Variability and discipline of thinking), Munich/Basel, 1967, 17ff., says that most theorists agree that two axioms-the law of identity and the law of reason or ground-dominate classical Aristotelian logic.

The wording.

"All that (is) is (is) for the reason of something in or outside itself". Or still: "All that is, has either in itself or outside itself a (necessary, preferably sufficient) reason or ground". One can also put it another way: "If reason (ground), then intelligible (sensible, justifiable, justifiable)."

In other words: here we touch the artery of logic. If this principle did not exist, reasoning, reasoning thought, would be impossible. In all reasoning, this axiom is presupposed as a rock-hard law.

When we want to understand, explain, explain, understand something, we look for the reason or ground of it.

Applicative model.-- A student arrives, Monday morning, confused and inattentive to class. The teacher, without any conscious reference to the principle of sufficient reason or grounds, says to herself, "I would like to know how and why this child is so confused. That how, that why,--that is the reason.

The great tradition.

Simplicius, *Phys.* 24:13, says: "Anaximandros (thinker of Thales of Miletos) asserted that the 'archè te kai stoicheion' (the principle and element (*E.L. 01*)) of the being is 'to apeiron' (the smexy). He was the first to reason, introduce the name 'archè'". - Platon said, "Nothing is without reason".

Pythagores of Samos (-580/-500), -- Platon (-427/-347) called the search for reason 'theoria', fathoming. The Romans translated by 'speculatio', literally: 'spying', perusing. Indeed: a soldier on guard, a spy were called 'speculatores'. These are people who look very closely - akribos - at something in order to fathom it, to recognize its reasons or grounds and to be able to explain it.

Those who translate "theoria" by "contemplation" are actually selling the original meaning short.

Sample 17.-- the reason or ground in the philosophy of nature.

With Thales of Miletos (-624/-545) begins ionic or rather Milesian philosophizing.-- This philosophizing applied to what they then called: ‘fusis’, lat.: natura, nature. ‘Nature’ on the understanding that our word has lost the whole sacred and metaphysical life force hidden in that term. That is what the first Greek thinkers were looking for (Given), the ‘stoicheion’ (element) or ‘archè’ (premise). I.e. that which makes the whole cosmos or fusis intelligible. The reason. The ground.

1.-- *Thales.*

He called the reason “hudor. We now translate that by ‘water’. He evidently meant ‘water’ as a model of all that is void of form (i.e. is not itself a form but is present in all forms). The flowing or fluidic life force. “If the fusis is carried, nourished, by ‘water’, then it becomes intelligible”.

2.-- *Anaximandros.*

This one found a better term to express the narrow-minded, viz. apeiron, lat.: infinitum, i.e. that which by itself has no ‘fines’, limits, and thus passes through everything with ease.

Note- The term ‘primal substance’. -- This term is correct if by ‘primal substance’ one does not mean one or another current chemical or physical substance. Better would be ‘working substance’, for what is stoicheion or archè is life force. Visible in all phenomena that collectively make up the whole of nature.

3.-- *Anaximenes.*

Thales’s second thinker.-- The primal substance was, according to his sense,

a. psuchè, inhaled and exhaled air through which we live,

b. aër, air without more.-- Again, things which are void, i.e. themselves without a fixed form, but are considered to be present in all forms of nature.

Something like a “world soul” (in the sense of “world soul substance”).

Note.- Herodotos of Halikarnassos (-484/-425), the “father” of historiography (better: of land and ethnology (W. Jaeger)), still attests to the search for reason.

A late-antique author says of him that, when one reads him, one as it were sees (observes), keenly watching, what he sees (observes), and thereby penetrates with him to the premises of what is observed. That is: to the reasons or grounds by which countries and peoples become understandable.

Sample 18.-- Identity Theory.

Ontology is essentially concerned with the identity (being) of all that is provable.-- In the principle of identity, it was concerned with the total identity of something with itself,--of being with itself.

We now extend this identitarian ontology to harmological ontology, i.e., the theory of reality insofar as it is concerned with ordering reality. This is done essentially by extending the concept of total identity.

1.-- ***The total identity of something with itself.***

One can also call this form of identity "reflexive" (looping) identity. By what means? Because, as it were, something in the form of a loop that departs from that something and exits into that something, identifies itself.

The Dutch term 'eenzelvigheid' reflects this well. One thinks of 'eenzelvigheidskaart', identity card: it defines - the word is right - the one who carries it on him.

In other words: in the strict sense, something is identifiable only with itself, because it coincides with itself totally.

2.1.-- the partial identity (analogy) of something with something else.

a. If I say, "This is a girl," I partially identify "that young thing over there." For I see in her one instance of a collection, namely the collection of "all girls". For she shares, with the rest (o.g. complementation or dichotomy), the same, identical, characteristic, namely, to be a youthful woman.

b. If I say, "This is the house," I am identifying "the façade we see from the street," with the entire house. For I see in the façade one part of the system or system which is the total house. Again, in terms of complementation: the façade shares with the rest of the house the same, identical property, namely, to make up one dwelling together.

The term 'being', as an auxiliary verb possesses the wonderful flexibility of being able to express both total and non-total (analogical) identities.

2.2.-- ***The total non-identity (difference, gap) of something with something else.***

This is the case only in the case of contradiction, as the principle of contradiction (*E.L. 21*) shows.

Sample 19.-- Tropology: metaphor / metonymy.

A ‘tropos’ (ancient Greek) is a ‘turn’, a reference: something is defined, described including something else. It is defined in terms of something else.

Both metaphor and metonymy are comparisons rendered linguistically in abbreviated form.

A trope is thus the abbreviated typing (rendering) of
1. A being (something)
2. by the hand of another being (something),
2.1. that is similar (metaphor) or
2.2. associated with it (metonymy).

A.-- *Metaphor.*

“That woman is a reed.” -- “Da’ s a reed of a woman”. -- “What a reed!”. -- On the basis of resemblance, one identifies partially (analogy, partial identity) “that woman” with “a reed”. Instead of speaking associatively - “That woman reminds one of a reed (so changeable, pliable, she is)” - one shortens and says identically, “That woman is a reed.” The term “is” means “is partially identifiable with”.

The comparison at the origin of the analogy or partial identity disappears, as it were, through the language shortened form. So it is with the metonymy we will discuss later.

Collection.

The specimens of a collection resemble each other. They have a common property.-- Under that viewpoint, all specimens are identical. Not under other points of view.-- The common property here is “pliability/changeability,” sometimes physical (the reed), sometimes psychological (the woman). So that the metaphor is already in the limited multiplicity of the terms “changeability” and “pliability”!

The metaphorical sign.

A map as an image based on a strong structural similarity of a landscape is a metaphorical sign of that landscape and vice versa. The structure is identical both in map and in nature. Only the design differs.

B.-- *Metonymy.*

“Apples are healthy.” -- “Oh! Those healthy apples.” -- In the store where they are for sale: “That’s my health!”. – in virtue of coherence partially (analogy) identifies “apples, those apples” with “healthy/healthy”. Instead of speaking associatively - “Those apples make one think of health (because they cause health)” - one shortens and says, “ healthy apples “ or something like that. In the sentence - “Apples are healthy” the auxiliary verb ‘are’ means “is partially identifiable with”.

System (system).

The parts of a system, i.e. a coherent whole (a crystal, a flower, an animal, a human being, a society, a landscape, the universe), do not resemble each other as in the mere collection but they are related. That is their common characteristic.

Under that point of view -- not under others -- all parts or portions (subsystems) are identical.-- Here in this case, that common feature is "causing/being caused": apples cause health, at least as one factor of it; health is caused by, among other things, one factor, i.e. apples.

The metonymic sign.

A road sign does not resemble the landscape and therefore does not form a collection with that landscape in the strict sense but it is related to it. 'Antwerp' with an arrow below or within the arrow itself of the road sign means "Whoever follows this road will arrive in Antwerp in due course." The shortening is drastic: "(Whoever continues this road, will end up in) Antwerp (in due course)".

The term "being".

Modern and postmodern logicians and logisticians reproach the traditional basic concept with its or his multiplicity. And thus uselessness, especially in exact language use. So e.g. in mathematics or in logistics.

1.-- The answer, after what has been explained above, is simple: it is not about multiplicity which is unlimited - total multiplicity - but about limited multiplicity or, as the great tradition calls it, analogy, i.e. partial or partial identity.

2.-- The term 'encompass' (implication) replaces the auxiliary verb to be. One thinks of the frequently occurring arrow ''.→ -- Thus "That woman →cane". Or: "Apple's →health". It is clear that this arrow sometimes covers similarity and sometimes cohesion. And thus is just as ambiguous as the term 'to be' as an auxiliary verb in the tropics.

Conclusion.-- The tropes, very frequent in the language, are a wonderful illustration of the identitarian nature of traditional ontology and lead equally beautifully into an order-theoretic ontology.

Sample 20.-- Tropological behavior.

Bibl. sample: *Th. Ribot* (1839/1916) Was experimental-psychologist and philosopher. His *La psychologie des sentiments*, (The psychology of feelings,), Paris, 1917-10, 171/182 (*Les sentiments et l'association des idées*), (The feelings and association of ideas) shows how our mind as a capacity for value values something including, in terms of, something else. In virtue of similarity or coherence.

Association (thought connection).

If, following A, B is thought of, then B is an 'association' of A. -- Ribot shows that this thought connection can be at once a feeling connection.

1.-- ***Metaphorical appreciation.***

For a young man, if he resembles her beloved son, e.g. has the same age and so on, a mother feels within herself the same feeling, at least a very related feeling (analogous feeling) of sympathy arise, as if it were her own son.

'Tropos' is reference. A secret trace runs from the noticed young man to her son who is absent. This one is, as it were, present in her mind in the young man, who is apparently a metaphorical sign.

2.-- ***Metonymic appreciation.***

A strongly in love 'lover - Ribot goes on to say - passionately goes through an erotic feeling for the person of his beloved.-- But, if he sees (or merely thinks about) her clothes, her furniture, her home, then in virtue of coherence he transfers his eros (which thereby becomes 'fetishistic') to "all that is hers."

The same feeling arises as if the beloved himself were present. -- "Tropos" is reference. In the present that is "hers," the absent, "the absent" woman, emerges. Metonymic sign is the present.

Feeling Identical.

Such things are legion. Consider, for example, how the Chechens burn a Russian flag, not because of similarity but because of consistency: in the flag, Russia is targeted.-- The trope knows very well that there is a distinction. Yet it identifies.

Transfer ("transfert").

Ribot: "transfert par ressemblance (similarity)/transfert par contiguité (apposition, coherence)".

All human experts, -- all psychologists know this basic concept. Our soul life is thoroughly identitive,-- full of transferences (if only from the patient(s) to the psychiatrist, for example). -- The identitive ontology can situate this fundamental phenomenon!

Sample 21.-- Identical model theory.

K. Bertels/D. Nauta, Introduction to the Model Concept, Bussum, 1969, 31: "The analogy is the pivot of the model concept" -- Better would be: "The thinking of identity and its variants is the pivot of the model concept".

1.-- *Total identity.*

The (tautology) "a is a" is one application of the pair "original/model". In this there is no analogy. However, general identity of a with itself (*E.L. 21*). The first a is original (what asks for information). The second a is model (which gives that information and does so in terms of overall identity). It is precisely the same a but in two roles within the sentence.

As an aside, we will see that this is also true of any definition of the essence of anything.

II.1.-- *Metaphorical analogy (partial identity).*

In traditional textbooks "proportional analogy". -- "Johnny is the rooster ahead of the gang". -- The analogy: "as a rooster is ahead of (the gang) of chickens, so too is Johnny ahead of the gang (children)". Shortened to a metaphor: "Johnny is the rooster-for of the gang".

Rooster, in his social role, is the original. 'Rooster-ahead' is the model, in the chicken kingdom, of that role.-- Common characteristic: Rooster leads. Johnny leads. Though creaturely different (chickens are not children), yet the metaphor stoops to 'identify' to some degree. Not without more. For that would be wrong.

II.2.-- *Metonymic analogy (partial identity).*

In traditional textbooks "attributive analogy". - "Where there is smoke, there is fire". -- The equation: "as the effect stands to its cause, so also the smoke stands to the fire (which causes the smoke)". Causation. Shortened to metonymy: "Where there is smoke (effect), there is fire (cause)".

Smoke (as a result) is the original. Fire is the model.-- But the common characteristic now is not one of similarity (The rooster leads/je leads) but of coherence: fire causes smoke. Original and model belong together -- not within the same set like cock and john but -- within the same system, i.e. smoke-producing fire. The common feature now is the fact that smoke and fire make up a single system (together, by virtue of coherence).

Sample 22.-- Tropology : the synecdoche.

Bibl. sample: *K.A. Krüger, Deutsche Literaturkunde*, (German Literature,), Danzig, 1910, 115.-- The antique-Greek term ‘sun.ek.dechomai’ meant “I make myself master of at the same time.” ‘Sun.ek.dochè’ is what follows. It revolves around the concepts of “copy/collection” and “part/whole”.

Understanding.

The metaphorical synecdoche speaks of all copies of a collection - abbreviated - in terms of just one (or at most a few) copies. And vice versa.

The metonymic synecdoche talks about the whole of a system - abbreviated - in terms of precisely one (or at most a few) parts. And vice versa.

1.-- ***The metaphorical synecdoche.***

By the German poet Schiller: “Und sieh: ihm fehlt kein teures Haupt” (head stands for man).

Explanation -: “A soldier remains at his post” the commander says to all the soldiers. He does say “one” (specimen). But he means ‘all’ (collection).

“Teachers never arrive late” says the inspector to two or even one teacher who arrives late. He does say “teachers” (plural) but apparently means “two or even one teacher”, (singular or pair).

One translates - so e.g. Krüger - synecdoche by ‘co-meaning’: indeed this figure of speech speaks of something including something else of the same set (or as will be seen later of the same coherence (system)). And it does so in an abbreviated way (trope).

2.-- ***The metonymic synecdoche.***

Schiller: “Wir flehen (beg) um ein gastlich(es) Dach” (roof stands for home).

Explanation.-- “The beard is there”. Thus the staff of a firm when the (whole) boss arrives!

They do say “the beard” (one part) but apparently mean the boss (the whole).

“This parish has two thousand souls” says the shepherd of souls (this term is also a metonymy). He does say “souls” but means “people” (part/whole).

Note.-- According to Krüger, allegory (elaborate parable) and personification (personification of inanimate things) also belong to tropology.-- One can add parable (“parable”) to allegory.

One example of personification: “The fresh air has awakened” (as if that air were a person awakening).-- Do you recognize the systechy “original/model” in allegory, parable, personification?

Sample 23.- Generalization / generalization.

In the two terms in the title stick two adjectives, “general” and “overall.

In the wake of the synecdoche or co-authorship, we now briefly - and anticipate later - set forth what is meant by generalization and generalization.

The ancient Greek term ‘ep.agogè’, Lat.: inductio, ‘induction’, means that one **a.** on the basis of samples either in a collection or in a system

b. decide on one or more features that can be confirmed in forthcoming samples -- from samples done to samples to be done.

1.-- *Generalization.*

It follows in the footsteps of the metaphorical synecdoche.-- It rests on similarity.-- If this water and that water (= samples made) boil at 100° C., then all water will boil at 100° C.” From one or a few samples one concludes to all possible samples.

Other model. -- The classroom inspector, out of twenty-four lesson things, questions four. Two do well. One less. One poorly.-- He generalizes for the non-interviewed rest.

Note.-- One sees that a totality is split into two parts: tested and untested cases.

2.—*Globalizzation or ‘Whole-ization’.*

This follows in the footsteps of the metonymic synecdoche.-- It relies on coherence.—A female economist studies the economy “of Antwerp. -- To this end she works her way in, in the Meir, the large and central shopping center, and then delves into the life of the port. Two samples from the whole (system). She will develop a view, albeit with gaps, of the whole economic life of Antwerp. She ‘whole-izes. From the tested parts she concludes to the untested parts.

This is also what doctors do: the urine samples, some blood drops, for example, arrive at the laboratory. There they dissect the parts to get a view of the whole of health. From tested parts one concludes to untested ones. One ‘Whole-izes’.

It will be seen that the synecdoche provides an excellent introduction to the doctrine concerning scientific induction which is merely an elaboration of it.

Sample 24.-- Platon's 'stoicheiosis' (arrangement).

Platon connoisseurs discover that *Platon* speaks of ordering data in terms of "all" and "whole. Thus *A. Guzzo, Le concept philosophique du monde,* (The philosophical concept of the world), in: *Dialectica* 57/58 (vol. 15) 15.03/15.06.1961, 97ss., who cites, among others, *Theaitètos* 205a, *Parmenides* (*passim*), *Filebos* 15d/17a, *Sofistès* 248e/249a, *Timaios* 92e/31c to show that 'world' and 'all' and 'whole' are related, constitute the same idea.

Bibl. sample: -- *P. van Dorp, Aristotle on two workings of memory* (*Platonic reminscences*), in: Tijdschr.v. philos. 54(19S2): 3 (Sept.), 457/491 (the term 'anamnèsis', lat.: reminiscentia, is the ability to think together data in an ordered way;-- something by which anamnèsis differs thoroughly from mnème, lat.: memoria, the loose memory);

-- *E.W. Beth, The Philosophy of Mathematics*, Antw./Nijmeg., 1944, 36. 'Stoicheion' we know (*E.L. 01; 19*): element of an order(s).--

'Stoicheiosis', Lat.: elementatio, arrangement, is described in one of *Platon*'s texts as follows. *Namely Filebos* 18b/d. "When someone (...) noticed that sound was infinitely diverse, he was the first to recognize that:

a. the vowels in that infinity were not one but many and (...)

b. there were other sounds that, although not vowels, still possessed some sound value (semivowels).

c. he further distinguished a third kind of letters which we now call consonants".

Note.-- One sees that Platon:

a. a cluttered multitude of letter sounds

b. tries to organize into three types.

But he recognized that none of us could learn one of them separately without all the others. He further recognized that this pointed to a coherence that made them all one. Therefore he assigned to them one science which he called 'grammatikè' (alphabet., speech)".

Note.-- After listing the types, Platon pauses to consider the coherence or system. For example, one letter sound cannot be thought of and known without co-thinking all the others. One including the rest (dichotomy or complement).

What Guzzo said about the world, Platon confirms here regarding the "world" of the sounds of letters: he speaks about it in terms of a single one, of species, yes, but especially of all and whole (collection and system).

Sample 25.-harmological ontology.

'Harmologeo', in ancient Greek, means "I order". -- "I join together." -- 'Harmology' is therefore (ontological) theory of order.

-- *Fr. Schmidt, Ordnungslehre*, (Order theory,)n Munich/ Basel, 1956, 11: "The whole metaphysics of the West -- From Platon to Nietzsche -- could be considered from the concept, 'order' such that each of its systems and as one type of order thinking would come across." -- That's "the great tradition"!

S. Augustine of Tagaste (354/430).

This "greatest church father of the West" was the first to write a separate theory of order, *De ordine* (literally, About Order). He did this while preparing for Christian baptism.

A multitude of themes - music, geometry, astronomy, numerology (all things from the great Pythagorean-platonic tradition) - are brought up in Augustine's little work. Among other things, the basic concept is 'numerus' (translation of the Greek 'arithmos'), i.e. not 'number' but 'structure' (principle of order).

Combinatorics.

S. Augsutinus gives a definition of order: "Order is the arrangement (placing) of equal and unequal things that assigns to each its proper place." (*De civitate dei* XIX:13). By which he emulates Cicero, the great Latin writer.

In 1666 - barely twenty years old - *G.W. Leibniz* (1646/1716) - what is now called - published the first treatise on combinatorics: *De arte combinatoria*.

C. Berge, Principes de combinatoire, (Principles of combinatorics,), Paris, 1968, defines "combining" as placing data within a set of places. Augustine's definition!

'Configuration'.

The name for a set of places is 'configuration'. To combine, then, is to assign a place to something within such a configuration.

Classic model.

Noë, just before the Flood, designed the ark as a configuration such that all pairs of animals could be assigned a place in it.--- A housewife who, in a closet, orderly "assigns a place" to her linen, combines within the configuration of the closet. She orders.

But in this we recognize Platonic stoicheiosis which assigns all letter sounds e.g. a place within the 'grammatikè'.

Sample 26.-- Applied harmology.

In an introduction to logic such as this, we choose the examples that involve reasoning.

1.-- *Computing*

I.M. Bochenski, Philosophical methods in modern science, Utr. /Antw., 1961, 52vv.

27 x 35- 135 81 945	The fact that arithmetic is first and foremost about places is demonstrated by the example of a multiplication given by the Polish logician. The units, the tens, and the hundreds are each given their place on the paper, which is an imperceptible configuration.
$ax^2 + bx + c = 0$ $ax^2 + bx + c - c = 0 - c$ $ax^2 + bx = - c$	Another example gives a 'flat' configuration. One of the operations 'manipulates' the places of the configuration. Thus we calculate in an orderly fashion.

2.-- *The rule of three.*

Again, there is a configuration at work here.

100% is equal to 30. 1% is equal to 30/100 = 3/10. 15% is therefore equal to (3 x 1 5)/15 = 45	One sees the collection structure at work: 100% (universal collection); 1% copy (element); 15% (private collection).

3.-- *The systechy and the differential.*

A systechy (opposition pair) is a configuration in which two 'values' (being) with opposite 'sign' (value) are 'placed'. Thus: "ice cold/hot".

A differential splits the system in the middle and introduces gradual changes with (qualitative) jumps. Thus what is called today "fuzzy logic".

D. McNeill/P. Freiberger, Fuzzy Logic (Bodoni), explains a kind of applied logic which, among other things, works with differentials instead of hard opposites (systechies).

For example, in recent years the Japanese industry has been marketing products - vacuum cleaners, for example - that have such "fuzzy logic" built in. Terms such as "ice cold / cold / lukewarm / warm / hot" are quantified (translated into mathematical terms) so that e.g. "20% warm" or "70%" can be applied mechanically.

One sees the differential that splits the systechy "icy/hot" with intermediate values. These are assigned a place within a "flat" differential or configuration. Behold some examples of combinatorics,--applied harmology.

Sample 27.-- The basic differentials.

Let us take again *E.L. 21* (*Identity Theory*). There it brilliantly states the basic differential: totally identical (with self)/partially identical (analogous) (with something else)/ totally non-identical (with something else). -- This is the core of identitive thinking.

1. ***A predetermined differential.***

Do we watch carefully : "total (= whole)/ part/ not at all". -- Previous differential stands or falls with this differential.

2. ***The logical square.***

In traditional manuals of logic, one finds this basic configuration :

All well	All non (none)
Non-all are	Non-all non
(some do)	(some not)

The structure is clear:
a. the systechy (model: yes / counter model: no);
b. the differential (all / some (do.) some (not) / none)

Note: the second previous differential uses Platon' s "whole" and the previous Platon' s "all" (*E.L. 28*), i.e. System and set. In the background of those two: the identity differential.

Note.-- *Ch. Lahr, Logique*, Paris, 1933-27, 499, mentions the scholastic language in this regard.

1.-- ***Totum physicum.***

Literally, "natural whole." -- In current language 'system'. -- In the mid-century theory of concepts, the collective concept corresponds to this.-- Thus, e.g., the concept of 'man' (as a system of soul and body).

2. -- ***Totum logicum.***

Literally, "logical whole." -- In current language "collection". In the mid-century theory of concepts the distributive concept corresponds to this. - Thus, for example, the concept of 'people'.

In mid-century Latin, a translation of Platon's all and sundry was common, namely, 'omne' and 'totum: -- terms that represent in numerical terms the concepts of collection and system.

J. Royce, *The Principles of Logic*, New York, 1912-1; 1961-2, 9, says that logic as it has been conceived for centuries is only "a part, a very subordinate part" of the theory of order.-- What follows in this course will show how true that this claim of J. Royce is.-- The differentials above form the framework of the science of order ("science of order" says Royce) as the basis of logic.

Sample 28. -- Unity Theory (henology).

'Them', in ancient Greek, is 'one' or 'unity'.

A peculiarity stands out in the use of language:

a. unity can mean" elemental unity" (e.g., "The two is made up of two units");

b. unity can mean "encompassing unity" (thus it is said, "A multitude is brought to unity").-- Heno.logy, then, is to bring up (-logy) the one (heno-).

Do we note that all that is, i.e., being, is always susceptible to statements like "Being is one in number or many in number." Which indicates that "number" (expressible in "number") is an all-encompassing or transcendental concept.

The basic differential here is: one/ part one (limited many) / total many (not one).

Again:
a. the systechie "one/many",
b. the differential enters intermediate value "partly one = partly many".

Identity and unity.

A multiplicity of being - think of Platon's sounds of letters (*E.L. 28:* "infinitely diverse") - is brought to unity thanks to that which is identical in that multiplicity, namely the common characteristic.

1.-- A multiplicity of specimens ('elements') is brought into unity by virtue of their common property. Thus, out of a loose class, a true collection emerges in virtue of Similarity.

2.-- A multiplicity of parts is brought to unity by virtue of their common property. Thus, out of disconnected parts, a true system (system) comes into being. in virtue of Consistency.

In other words: are specimens or parts a multiplicity, they are a unity in that they are identical in at least one point, namely in what we call common characteristic.

Note -- Logic of relations. -- A relation is either loopy (reflexive) and means total identity of something with itself or non-reflexive and means partial identity or non-identity of something with something else.

In fact, the term "relation" covers the classical theory of order, i.e., the traditional theory of identity in which total identity and its variants are central.

Sample 29. -- Comprehension logic.

Now that the main premises have been discussed, we can begin the actual logic. - Logic is revealed in conditional sentences. In them one works with concepts.

Definition.

A concept is "a reality (*E.L. 11/15*: Content and Scope of the Concept of Being or Reality), insofar as it is present in, our mind."

Concept and term.

Let us take the concept of "girl. The language form in which the thought 'girl' is expressed is called 'term'.

One does not confuse "term" with "word. We reread *E.L. 15*. There we find "the axiomatic part" consisting of three axiomata and an agreed sign. Well, these three axiomata plus the agreed sign together make up one concept and thus one term consisting of many words and even a sign.

Many confuse terms with words. Traditional logic is not a logic of words but a logic of terms.

The term "girl," by the way, can be translated into more than one word: "A girl is a young woman. The definition betrays the fact that term and words are not the same. "Young woman" is thus a term (and at once a concept) that can also be translated into one word.

Note.-- Already we note that traditional logic works not so much with concepts but rather with defined concepts. Why?

Because rigorous thinking does not concern itself with vague notions but as much as possible with precisely defined, i.e., defined, notions.--

It is true that the theory concerning defining comes only after the exposition of the concept, but the application is there from the beginning.

Conceptual content / conceptual scope.

A concept includes two 'stoicheia' or constituents: content and scope (range, domain).-- In scholastic-middle language: "comprehensio / extensio".

1.-- ***The content.***

This is what is actually thought of a reality as far as it is present in our mind. This thought can be divided into characteristics (properties).

For example, the concept of a girl:

a. it is of the female sex and

b. it is youthful. That is two - three traits (gender female and youthful). Only when such traits form a system is there one concept (collective structure).

2. -- *The scope.*

That is the collection or system to which the content refers, -- which summarizes the content.-- Thus, the term "girl" refers to the whole girl and to all girls.-- Thus, the term "girl's clothes" refers to the clothed appearance of girls,-- the whole of them and all ditto clothes.

Summary.

Content and size can be formulated as follows in good Dutch: al wat ... is. 'All that' refers to the extent. "...." refers to the content (e.g. "All that is girl"). 'Is' situates both aspects in the totality of being(s) or reality (ontological trait).

Note.-- Actually, a triad is necessary.
Those who make a treatise on e.g. "poverty" must:
1. Describe the entire poverty (content),
2. All (forms of poverty and
3. 'the totality of all (forms of) poverty.

Why the latter? Because the different forms of something are also interrelated. For example, one poverty (that of the parents e.g.) generates another (that of the children). That too is part of the (defined) concept of poverty. -- One sees that Platon's basic terms "all / whole" are more than a meaningless systechy.

The "content/size" ratio.

"The richer the content the poorer the size." -- The term "girl" refers to all that is girl. But add to the knowledgebase 'girl' a new knowledgebase or 'note' and the size reduces: for example, there are far fewer "rich girls" than "girls". Rich girls are a subset of girls. The key trait 'rich' narrows the scope.

Similarly, *E.L. 15*: drop an axiom. What happens? The scope or domain ven the axioms becomes larger but fuzzier.

The tree diagram of Porfurios of Turos (233/305).

This Alexandrian thinker left us with a diagram illustrating the "content/size" relationship.

Being is divisible into purely spiritual (immaterial) and material (material) being.-- Material being is divisible into dead (inorganic) and living being.-- Living being decays into vegetable and animal being.-- Animal being decays into mere animal (spiritless) and into spirit-gifted being (the latter defines man).

As we can see, the more one adds features within the term "being" the smaller the scope, the number of beings to which the content refers.

Sample 30.-- Textuology.

'Textus', Latin, gives our word 'text'. Textuology is the bringing up of text, textology.-- Every text (forming a unit) is summarized in a conceptual content. The term that represents that content makes up, normally, the title above the text.

Bibl. sample: *H.I. Marrou, histoire de l' éducation dans l'antiquité,* (history of education in antiquity,), Paris, 1948, 239.-- Students first listened to a story (Gr.: muthos, epangelia; Lat.: narratio). From this they had to make a report. On a papyrus such a report was found.

Given : the teacher recounts a religious myth in verse form.

Asked : the student(s) drafts an abbreviated "paraphrase" (paraphrasing, i.e. rewriting with their own words.

The text.

"A boy who had murdered his father and "feared the legislation on parricide" fled into the desert. As he passed through the mountains, he was chased by a lion. With that lion at his heels, he climbed a tree. Then he saw a snake ('dragon') rushing towards his tree, perhaps to climb it too (...). While he was fleeing from that snake, he made a trap. -- The malefactor does not escape a deity: "The deity will make the malefactor suffer a judgment".

Note.-- The words quoted in quotation marks are apparently words quoted from memory.

The structure.

Do we look, conceptually, at the text.

1.-- ***Conceptual content.***

This is exposed in what traditional literatology (literature) calls "the moral lesson." Here: "The deity will subject the wicked to judgment." Shorter "divine judgment.

2.-- ***Conceptual scope.***

The content of that term, which here includes a whole sentence or statement (the thesis or thesis being defended), refers to all cases of such a judgment of deity.-- The narrative singles one out. This is the sample from the whole collection of divine judgments.

Think of the synecdoche (*E.L. 26*) and specifically the metaphorical synecdoche that says one sample but means all.

Rule.-- Without the sample, the content is empty. Without the content (= moral lesson), the sample is blind.-- See what text comprehension can be!

Sample 31.—Scope types.

The scope can be distinguished into following types.

A.-- *The singular concept.*

"This landscape here and now" (geographic). "Emperor Nero" (historical).-- Geography and history in particular contain general contents (objects of 'nomothetic' science) yet they stand out because of the singularity (uniqueness, singularity, individuality, singularity) of their subjects. There is only just one Antwerp, just one Nero!

The Romantics, later W. Windelband (1848/1915; Badener Schule) emphasized the uniqueness of things, especially when it came to cultural history. Windelband called sciences that study the singular as singular "ideographic" sciences. - A monograph, for example, is one such type of knowing.

B.-- *The collective understanding.*

"All people together form the humanity." That phrase refers to all people, universal understanding, but as a system. I.e. as a coherent whole. Indeed: people act on each other both synchronically and diachronically (in communication and interaction,-- in traditions of all kinds).-- Coherence is decisive.

C.-- *The distributive concept.*

"All people like to eat what is cooked and drink what is ready. All people are taken here as individual specimens of the collection "human.

Here, the common property is distributed among all individuals (distributive). In the collective understanding, the common property accrues to all collectively - not each individually. Similarity is decisive.

***Note* --** The transcendental or all-encompassing concept is a type apart. The term "being" (being, reality) is such an all-encompassing concept. Everything and everything of everything in it is contained.

As we saw (*E.L. 32*), the term "number" (expressible in a number) is likewise transcendental: of everything (and of everything of everything) it can be said to be either singular (existing precisely once) or discoverable in plural.

In other words : singular and plural are linked but distinct from all that is.

Other traditionally known transcendentalities are 'true' (knowable) and 'good' (assessable).-- Although expressible of everything, they are rather vague. Which does not prevent them - together certainly - from being a light that precedes (light metaphysics).

Sample 32.-- Classification.

What the definition, i.e.: enumerating all the features (notae), is for the content, that is the classification for the scope of a concept.-- The enumeration rules are the following.

1.- ***Distinctiveness / Inseparability.***

The enumerated copies / parts or grouped copies / parts must be distinct (otherwise there is redundancy, redundancy: think of someone who lists all the first names of the members of his family and lists one of them twice). But the same enumerated (grouped) specimens / parts must be thought including the rest.-- Briefly: distinguished but not separated.

2.- ***Incompleteness/ Completeness.***

One can list so that all specimens / parts are mentioned. But often a classification is limited to the most striking or characteristic specimens / parts. Again two types.

a.-- ***Distributive classification.***

In Platonic language: all. Scholastic: "totum logicum". -- Reread *E.L. 34*: Porfurios' tree diagram. Porfurios begins with an incomplete classification. Ready-made, of course. But incorrect because apart from the merely spiritual and the merely material beings, there are those who are simultaneously material and spiritual. Man is a mixed being.

b.-- ***Collective classification.***

We shall see examples of this yet.-- But for now this.-- In platonic language: whole. Scholastic: "totum physicum"

Scale.-- Philosophical aesthetics (beauty theory) distinguishes related concepts. -lovely is small-scale beauty ('graceful'): think of fashionable female underwear! Exalted is large-scale beauty: think of the 'sublime' impression emanating from the Alps.

Comical or laughable is small-scale innocuous (a clown, for example). Tragic is large-scale innocuous (a demise of a gender).

It is only when these concepts are thought of together that they acquire their full clarity of meaning. The notion of scale, a quantification of qualities, underpins the system of these inseparable though distinguishable notions that classify "the beautiful". -- Note that there are also hybrid forms: e.g., "tragicomic.

Sample 33. - Classification/ definition.

Prof. Martin Bronfenbrenner wrote an article in Harvard Business Review, in Sept.-Oct. 1973, on "*social criticism in the USA and Japan*." -- We provide a summary of it.

1.-- *The format.*

This one emphasizes the differences.

1.1.-- *Radical anarchism.*

E.g., Abbie Hoffman's (1968) manifesto.-- "Money must be abolished: no more payment for housing, communications media, transportation, food, clothing, medical care and W.C.

Our goal is complete non-employment: a society in which everything is done by the machine and people are completely freed from the drudgery of labor." -- Bronfenbrenner also called this streak that of the Yippies (Zippies).

1.2.-- *More moderate anarchism.*

This is the "counterculture" of hippies. Withdrawing from "established society" into autarkic (complacent) communes in the countryside or in the metropolis, -- making an economic living from selling cheap jewelry or leather goods or in some kind of agricultural cooperative, -- experimenting ("pushing the boundaries") with religion and occultism, drugs and sex.

2.-- *Syndicalism.*

"All power to the workers!" Power must be conquered not by a political revolution but by strikes. The factories must be given workers' control. The state must be phased out.

3.1.-- *Neostalinist socialism.*

For example, in Japan.

Marx and Lenin are the figureheads.-- "Freedom is such a valuable commodity that it must be rationed. Consequence: planning of the economy in the neostalinist sense. Divergent opinions, behaviors are, intolerable.

3.2.-- *Humanist socialism.*

Figurehead: the young Marx of pre-1848.-- Four axioms.

a. Income and property equality.

b. Complete gratuitousness of some goods and services.

c. Moral incentives replace material incentives to motivate people.

d. Liberation from "die Entfremdung," i.e., all that in our industrial society subjugates, enslaves people.

One can see that the one term "social criticism" encompasses very many, indeed contradictory, strands.

2.-- *Definition.*

To define essence, i.e., that which distinguishes something from the rest of all that is, is to enumerate as well, but with the emphasis on what the classification notices in terms of differences, so that the common properties are revealed. -- Bronfenbrenner sees the following features.

a. -- *Cultural Criticism.*

1. The established society is heading for something negative: hopeless disorder,-- military dictatorship,-- new world war,-- even the demise of humanity. What has been called "doomsday thinking.

2. Therefore, radical reform and urgently so (still in the course of "this generation") is necessary.

b.-- *Revolution of culture*.

1. Parliamentary democracies - with free elections, among other things - are powerless.

2. Revolution, short and non-violent if possible, is the salvation.

c. -- *Irrationalism.*

Most adherents of social criticism do not rely on rationality, the hallmark of modernity, but on sources of knowledge such as intuition and feeling.

Behold the axiomata that define "social criticism and social revolution." Cf. *E.L. 15; 33*. The concept of "social criticism" is fixed in one tripartite term (a, b, c above) which constitutes a system of thought that refers to a domain in reality,--domain that was articulated above in the classification. The tripartite term does consist of a plurality of words.-- Words that form term,-- term that articulates a concept: behold the text.

Opm.-- *J.M. Chauvier, Gauchisme et Nouvelle Gauche en Belgique*, (Leftism and New Left in Belgium,), typified New Leftism and Gauchism in our little country as follows.

1.-- Instead of the working man the playful man.

2.-- Self-governance in the short term.

The stake is not one or another cultural domain but the whole culture as such. Since neither traditional socialism (reformist or communist) nor the labor movement offer a solution politically and syndically, the only way out is the cultural revolution by the playful man who acquires self-government.

Belgian gauchism is classifiable in Maoism, Trotskyism and anarchism. One can see that Bronfenbrenner and Chauvier are similar though.

Sample 34. - Categories.

Something can be a model for an original in more than one way. On this subject, the ancients have left us with the kategoremen and the categories.-- Now first about the kategoremen.-- 'Katègorèma' in ancient Greek is "to say something of something", proverb.

The kategoremes belong to the distributive type.-- In Latin 'praedicabile' (from there 'predikabilia').

Model. To be specific, we take a murder of a young girl. Do we pay attention to how such a fact is spoken about.

The five distributive viewpoints.

In Latin "quinque voces". -- In the wake of Aristotle, Porphyry of Turos (233/305; theosophical thinker) brought these up.

A. ***Features.***

Every being or something has characteristics, properties. But these differ under the point of view of relation to the being of something.

A.1.-- ldion (Lat.: proprium), essential, ever-present property.

Here: it is peculiar to every murder in all cases that killing happened. Or impotence of the victim.

A.2.-- Sumbebèkos, Lat.: accidens, accidental, non-essential and therefore not always present trait.-- Here: various knife stabs.

B.-- ***Classification traits.***

These control the layout.

B.1.-- Genos, Lat.: genus, 'genus' in the sense of universal collection.-- Here: murder.

B.2.-- Diafora eidopoios, Lat.: differentia specifica, specific or specific difference. -- Here: 'brutal' for the reason of the many knife stabs.

B.3.-- Eidos, Lat. : species, kind (type) in the sense of private collection.-- Here: brutal murder.

One sees that the species combines the two previous ones. The doctor or the policeman who characterizes - defines - the murder then says: "Here is killing (of a powerless girl) by means of several knife stabs such that here can be spoken of as a brutal murder".

One can see that the five distributive viewpoints constitute a kind of definitional scheme that defines the separate features into a coherent whole.

Sample 35.-- Categories

These are collective.-- They divide the subject, the understanding, into parts, aspects,-- perspectives.-- Aristotle, probably in the wake of Archutas of Taras (lat.:Tarentum) (-445/-395), paleopythagorean, among others, saw each being as contemplable under the following points of view, listed and thought of as systechies.

1.-- *The basic couple.*

Ousia, lat.: substantia, essentia, main.-.; Pros ti, lat.: relatio, relation (side issue).-- Let us return to the murder of the young girl. That is the ‘ousia’, the main thing or ‘substance’.

Note.-- Traditionally, one also calls the side issues or relations ‘sumbebèkota’, accidentia (as E.L. 40), but this creates confusion because here the term is not distributive but collective.

2.-- *The relations (side issues).*

These are the partial identities of the substance with the secondary. They are also thought in pairs.

2.1. - Poson/ poion, Lat.: quantum/ quale, how great/ how many (quantity/ quality). -- Here: just this one case/ brutal murder.

2.2. -Pou / pots, Lat.: ubi/ quando, where (place)/ when (time). - Here: in a park / at night.

2.3. - Poiein/ paschein, Lat.: actio/ passio, bring about/ be brought about (cause/ be caused).-- Here: by one who kills / victim.

2.4. - Echein/ keisthai, Lat.: habitus/ situs, to situate/ be situated.-- Here: (as seen from the victim) the girl shows signs of resistance/ it was apparently overwhelmed.

Note.-- A better translation would perhaps be: thrown into a situation (situs)/ design or reaction to that situation (habitus) for that is apparently the thought. Unless one takes both terms to be purely local.

The definition that emerges from that multitude of categories then reads as follows: the murder of a young girl.-- Just one case/ brutal murder.-- In a park/ at night. -- By an attacking person/ victimized.-- With signs of resistance/ but apparently overpowered.

Admittedly, this list is incomplete. But it sets the stage for beginners who need to analyze a collective understanding. There are other relations that further define the main issue, of course.

Sample 36.-- Topic: material and formal objects.

A ‘theme’ (subject) is a being that, as an original, requires models (information). Thus, a ‘main thing’ can be approached from several “formal objects”. The main thing is called a “material object”.

1.-- ***Material object.***

Let’s take again “the murder of the young girl” so that by comparison this chapter becomes clearer. What the scholastics. “the material object” is the undoubted, brutal fact, before even the slightest interpretation becomes active.

2.-- ***Formal objects.***

Brute being can be approached from a plurality of viewpoints that the medieval tradition calls ‘formae’, being forms. Hence the term ‘formal’ objects. The form of being considered within the totality of the given (again, it is about a collective concept), differs from e.g. a plurality of sciences.

a.-- ***The position of the police.***

Making “the necessary findings” is governed by the preparation ven the judicial inquiry and judgment that comes with time. The police support or perspective (sample) pays attention to the legal part of the whole.

b. -- ***The physician’s point of view.***

For example, when a law doctor examines the corpse, he has his medical part of the whole given.

c. -- ***The journalist’s point of view.***

This one, as a communications scholar, pays attention to what in the whole thing may be the journalistic component.

d.-- ***The viewpoint of the passerby.***

He pays attention to what his eye can catch through the meshes of the police cordon regarding details that interest him, as a man of the street. He sees another part - it is somewhat similar to that of a journalist (among other things, he also wants to tell ‘news’ as an ‘eyewitness’!) - of the whole.

Ambiguity.

One fact -- being -- gives rise to many interpretations.-- For the logician, these count as samples within the same inductive acquaintance with that being, which as the main thing including a multiplicity of points of view reveals a multiplicity of side issues (relations).

Sample 37.-- Words as themes.

Bibl. sample: *O. Willmann, Abriss der Philosophie*, (Outline of philosophy), Wien, 1959-5, 10/12. The middle ages distinguish more than one form of theme.

1.-- ***A word.***

"Quaestiones simplices de uno vocabulo". Quotations that are singular ('simplices') because limiting themselves to just one word that then acts as a term for a concept.-- So e.g. "The Girl". Or "Labor.

Note.-- The title then does not have a caveat "modality" built into it. This implies that the theme whole, in all copies, these in turn should be treated in their entirety. Thus: the whole of the girl or labor, all girls or labor forms, the whole of all girls or labor specimens. What an encyclopedic text would include.

Usually, yes, pretty much always, the theme is not "exhausted. One sticks to the essence of the theme: "The Girl as Girl (insofar as she is girl)" or "Labor as Labor" (labor as such or as such, i.e. insofar as distinguishable from the rest of the universe).

2.-- ***A relationship.***

For example, "The Girl and the Boy." Or "Labor and Economics". -- Here a caveat is introduced: not the girl or labor without more but the girl in its relations to the boy or not labor without more, without reservation, but labor in its relation to all that is economy.

3.-- ***A judgement.***

"Quaestiones coniunctae de propositione aliqua". Statements that are compound ('coniunctae') because expressed in the form of a sentence ('propositio').-- Thus: "Young girls invariably have problems of their own". Or: "Labor can be a pleasure but is often a burden".

Here the "formal object" (point of view) is scarier than in a relationship (just above): not the girl seen from his relationship to the boy but the girl seen from the fact that she invariably has problems of her own. Not labor in the context of economy but under point of view ("formal object") of lust and burden.

In the relation and judgment, the text to be worked out is no longer endless (encyclopedic) but limited. The conceptual content of the theme is richer (*E.L. 34*) and thus the scope poorer. Because of the built-in 'modality', containment, in the title itself.

Sample 38.-- Chreia.

What the ancient Greeks called ‘chreia’ (literally: what is useful) is the schema that helps ‘develop’ a theme, i.e. transform it into an ordered text.-- *J.Fr.Marmontel* (1623/1799, *Eléments de littérature* (1787), says that the chreia (chrie) is “a definition”. But he confuses the strict definition of being with that text which “develops” that same strict definition into a more comprehensive text by which the thing to be defined comes much more clearly to mind. If one wants: an expanded definition.

H. I. Marrou, Histoire de l’éducation dans l’antiquité, (History of education in antiquity,), Paris, 1948, 241, says that the chreia, with its platitudes (it is a configuration; *E. L. 29*), each of which is a heuristic or finding point of view, amounted to “a small page” in ancient secondary education in its “developed” form.

The viewpoints prove the concern of ancient teachers to instill in students the notion of the ambiguity of a theme (concept). Cf. *E. L. 42* (*Plurality*).

An applicative model.

We immediately incorporate the regulatory model with the example.

1.1. - ***Who. Isocrates of Athens*** (-436/-338)

He was a renowned rhetor and logographer (text editor). He enjoyed a very well-groomed education. He took lessons from protosophists (Gorgias and Prodikos). Also from Socrates.

As an advocate of “panhellenism” (unity of all Greeks), he put his hopes in King Philip II of Makedonia (-382/-336). However, when he found that he was working for unity in an undemocratic way, he let himself die of hunger.

1.2.-- ***What?-- a statement by Isokrates:***

“The roots of education are bitter. The fruits taste sweet”.

Note **--** “What?” can also be an act. e.g. a victory of an army leader.

Note.--

1. These are the two basic commonplaces: a person said or did something.

2. note: the statement is metaphorical! Those who wish to develop the theme must translate the trope. Here: roots/ cause (formation and fruits/ consequence (education). Otherwise one risks slipping into phantasmagoria! Sometimes - so in poetry - the trope is essential and therefore remains untranslated.

2.1.-- *By what? / Why?*

One paid attention to the two terms: "why?" refers to a causal process; "why?" refers to a motive. The (unconscious) motive can be classified among the causes.

Here: e.g. Isokrates' case itself. He was very timid of temperament and had a weak voice. As a result, he could not act as an orator in the agora, the popular assembly, and had to stay out of politics. Nevertheless, he became very influential thanks to his "sour" efforts. So he knew by his own experience what he was saying.

2.2.- Counter model/model.

The chreia applies the comparative method here.

2.2.a.-- Counter model.

If educators indulge, the result turns out to be spoiled, unresisting "products.

2.2.b.-- *Model.*

Already the metaphor suggests a model. Just as a plant, thanks to care, yields more, so does the educator(s).

2.3.-- *Examples.*

Here Demosthenes of Athens (-384/-322) can be cited as an applicative model: he had a weak voice but thanks to rock-hard practice he was able to perform in the agora and became a famous orator and politician.

Note that the example is a sample. Cf. *E.L. 35*, where the mythos illustrates a moral lesson by means of a single case. In other words: the inductive method.

2.4.-- *Testimonials.*

Now this is called "authority arguments. -- Here one can cite educators who are competent in the matter, i.e., regarding Isokrates' assertion (the concept or theme). Opinion surveys may also be cited here as 'testimonies'.

Behold, filled with some content, the structure of the chreia.-- It can be memorized. The Latin mnemonic formula reads:

a. Introduction.

b. Middle.-- Quis? (Who?). Quid? (What?). Cur? (Wherefore?/why?). Contra (Counter model). Simile (Model). Paradigmata (Examples). Testes (Witnesses).

c. Conclusion.

Note.-- Afthonios of Antiocheia (270/ ...).

a. Introduction.

b. Middle. -- Paraphrasis (who? what?). A causa (explanation). A contrario (counter-model). A simili (model). Ab exemplo (example). Testes (authority arguments).

c. Conclusion (a brevi epilogo, o.k. a short epilogue). In this way, antique students learned to "define" a concept (theme) briefly and comprehensively.

Sample 39.-- Definition.

Let us begin with an example. - "Education is the assistance of those responsible for the outgrowth of the child so that he becomes an adult." (*N. Perquin, Pedagogy* (*Reflections on the Phenomenon of Education*), Maaseik, 1965, 43).

1.-- *Definition.*

As seen a moment ago, there is brief and extensive defining.-- Here we dwell mainly on the brief definition. This is: to define the essence (essence + existence) of something - here: education, i.e. to represent it with signs (words, schemata, numbers, letters) in such a way that it becomes clear what the thing to be defined is.

As a result, the definite, Latin for the thing to be defined, as original, becomes distinct from the rest (dichotomy) of being.

Definition as (full) sentence.

The subject (definiendum), the original, and the saying (definiens), the model, must be interchangeable.-": Here Perquin's definition: "The help of those responsible for the outgrowth so that the child may become an adult" must be identical, even totally identical, with 'education'. If not, the total identity of the definite is misunderstood.

Model theory: original and model must coincide, be indistinguishable.

Other example.

"Man is a spirit-gifted animal." -- Model: "spiritually gifted animal". The original "man" must not differ in anything from the model.-- In a broad sense, a definition is a "tautology.

2.-- *Definition terms.*

These can be reduced to two.

a.-- *The entire definiendum.*

Suppose Perquin omits the term "growing into adulthood," then any help provided to a child is valid as a definition of parenting. Which blunts the point of the definition, of course.

b.-- *Only the entire definiendum.*

In other words : do not introduce something else, otherwise there is "ignorantio elenchi" (*E. L. 07; 09*): "One walks well but off the track" (S. Augustine).

Note -- "Continuing education" can be built into Perquin's definition: one adds the term "adult" to that of "child" (but then the term "adult" takes on a purely biological meaning: biologically adult but not culturally adult).

Sample 40.-- Typology of definitions.

Ch. Lahr, Logique, 498s. (*Définition de mots et définition de Choses*), distinguishes linguistic (nominal) and a more scholarly (real) definition.

1.-- *Wordy, linguistic definition.*

Actually, Lahr means the partial and thus provisional definition.-- For this purpose, at least one feature of being (idion, ever-present feature; *E. L. 40*) suffices.

For example, for ‘soul’ one can say: “The soul is the principle of conscious life”. Thus the (human) soul, as the West is traditionally accustomed to it, is clearly delineated against the rest (distinguishable).-- Such definitions are regularly found in dictionaries.

2.-- *Scholarly (real) definition.*

Actually, Lahr’s language means the entire and thus definitive definition. for it must, in principle, state of something all the features of being.-- Thus, for “soul” he says: “An immaterial being, gifted with spirit (*note*: intellect and reason, free will), embodied or not. This clearly delineates the human soul, Western-style, from the rest of being.-- That kind of definition is the result of advanced scientific research.

Scientific work.

Lahr.-- Scientific inquiry starts from the nominal definition with the objective of the real.-- In platonic language: it starts from a lemmatic definition.

Disagreement.-- Lahr cites two different opinions.

1.-- Some definition theorists reduce the nominal to the real definition: “One cannot present the nominal without the real.” - Lahr on that: One can define something ready without knowing the whole nature of it”.

2.-- Some definition theorists reduce the real to the nominal definition. -- Thus *John Stuart Mill* (1806/1873; *System of Logic* (1843)). - The Real definition is nothing more than a merely nominal one. To say that man is “a gifted animal” is to say briefly in the term man what the term gifted animal says more comprehensively! One says the same thing twice (and thus commits - what Mill calls - a “tautology”).

Lahr on this: the scientific progress, which gradually exposes - verifies (K.Popper) - more and more features of being, proves that the definition gradually becomes more ‘businesslike’, i.e. clear (reflecting the whole being).

Sample 41.-- Types of definitions.

One can partially classify the definitions differently from Lahr.

1.-- ***Semiotic definitions.***

Words, numbers, abstract signs (*E.L. 15*), diagrams, charts and the like more . are ‘signs’, object of semiotics (sign theory). A definition limited to that domain, we call ‘semiotic’.

Thus the following types.

The descriptive (descriptive) definition represents the usual conceptual content (so dictionaries).

The analytic definition employs the usual terms to introduce a new term.

The stipulative definition employs common terms and gives them new meaning to facilitate discussion.

The prior definition is introduced by scientists to align their scientific jargon with the usual, everyday language (*E.L. 12*).

The contextual definition situates a term within a context.

2.-- ***Non-semiotic definitions.***

Here one steps outside the sign or linguistic system and tests against additional semiotic reality.

Species.

The deictic or ostensive definition:

Contemplative education shows what is definable and attaches a term to it.-- The use definition : one teaches the use to children of e.g. a pen, while introducing the term ‘pen’ and saying, “A pen is something to color paper with”.

The algorithmic definition

It indicates a sequence of actions in such a way that the thing to be defined is clearly distinguished from the rest: for example, the numerous kitchen regulations --

The industry definition

This defines by indicating how something, - e.g. paper - is made in industry: whoever visits a cookie factory, under expert guidance, is introduced to an industrial definition. Related to the algorithmic definition, of course.

The operative or operational definition

It gives useful procedures in such a way that the essence of the thing to be defined becomes clear. Think of *P.W. Bridgman, The Logic of Modern Physics*, New York, ; 927-1; 1960-2. Thus: first to define the essential features of e.g. ‘sadness’ and then to connect methods in order to distinguish them in praxis is to give operational definition. Otherwise, one remains too much in the rarefied realm of talk.

Sample 42.-- Nominalism and (conceptual) realism.

Bibl. sample: *O. Willmann, Abriss der Philosophie*, Wien, 1958-5, 366.-

1.-- ***J. Locke's nominalism.***

Locke (1632/1704) is the head of Anglo-Saxon nominalism.

Locke.-- A goldsmith, for example, deals with e.g. gold empirically on a daily basis. Thus he 'knows' gold. His ordinary observations provide him with sensory (sensualism) impressions (empiricism). These are for him the 'data', the data.

In response to this, (constructivism, constructionism) his reason constructs "concepts" (conceptualism), i.e., "notions. These he sticks on the sensory impressions, resp. data. -- If he is forced to do so - e.g. in response to a client requesting a well-defined piece of jewelry - he acquires an experimental knowledge and a technical skill in the practical processing of the metal.

He at least "knows" what gold is. But what metaphysicians say about "the (deep) nature" of e.g. gold, is just nonsense. Based on nothing tangible.-- The definition of gold - to give but one example of definition - is therefore a purely nominal one: it confines itself to proposing a number of loose features in order to make e.g. gold distinguishable from the rest of the material 'substances'.

2.-- ***O. Willmann's (understanding) realism.***

Willmann was a platonizing realist.-- Indeed, what the nominalist says is true. Empiricism, possibly enhanced by experimentation, provides the "data" as Locke describes them.

Today one knows e.g. of gold, Au, aurum, among other things the yellow color, the high malleability, the immutability to a very high degree, -- scientifically among other things the atomic number 79, 18 isotopes known so far, the boiling point (2600 C.).

But these separate properties have not "got together by chance" (according to Willmann) : they make up a "totum physicum" a collective concept.-- The totality of all the properties of e.g. gold is called "the essence" by the ontologists of traditional house.

a. It is admittedly an 'X', a "qualitas occulta"(hidden trait)

b. but as long as gold, for example, does not disintegrate, that essence is a coherent system hidden "in the depths". Yet that being works like a light that illuminates and drives further research in the scientific field.

Sample 43.-- Definition of "culture.

We started this course with the systechy "problem (given + asked) /solution". Cfr *E.L. 01*.-- Mathematicians who solve problems know this scheme very well.-- The Hegelian term "actual" means "what a statement can handle by solution of the problem".

Widening

If we broaden this scheme so that every - including non-mathematical - solution to a problem is included, then we have a very suitable concept of 'culture'.

'Culture' then is:
a. grasping the given and the requested, i.e., the task and
b. meeting the requirements of the request.
In other words: culture, in its fortunate form, is the ability to cope with problems. Whether it is a water pipe that needs to be repaired, or a computer task: those who solve problems show that they are "real," i.e., up to the task.

The advantage of this definition is that it does justice to both primitive cultures, for primitives -- formerly called by moderns first "savages," then "nature people," eventually "primitives" -- solve their problems, -- if not entirely then partially, if it can correctly situate the most advanced modern and postmodern cultures.

A further advantage is that this definition integrates both the vernacular and the elite strata of a population into one comprehensive concept of "culture. All people solve problems. So they establish culture. Some in this way, others in another way. Some completely, others partially. Some better, others worse.

Note.-- Exist.

Since S. Kierkegaard (1813/1855), the father of existential philosophy, a concept of "existence" or "exist" has preferred to circulate that means "to exist as an actual human being in the world.

Not the transcendental concept of 'existence' (*E.L. 16*), which applies to everything, but the narrower concept of 'existence', which means only human existence, is the theme here. Neither God nor the animal, the plant or the stone 'exist' in that narrower sense (the content is greater, the scope smaller).

Well, existing is defined as being thrown into situations with the task of "coping" with such situations thanks to a design, i.e. a way out. Do you see that this notion of "existing" finally means "being a cultural being"?

Sample 44. -- Defining Praxeologically.

The ancient Greek term ‘praxis’ means “the fact of acting.” This is opposed to “pathos,” undergoing. *Cfr. E.L. 41*, where the systechy “bring about/being brought about” was discussed as a category. Which, in passing, demonstrates the usefulness of the categories.

Praxeology (sometimes “praxiology”).

This term means to act’ (= praxeo-) bring up (-logy). Acting doctrine.

Defining Praxeologically.

Ch. Lahr, Logique, 497 (Définition industrielle), without situating it within the comprehensive whole of all praxeological defining, brings up a wonderful example of praxeological writing.

Back then, indeed, paper was made, produced in an industrial way. Those who went through the production process willingly followed a predefined definition.

1. -- *Infrastructure.*

Acting, processing, bringing about does not take place in the void but situated (cf. the systechy “situs/ habitus” in the categories; *E.L. 41*). Producing paper presupposes, among other things, substances (wood, earlier: chlorine, etc.) as materials to be processed and tools for processing (the pestle, for example).

2. -- *Algorithm.*

The demand is to make paper out of the materials. The solution is a series of actions that achieve that as a result.

Note - Around 825, in Baghdad, the Islamic mathematician *Al Chwarizmi* wrote a work on the rules of arithmetic in India. In the XII- century this was translated into Latin: *Algorismi de numero indorum*. Literally, “From the hand of al chwarizmi (a work) on number among the Indians.-- The term ‘algorithm’ or better ‘algorithm’, dates from that work.

An algorithm, outside of mathematical territory (again: a broadening of a concept as we saw for the pair “task/solution”) is:

a. a starting situation (here: a type of linen),
b. intermediate situations (sequence of operations: in the pestle, reduced to dough, whitened by chlorine, etc.),
c. final situation (here: usable paper).

The process description exhibits the characteristics of the definition: entirely the course and only entirely the course of all actions! Thus one defines ‘act-learning’ or ‘praxeological’.

Sample 45.-- Kitchen definition.

Countless women, since centuries, also men (especially then cooks) apply the algorithmic definition.

Bibl. sample: *Da Mathilde, 325 recettes de cuisine créole*, (325 recipes of Creole cuisine), Paris, 1975, 215s. (*Riz doux au lait de coco*).

1.-- *Infrastructure*.

Cookware. Fire.-- Ingredients : a well-ripened coconut, a handful of washed rice Der person, a tablespoon of powdered sugar per person, a piece of cinnamon, a little nutmeg, juice of a green lemon.

2.-- *Algorithm*.

1. Strip the coconut of its bark. Pierce with a nail that one beats into the head holes. Collect the fruit juice in a bowl.

2. Break the nut with an axe. Fluffing the debris so that the brown epidermis is removed. cut into tiny pieces. Result : a paste.

3. Pour the mash into a bowl. Pour the bowl of fruit juice into it. Add a glass of water to it.

4. Pour this rather liquid mash into a large enough piece of gauze or tulle. Wring out over a container. Result : a rather dry mash.

5. Meanwhile, gently cook the rice on the stove until it is really cooked through.

6. Mix rice and coconut milk. Add sugar as well as nutmeg and cinnamon.

7. Let it fester.

8. Enjoy!

***Note* --** Da Mathilde ranks the result with the desserts.

Comparison.

Cf. *E.L. 30*.-- The multiplication 27 x 35.

a. ***Head counting.***

Initial act: e.g. 20 x 35. Intermediate act: 7 x 35. 700 + 245. Final act: 945.

b. ***Scripture calculating***.-- The series of operations: 27, x, 35.-- 5 x 27= 135. 3 x 27 : 81. Both Last digits of course ‘placed’ in the configuration of multiplication (= combinatorics). Final result: 945.

In the strictly logical sense -- taking the algorithm as a goal-oriented system as the basic concept -- there is no essential distinction between cooking and arithmetic as combinatorics using an algorithm. Only that in cooking acts of cooking and in arithmetic acts of calculating are at stake.-- Defining the final number of 27 x 35 or defining the final result “soft rice in coconut milk” is essentially identical: it is praxeological according to an algorithm.

Sample 46.-- The accumulating (cumulative) definition.

Someone comes to a large village. Everyone there has been talking for days and weeks about "a shocking event," a neighborly quarrel. One tells this, another that, a third the same but yet different. This is the fact.

The requested: to find out the truth. This is: to define the true event by means of a series of actions (a survey).

Lemmatic-analytical.

Platonically speaking, one begins with a hypothesis, called 'lemma'. All subsequent acts are analysis, i.e. the testing of the lemma or initial story. With before eyes: the true event, an 'x'.

Structure.

Bibl. sample: *H. Pinard de la Boullaye, L' étude comparée II* (*Ses méthodes*), (Comparative study II (Its methods)), 509 / 554 (*La démonstration par convergence d'indices*), (The proof by convergence of indice).

It is about a searching form of induction : samples, by interrogations of all kinds, which at a given moment point in the same direction, 'converge', converge in the same point, the truth most probable (the 'X').-- Cumulatively, i.e. one 'indication' ('indice') after another accumulates. In the same direction.

Conditions.

The indications - Latin: indicia - must be both mutually independent (questioning more than one person, of course) and yet interrelated in that they refer to the same event over and over again.

To the extent that the indicia become uniform (they may contain different versions), to the same extent they provide information and become models of the sought-after original, namely the 'X' of the beginning or lemma.

Note -- This structure children play when they play "treasure hunt. For example, the 'X' is a gem that the teacher has stored away in the big forest.

Theories.

They are samples. So induction. But a groping induction.

I. Newton (Î642/1727; *Principia mathematica philosophiae naturalis* (1686)) defined this method of defining by means of an equation: just as a regular polygon within a circle, when infinitely multiplying its sides, has as its limit (limit) the circle itself, so do the models, i.e. the indicia. They approximate the true event as their 'limit'.

Sample 47.-- Judicial definition.

The "true event," the "X," is what investigators, police officers and judges detect.

Bibl. sample: *W. Wagenaar, Where logic fails and stories convince*, in: *Our Alma Mater* 45 (1991): 3 (Aug.), 258/278.-- The author mentions a concrete case in the Netherlands.

1.-- ***Story 1.***

Ms. A., living with her "boyfriend" since she was 21 years old, maintains that she was "assaulted by her father six years ago. Whereupon the boyfriend persuades her to report it.-- The term 'assault' is a legal definition.

2.1.-- ***Story 2.***

The father confessed that he was once alone in the house with his 15-year-old daughter but only administered "gen flinching."-- The term "flinching" is a legal definition.

2.2.-- ***Story 3***.

The appointed doctor notes that "A. is indeed no longer a virgin. The court-appointed physician relates that he examined them for her virginity and determined its absence.-- The term "no longer a virgin" is in fact, given the context, a legal definition.

Significance.

Thus, the judges face three "formal objects" (*E.L. 42*), i.e., interpretations that are, in the form of a (comprehensive) narrative, a strict and a comprehensive definition (*E.L. 44*; 46). For those involved narrate to suggest to the judges a definition, theirs / hers. They are not eyewitnesses. Thus, rely only on reports.

To speak with Herodotos of Halikarnassos : they do not possess 'opsis', direct perception, but 'historiè', cumulative definition (*E.L. 53*: Touching induction).

Logical.

Wagenaar sets 'stories' against 'logic' a little too quickly. As if stories had nothing to do with logic - but not in his definition of it.

1.-- Narratives are (strict and comprehensive) definitions.

2.-- Definitions are prepositional phrases.

So.--**1** . If story 1 is again, then the father is guilty. **2.** If story 2 is true, then the father is innocent. **3.** If story 3 is true, then the father may be guilty. In other words: the logical "modalities" (about which further) necessary (stories 1 and 2) and non-necessary (story 3) qualify the deductions.

Conclusion

"Where stories don't convince but logic convinces"!

Sample 48.-- Definition of the singular.

Reread *E.L. 36* (Singular concept). There we saw that there are notions of content which apply to just one instance (extent).-- How to define such a thing?

Bibl. sample: *H. Pinard de la Boullaye, L'étude comparée des religions*, II (*Ses méthodes*), Paris, 1929-3, 509/554 (*La démonstration par convergence d'indices probables*).

Reread *E.L. 53*.-- One falls back on loose kentracks. Thanks to sampling. So thanks to induction. But then the groping form of it.

By accumulation (cumulative method) until one is sure that the singular that is at issue, and only that singular cannot be confused with the rest (two. division or complementation). Thus that singular is radically distinguishable in its uniqueness (singularity).

Distinctiveness of the human individual.

The *Jesuits of Coimbra*, in their *In universam dialecticam Aristotelis* (1606) drafted a distich (two-line verse) on the subject.

"Forma (being),-- figura (view), locus (place), stirps (outlet), nomen (proper name),-- patria (homeland), tempus (time), unum (the singular) perpetus lege reddere solent".

Application.

Roxanne (proper name),-- forma (woman), patria (Belgium), locus (Antwerp), tempus (27.06.1996: date of birth), stirps (a begotten family), figura (large in stature).

One sees: enumeration (= accumulation) of notae (traits) so that the unique being is marked off and immediately no confusion with someone else is possible.

Note -- Rereading *E.L. 47*.-- There was talk of partial (improperly "wordy") and overall (improperly "businesslike") definition.

The great tradition, with its illustrious exceptions such as the Jesuits of Coimbra, holds that "omne individuum ineffabile", all that is singular is "unspeakable": i.e. not objectively definable. Consequence: "Non datur sciëntia de individuo", about the singular no science (understand business, general, definition) is possible.

2.-- The Jesuits of Coimbra,-- the Romantics, the thrust of W. Windelband (with the notion of 'idiographic' sciences) nuance the great tradition: is no overall definition of beings possible, partial ('wordly') definition is and remains possible.

Sample 49.-- Judgmental logic.

After the logic of understanding (especially of the concept to be defined) the logic of judgment.

Just as the concept is translated into a term (sign), so a judgment is translated into a sentence (utterance, proposition), i.e., into a minimal number of signs, which make up the judgment term.

Subject (original) / predicate (model).

As already pointed out several times: a judgment essentially includes the subject - and the predicate. Which does not exclude other parts.

Among other things, following in the footsteps of Pinderos of Kunoskefalai (-518/-438; ancient Greek lyricist (lyric poet)" who already distinguished the "onoma" (usually a noun as a reality made present) and the (sometimes unspoken) "rhèma" (a verbal form), Platon distinguishes, within what he calls logos (judgment), onoma (Lat.: nomen) or "nominal componente" and rhèma (Lat.: verbum) or "verbal componente.

Definition.

Aristotle says that to judge is "of something, to pronounce something" ("katègorein ti tinos"). -- As the title of his work on judgment he states "*Peri hermeneias*", Lat.: *De interpretatione*. Which implies that he conceives of judgments as interpreting.

"***It's cold***." -- It is evident that 'it' is an agreed subject. 'It' refers to "the weather". Or perhaps to "the weather and what we sense of the weather": for "cold" is a sensation.

Style figures.-- ***Bibl. sample:*** *K. Krüger, Deutsche Literaturkunde*, Danzig, 1910, 116 (*Figures*).

Dwell for a moment on the judgment that may be present in such figures in the language.

Take for example the exclamation.-- "How impressive this tropical forest!". It is clear that the concealed word is e.g. 'is'. It is a value judgment. Not that it is not a determination judgment. But the determination is accompanied by a shudder of aesthetic nature which recalls e.g. the sublime (*E.L. 37*).

It is the tropical forest that is at issue. But then in such a way that the encounter with that 'object' (indicated in the subject) causes the subjective-aesthetic experience (permeation). Neither purely objective nor purely subjective! The two together.-- That too is judging,-- no matter what positivists say about it. Thus all figures of speech can be viewed.

Sample 50.-- Quantity / Quality of judgment.

1.-- *Quantity.*

The size (domain) of the subject decides the quantity. Cf. *E.L. 36*.

Thus. -- Just one bird was observed in the forest" is singular.- "Some/ all birds were observed in the forest" (singular/ universal).-- That as to the distributive judgment.

The collective judgment reads e.g. "The bird sought was found only partially/wholly" (private/universal). "Just one feather was found of the whole bird" (singular).-- Cfr *E.L. 22v*. (*Collection* (*distributive*)/ *system* (*collective*)).

***Note* --** The transcendental judgments are a species apart, of course (*E.L. 36*).

2.-- *Quality.*

The presence or absence of either total or partial identity of subject (original) and saying (model) decides the quality.-- Cfr *E.L. 21*: *Identity Theory*.

So.-- affirmative: "That wall is white". Denying-within-affirmative : "That wall is white and not white". Denying-without-prejudice: "That wall is not white". -- Note "white-and-not-white" is not a contradiction (*E.L. 17; 21*).

Style Figure.

Two house painters are standing in front of a wall they need to whitewash. They look at it first. Their judgment: "That wall is white and not white". -- This is not a contradictory statement but a restrictive statement, i.e., a figure of speech or manner of speaking, by which one nuances the statement.

"That wall (if impure white can still be called 'white') is white and (if pure white is adhered to) not white."

"***Christianity is a humanism in one sense and not a humanism in another sense***.

If one takes the term 'humanism' in the strictly secularizing ('earthly') sense, then Christianity is not a humanism. However, if one takes the term 'humanism' in a broader sense (Man is central but does not exclude a sacred, religious sphere of being human), then Christianity is a humanism.

Judgments with reservations (restriction) do occur more often: "By implication, one may assert that ....." Such judgments affirm/deny but "with measure", "with shading".

Thus: "She was somewhat (somewhat, to some extent) cool". Cautious people, mature people often nuance and speak restrictively.

Sample 51.-- the comparative method.

Ordering is done on the basis of unity-in-quantity. Connections - resemblance / coherence - are the forms in which that unity-in-quantity shows itself.-- These appear, are exposed, when comparing.

Attention

Everyday use often confuses "equating" with "comparing! Comparison' in logical language means "more than just checking data for their connections". To confront each other in this way to see if there is similarity but also difference. To see if there is a connection but also a gap.

1.-- *Internal/External Equation.*

Bibl. sample: *H. Pinard de la Bullaye, Etude comparée des religions*, II (*Ses méthodes*), Paris, 1929- 3, 40/87 (*Méthode comparative*).

The same object - e.g., a religion - can be dissected on the set of relations (similarities/relationships) that can be found within that given self. Both synchronically and diachronically.

However, the same fact can also be compared with all that is outside. Syn- and diachronic.

Thus a religion, which one first dissected internally (looked at for its relations, structure), by comparing its parts e.g., also has relations with e.g. the culture or cultures with which it comes into contact, -- in which it takes root. Christianity in a primitive tribe on New Guinea looks different from our partially secularized Christianity in Western Europe or the Western world in general.

2.-- *Quantitative / Qualitative Comparison.*

Bibl. sample: *H. van Praag, Measuring and comparing*, Teleac/ De Haan, 1968, 24.

It can be argued with the author that measurement is "a comparison of quantity" (one compares that which is to be measured with a model of measurement (a meter e.g. is a model of measurement in terms of which one can speak of an original).

But one can also, analogously, speak of measuring qualities. For this, see *E.L. 30*: "Fuzzy Logic". "To me this object feels (not/ somewhat/ rather/ very) cold". That is qualitative 'measuring'. "Both our views are (not far/ fairly/ very far) apart". One may begin to see that comparison is at the root of he or she who judges.

Sample 52.-- Every judgment relies on comparison.

Bibl. sample: Ch. Lahr, Logique, 226s. (*Le jugement et la comparaison*).

1. -- ***All logicians***

These are of the opinion that some of our judgments have comparative basis, i.e., insofar as the judgmental compares consciously and thoughtfully.

2. -- ***Not all logicians***

also agree that judgments in which the judge unconsciously and unthinkingly connects subject and saying rely on comparison.

Th. Reid (1712/1796), -- V.Cousin (1792/1867) et al. claim that phrases like "I exist", "I suffer" -- "It is cold", "The snow is white" and the like more . rely on comparison. For only in retrospect would the judgmental be able to truly compare.

3. -- ***Aristotle and with him a whole series of logicians***

(ancient, middle ages, modern times) claim that even the unconscious and unthinking judgments are in fact based on comparison.

Thus J. Locke says : "A judgement is the perception of a relation either of fitting together (affirmative o.) or of not fitting together. (negative o.) of two 'ideas' (contents of consciousness) already observed and compared with each other".

"It's cold."

'It' is either the weather in itself around us or our bodily reaction to the weather. Or the two together (encounter).-- 'It' as a subject, i.e. as an original that asks for information, provokes - consciously or unconsciously - a model that provides information. This model we find in articulated form in our language vocabulary (the language system).

If our impression is one of "cold," then spontaneously, if we master our language (mother tongue), we choose the term "cold" as a model.

Comparing goes ultra-fast. After all, our minds are mechanisms that grasp and choose wording ultra-fast.

Note **--** The whole issue is, "Is our thinking only conscious-thoughtful or is there unconscious-thoughtful thinking?"

People like W. Dilthey (1833/1911) or W. Wundt (1833/1920) assume that "das unmittelbare Erleben", the direct living through, is the premise of (modern) thought. E. May (1905/1956) claims that e.g. the principle of identity "is neither consciously put forward nor somewhere 'constructively' (on the basis of one's own mental contents) thought out but "urtümlich geschaut" (directly seen).

So too is our comparison of subject and predicate.

Sample 53.-- "Not" (negation of phrase).
Bibl. sample: *D.J. Mercier, Logique, Louvain* / Paris, 1922-7, 108.

1.-- *The correlative contradiction.*
"The mother (though the mother of the daughter) is not the daughter". "The ruler is the mistress of the slave but is not the slave".

The opposing terms are reciprocal terms: there is no ruler over slaves without slaves e.g.. Within a coherence there is a relative opposition.

2.-- *The Contrary Contradiction.*
Here the coherence is a differential.-- The differential of the rainbow, with the color spectrum from red at the top to violet at the bottom, involves such an opposition of the extremes e.g., "Rainbow red, although belonging to the same spectrum, is not rainbow violet."

All the intermediate terms of the range are contained within an analogous opposition,--within one and the same coherence.

3.-- *The privative opposition.*
The connection here is one of actual absence and desired (ideal) presence.

"The blind person does not see (where he/she should normally see). The deprivation is also ascertainable in" A dead man is not alive". The deprived situation is more than a mere, neutral absence: it is about the absence of what should or must be there, something normal, something ideal.

4.-- *The contradictory contrast.*
Here all coherence is radically absent.-- "Being is not nothingness." In this sense, "nothingness" is meant in the absolute sense of "the utter or absolute nothingness," i.e., that which is absolutely nothing under no point of view.

Actually, there is no contradiction, because a real contradiction involves at least two realities (even if they were two imagined realities).

Note -- The proof from the incongruous (absurd).-- The contradictory is the presupposition of the proof from the incongruous.

D. Nauta, Logic and model, Bussum, 1970, 27v., defines: "In such a proof, one starts from the assumption that there exists a counter-model (an example, an 'instance') which satisfies the data (of the problem) but not the requested (what must be proved). In a systematic (understand: methodical) way, one then shows that such a counter-model cannot exist because it contains an incongruity (contradiction, contradiction, paradox)."

Sample 54.-- The incongruous is absolutely nothing.

Bibl. sample: *Ch. Lahr, Logique*, 495s. (*Règles formelles de l'idée*).

Compare *E.L. 17* (*Contradiction Principle*); *21; 57.* Something can impossibly be itself and something else at the same time (emphasis added: when it comes to total identity with itself).

"Pain is unconscious." -- "The square circle exists". -- Behold two non-existent sentences, for they are inconsistent (contradicting themselves), according to conceptual content, and therefore do not refer to anything, according to conceptual scope. Lahr demonstrates the inconsistency, regarding the "square circle".

Given.-- All necessary and sufficient elements of én square én circle.

Asked. -- Square circle.

Lahr, in the literal sense, dissects the concept of the square circle into its constituents. After that division, he confronts them among themselves (*comparative method; E.L. 58*) in such a way that the contradiction is revealed,

1.-- *A circle...*

posits three defining (= essential) constituents that collectively make up one system: **a.** surface, **b.1.** curve, and **b.2.** radius that is identical everywhere.

2.-- *A square...*

puts forward the following defining (= essential) constituents. parts that together also make up one system:

a. surface"

b.1. midpoint,

b.2. around which four equally long lines forming a closed figure.

Or shorter: "A square is a rectangle with four equally long sides."

A.-- *Each considered separately...*

both geometric figures are consistent (contradiction-free) as a system. Conceivable. Possible. Being.

B. - *Inserted ...*

they try to "fuse" contradictory traits!

a. As pure surfaces, they are consistent.

b. The contradiction shows itself as soon as one dissects the circumference of the surface.

(a) The square exhibits only lines where the circle exhibits only a curve.

(b) The square has from its center point lines of unequal length where as the circle has only lines (rays) of equal length.

Conclusion.-- The judgment "The square circle exists" has as its subject something that belongs in absolute nothingness and is unthinkable.

Sample 55.--Heading judgment.

“Classical logic - so logicians teach us - falls short on relations. As a result, it also falls short for mathematics.” (*G. Jacoby, Die Ansprüche der Logistiker auf die Logik und ihre Geschichtschreibung*, (Logisticians' claims on logic and its historiography,), Stuttgart, 1962, 53).

Reason: sentences that ascribe a proverb to a subject are “capable of formulating properties (classes) but cannot formulate relations logically.” Thus the logicians.

Answer.

How is it, then, that logicians, when explaining their formulas to novices, can use everyday language (and immediately its logic) without betraying what is being explained?

1.-- *Classical logic works with terms....*

(which may be words, numbers, abstract symbols, drawings and the like more .).-- not with words.-- Thus the expression “greater than”, “part of” is a classically-logically valid term.

2.-- “***The assertion of logisticians ...***

applies to class logic but not to concept logic, for it pays attention to identities between relations as much as to identities between subjects and sayings.” (O.c., 53).

Thus. -- “The relation between 3 and 2 is one instance (and as such part-identical) of the relation “greater than”.

Similarly.-- The reasoning “Three is greater than two. So two is smaller than three”. -- This is precisely one instance of the general statement “The relation “greater than” is, on displacement (exchange) of both terms, reversible in the relation “less than”.

3.-- *The term “being” ...*

as an auxiliary verb especially, is perfectly usable in the two cited applicative models.

“Three is greater than two. So two is smaller than three” is rewritable in “Three is larger than two. This implies (implies) that two is smaller than three”.

It remains true that mathematics, conveniently, works with abbreviation symbols. And with great reason. Because the everyday vernacular is radically unsuitable for this purpose.

But whether (classical) logic is thus also unsuitable is an entirely different question. It does use all the symbols and all the operations that are so typical of mathematics and logistics.

Sample 56.-- The sufficient reason for a judgment.

Rereading *E.L. 19*.-- "All that is (so) is (so) for a reason (ground) within or without." This is the justification axiom. "If (necessary/sufficient) reason, then a statement is (partly or wholly) justifiable(s)".

The semiotic reason.

Ch. Morris (1901/1971), in his *Foundation of the Theory of Signs*, Chicago Universiy Press, 1938, is considered the founder of current semiotics or sign theory.

But the significa of Lady Welby, the semiology of de Saussure,--not to mention Morris's predecessor Ch. Peirce-have also contributed to "the semiotic turn" (the tendency to express everything in signs) that prevails today.

The language act.

The significi have e.g. a judgment situated within the total framework of human communication - and - interaction. For example, in the case of a judgment such as "It is sunny today" they talk about an act of language, i.e. a judgment but situated within the language system in which the judgment maker expresses him/herself, within the surrounding reality in which the judgment is situated, within the aims or intentions which the judgment maker cherishes with his/her judgment.

1. -- *It's sunny today".*

This is a syntactically well-constructed sentence, because the parts of the sentence fit together linguistically. Whoever speaks this way has a linguistic reason or ground for doing so. The rules of syntax, speech-wise and logical-speech-wise, compel it.

2.-- *"It's sunny today".*

This is a semantically true utterance if indeed, fixably, today is really sunny weather! The semantic branch of semiotics no longer situates the utterance within the linguistic system but within the surrounding reality.

One who speaks in this way has a semantic reason or ground for doing so which brings up the identity principle (*E.L. 16*). One who speaks thus and wants to say truth, is compelled to do so in conscience by "What is so, is so. If it is - fixably - good weather today, then so be it!".

3. -- *"It's sunny today".*

This is a pragmatically valid judgment insofar as the judgment maker - e.g. speaking to his wife - in this sense makes a proposal to make use of that sunny day to go out. That is the pragmatic reason or ground for that (inviting) judgment.

Sample 57.-- The text of the judgment within a context.

1.-- ***The text.***

Concepts - essentially subject, proverb, and (adjective and adverbial) clauses - are represented within a language system by terms (words, numbers, diagrams, symbol-shortened texts) through which they can become judgments that are propositions.

2.-- ***The context.***

Normally our mind compares, sometimes ultra-fast, subject (original) with some saying (model). This comparison reveals a connection between the two .

This proposition may appear to be a closed system but it is not. This is demonstrated by what follows. The sentence "Hilde walks" is ambiguous. And it is so by context.

A.-- "***Hilde runs***".

This can mean "Hilde is a runner." This means that she has a profession or a secondary profession. She then belongs to the collection (totum logicum) of runners: "She is a runner". As a specimen.

B.-- ***"Hilde runs".***

This can also mean "Hilde is (now) running." -- Then Hilde is said to be, apart from other activities and traits, "running" (durative aspect). The system she is, includes at this moment one trait (of transient nature, by the way), namely "the actual walking". Totum physicum.

Note -- If one now rereads *E.L.*, (*40Kategoremen*) and (*41Categories*), one will find that "Hilde is running" belongs to the kategorematic utterances and that "Hilde is (now) running" is a categorical utterance.

Conclusion. -- "Hilde runs" is now twofold. From which the ambiguity of the very words of the judgment is evident. In other words: the context penetrates into the meaning of the words of the judgment. Thus these do not constitute a closed system but a quasi-open system.

Consequence: the text, given its context, can be translated into more than one text.

The unsaid.

In recent years, especially in French thinking circles, people have been talking about "le non-dit," the not-said.

Apparent Absent is what is not (explicitly) said, yet present. Nl. as context. The proper sense grasp of a judgment involves the unsaid!

Sample 58.-- The sufficient reason within the judgment.

E.L. 63 taught us about semiotic reason. Let us now consider one part of it, the semantic reason.

1.-- *The crisis of rationalism.*

Both internally (through self-criticism) and externally (through criticism from the outside), (modern) rationalism has entered a deep crisis. One of its sharpest forms is found in the criticism of the principle of reason.

It is not the intention to dwell on that at length now. Only this. The principle of reason or ground passes as the axiom par excellence of all rationality, non-modern and modern.-- The difficulty is, "how does one prove that principle?"

K. Popper, J. Habermas, J. Derrida et al. strongly disagree regarding provability from a traditional-rational standpoint. One reference: *E. Oger, literature review (Rationality* (*Its basis and its samples))*, in: Tijdschr.v. Philos. 54 (1992):1 (March), 87/106.

2.-- *G.W. Leibniz* (1646/1716.): ***analytic and synthetic reason.--***

Leibniz introduced a systechy on justification of judgments.--

(a) *The analytical judgment.*

'Analysis' (as opposed to Platonic language) here means "justifiable o.g. dissection (analysis) of the definition of the subject."

Short: "if the subject (original) is sufficiently dissected on its definition, then" the saying (model) is justified."

Thus "a is a". Or: "2 = 1 + 1" Or even: "A square is an equilateral rectangle" (cf. *E.L. 61*). The mathematical definition (creature definition, of course) allows the following sentence: "A rectangle, if provided with four equally long sides, is a square".

***Note* --** Not without reason, some logicians have responded to this with "That's saying the same thing twice" (one of the definitions of 'tautology').

(b) *The synthetic judgment.*

'Synthesis' (as opposed to platonic language) here means "accountable o.g. scrutiny outside the (semiotic) terms of judgment."

Practical: in virtue of inductive sampling.

Thus: "All physical bodies exhibit mass". In order to pronounce this judgment legitimately, one must include the (sufficient) reason thanks to definition and experiment.

Sample 59.-- The reason or ground of the value judgment.

Again, it's all about the semantic reason, of course.

1.-- ***The scholastic opinion.***

"Omne ens est bonum" (All that is being is 'good' (valuable)). However, one does not forget to add "insofar as being".

Reason: all that is something (non-nothing) is amenable to some value judgment. Only utter or absolute nothingness is non-radically non-viable for any value judgment. Precisely because it is utter nothingness! Cfr *E.L., 61*.

Note -- Since ancient times, the concept of good ("value") has belonged to the transcendental (*E.L. 36:* "*Valuable"*). And for good reason.

2.-- ***The applications.***

We will briefly discuss a few applications.

2.1.-- ***The radical inequity of any axiological subjectivism.***

'Axia', in ancient Greek, is 'value'. 'Axiology' is thus 'value' (axio-) "to bring up" (-logy).-- *A. Brunner, Die Grundfragen der Philosophie*, (The basic questions of philosophy), *Freibourg*, 1949-3, 77, says what follows. The subjectivist(s) defines 'value' as "What a person holds to be valuable". In other words: the valuing subject decides and very alone.

Criticism.-- How then does one explain that such a subject can err concerning the objective value? In other words, the valued is found, found differently, than the subject, of his own accord, had decided!

In other words: that reveals that the object itself is co-decisive.

2.2.-- ***One material 'good' but a multitude of 'formal' goods***.-- Reread *E.L. 42*.

An example.-- The same thing -- e.g., a toxin -- is "not bad" to the snake charmer but "bad" to a non-snake charmer (who is not used to toxins).

The same 'something' (being) -- material -- is thus susceptible to a plurality of "formal objects". Each of which can elicit a different value judgment.-- Once something is 'something'. non-nothing. it is so.-- This explains in part, the emergence of value-subjectivism.

Note -- "Values are being applied." -- "To apply" refers to the susceptibility to value judgments. More is that "being applied" not. For, as just demonstrated, the same value is susceptible to a plurality of "formal objects" concerning value.

The reason, the one, spreads open to the reasons, the many.

Sample 60.-- subject / predicate / provisions.

Let us repeat: a proposition (judgment term) includes a term whose inflection (flexion) depends on the verb (subject), a term whose grammatical form is verbal (proverb). The rest, either belonging to the subject or to the predicate, is called ‘clause’. These clauses ‘count’ as shades that can profoundly alter a judgment,--with little notice to an unpracticed person.

Note -- The adverbial (adverbial) provision “stands by” a verb: “Suddenly she showed up” (‘suddenly’ is adverb).-- The attributive clause “stands by” a non-verbial term.

Thus: “Beautiful she appeared on the beach”. ‘Beautiful’ is next to ‘she’! “She, the mistress of the café, did not allow herself to be done”. “The mistress of the café”, a noun, stands by ‘she’ and is then called ‘adjustment’ (apposition).

Reality Indicating Terms.

In grammars ‘modalities’.

1.-- *Interrogativus*. -- Question indicating, “Does a girl appear on the beach?”. This nuance seems to be our foundation from all others that answer it.

2.1.-- *Realis.* -- Indicating factuality.-- “A girl appears (actual and ascertainable and the like more .) on the beach.

2.2.-- *Irrealis*. -- Denial indicating.-- “No girl appears on the beach”.

2.3.-- *Potentialis*. -- Indicating possibility. Actually: ‘restrictive’ (E.L. 57).-- One neither affirmatively nor negatively expresses oneself. The reality-preserving predominates.-- “Maybe (maybe/probably/not likely) a girl will appear on the beach”.

Notes.

1. *Concessivus*. -- Concession expressing.-- “Nevertheless (notwithstanding) a girl appears on the beach” is evidently a realis, with emphasis even (“Against all odds ... “).

2. *Dubitativus*. -- *Indicating doubt*.-- “Would a girl appear on the beach?”. Subjunctive: “It seems unlikely: ....”. This is evidently one form of potentiàlis, expressing possibility.

Note -- The conditionalis, condition indicating sentence, introduces a preposition on which the “reality modalities” depend: “In that case, a girl appears on the beach.

Sample 61.-- Exactitude. Yes. But also 'akribeia!

Platon, Faidros 271a : "pasèi akribeiai", with all accuracy.

1.-- *Defective terms. Perfect understanding.*

Appl. model.-- In a remote parish.-- With the pastor, a friend looks at the small parish church. "But surely they can't all fit in there!". "Indeed. If they are all there, then they cannot all be in it. But, since they are never all there, they can always all get in".

Note -- The terms "they" and "all" denote two different sets (the potentially present / the actually present). Yet both understand each other perfectly. "With all (present in the thinking mind) 'akribeia', accuracy".

2. -- *'Being' / 'being'.*

Let us first consider the ambiguity of the terms.

a. 'Being' or 'being' (the whole of reality) are substantives (nouns).

b.1. The verb "to be" can be existentially descriptive (sometimes we say "substantive"). Thus: "God is". "What is, is ".

b.2. The verb 'to be' can be purely auxiliary (sometimes we say 'copulative'). Thus: "That girl is beautiful". The latter leads into the essentially descriptive sentence. Cfr. *E.L. 16; 50.*

a. -- *I. Kant claimed* that "actual existence" ("being there") is not a saying.

After what was discussed above, one hardly understands how the great rationalist came to claim such a thing.

b.-- *Critics claim* that the terms "are" and "being" are so ambiguous that they prove unusable in exact, indeed in ordinary accurate language. Thus G. Frege (1848/1925) and B. Russell(1872/ 1979). Also L. Couturat (1868/1914).

I.M. Bochenski, Philosophical methods in modern science, Utr./Antw., 1961, 61: "Most of the words of the language of manners are very ambiguous.

For example, the word 'is' has at least a dozen meanings that differ.-- It is therefore effective to use artificial but unambiguous symbols instead of such words".

Note -- If one reads through Bochenski's little work, the term "is" is frequently found in it! In order to express oneself as precisely as possible about the subject! So it is as with "they all" from above: Bochenski turns out to be perfectly unambiguous after all! Listen to my exact words but do not see my not - exact actions.

Sample 62.-- The conditional sentence.

Bibl. sample:

-- *D. J. Mercier, Logique,* Louvain/ Paris, 1922-7, 153ss.;

-- *Ch. Lahr, Logique*, 507.

1.-- *The categorical sentence.*

"I satisfy myself." -- Condition Free.

2. -- *The hypothetical (conditional) sentence.*

"If (and only if) the girl comes, I content myself". "In that case I will be satisfied". A condition can be hidden worded in e.g. an (adverbial) clause (*E.L. 67*).

Conjunctive and disjunctive sentences.

For example.

1.-- *Conjunctive*.

"A man is not at the same time conscientious and cynical". Is rewritable: "A person, if he / she is conscientious, then he / she is not cynical and - conversely , if he / she is cynical, then he / she is not conscientious".

Note -- Reread *E.L. 60* (*contradictory opposition*).-- The principle of contradiction and the principle of excluded third (*E.L. 17*) are articulable in such conjunctive-conditional sentences.

2.-- *Disjunctive*.

"Thou canst not at the same time be at thy post and not be at: thy post. Either thou art at thy post, and then thou art scattered. Either thou wast not at thy post, then thou wast in error." -- Rewrite : "If ye were at your post, then ye were scattered. If ye were not at your post, then ye were in error".

Or still: "One of you will give me all his money" says the robber. Rewrite: "If not the one, then the other!" Here both are not excluded!

Note -- Logic and conditional sentences. -- We are at the door of reasoning theory. there everything comes down to conditional sentences.

Notice. – A. o. causative sentences can be rewritten into conditional : "Because I am my mother's daughter, I inherit from my grandmother" becomes "I as my mother's daughter inherit from my grandmother" (reduplicative clause) or "If I am my mother's daughter, then ..."

Ordinary reasoning sentences also cover conditions: "Because my grandmother provided for me in her inheritance, I inherit". "If my grandmother provided for me in her inheritance, I inherit".

Sample 63.-- Modality.

The term "modality" has more than one meaning.

1. ***Caveat*** (= restriction, stipulation).-- Psychological : "The liar / liar says, within himself, betraying himself: 'What I am saying now is false'.

Legal: "The agreement/legal act is valid to the extent that ... " (o.g., an additional agreement e.g., or simply a condition).-- A conditional sentence is actually always present, expressly or not.

2. ***Phenomenological***: mode of appearance or 'form'. This is how Hegel sees the all-encompassing 'idea' in the universe and culture becoming history in its many forms ('modalities'). The description of the (many) forms of the (one) idea he calls 'phenomenology'.

Logical modalities.

G. Jacoby, Die Ansprüche der Logistiker auf die Logik und ihre Geschichtschreibung, (Logisticians' claims on logic and its historiography), Stuttgart, 1962, 61/64, says that strict logic has only, as modalities, the following differential: necessary/not necessary (possible)/necessary not (impossible).

1.-- ***Within the judgment.***

"A is (necessarily) A" (identity of something with itself, total identity).
"A and B are (non-necessarily) identical".
"A and non-A are (necessarily) non-identical".

Note -- A and B may be part-identical (analogous).

Note -- Re-read *E.L. 65*, where, e.g., the "analytical" judgment appears as necessary while the "synthetic" judgment appears as non-necessary.

2.-- ***Within the reasoning.***

According to *I. Bochenski, Philosophical methods in modern science*, Utr./Antw., 1961, 93, there are two basic forms (or basic modalities) of reasoning. In the formulation of W. St. Jevons (1835/1862) and J. Lukasiewicz (1878/ 1956) they read as follows.

Deduction.

If A, then B. Well, A. So necessarily B.-- Indeed: if A is the sufficient reason of B and A is there (given), then B is necessarily there.

Reduction.

If A, then B. Well, B. So A.-- Here the derivation or conclusion is non-necessary. For to do so, B would have to be the sufficient reason of A. Which is not apparent from the formulation. So A is valid for the time being as a hypothesis.

Sample 64.-- The so called "immediate" derivation.

"I think. So I am" (R. Descartes).-- Such a thing is called by logicians "an immediate derivation".

Why? Because there are only two and not three sentences expressed. In other words, there is no syllogism or concluding statement that invariably consists of three sentences that interact with each other.

Not only logicians but e.g. the Scottish school (Th. Reid (1710/1696) with its commonsensism talks about immediate derivations. The common sense (*E.L. 03*) handles a small number of immediate reasonings with ease. For example: "The whole is greater than the part". Rewrite in: "If a whole, then something greater than a part of it

Or : "2 + 2 = 4". For this, the common mind does not need the long route of reasoning of the *Principia mathematica* (Whitehead / Russell) because that sum (if 2 and another 2, then (necessarily) 4) is so obvious (by habit, and by the smallness of the numbers) that it is "immediately" (and not "indirectly", i.e. through the path of laborious reasoning) feasible.

It is to the credit of the commonsensists that they have brought to light the fundamental in everyday life of such a number of immediate reasonings.

G. Jacoby notes that a general axiom is always secretly presupposed in such immediate reasoning.

1.-- *"Three is greater than two. So two is smaller than three".*

(*E.L. 62*). **a.** Only two sentences. **b.** Minor editing.-- The omitted preface reads, "All relations "greater than" are, on reversal of their terms (exchange), rewritable is the relation "less than". Well, the relation "3 to 2" is precisely one instance of the set (all). So .... Only the complete syllogism (three sentences) indicates the sufficient reason of the reasoning.

2.-- *"I think. So I exist".*

"All that thinks is. Well, I think. So I am.-- Again: the connection (system) between my thinking and my actual existence is precisely one instance (application) of the collection (rule).

Consequence: Descartes could make do with **a.** two sentences and **b**. a small-scale comparison (confrontation of data) What does not exist, does not think, the counter model of what he claims, is so obvious that he did not even need to articulate the full syllogism.

Sample 65.-- The mathematical and summative inductions.

The type of immediate derivations includes the following two types of reasoning.

1.-- ***The mathematical (mathematical) induction.***

This can be outlined as follows.

***Rule*.--** If a trait k is a characteristic of any number n and immediately of its successor (n+ or n + 1) in the order of the integers and,

Application.-- If this characteristic k is in fact a property of the number 1, then k is a characteristic of each number separately and of all numbers together.

In *I.M. Bochenski, Philosophical methods in modern science*, Utr./ Antw., 1961, 146; we read: "Such 'inductions' are very common in, mathematics. It is clear, however, that here we are dealing rather with a real deduction."

2. -- ***The fully e (summative) induction.***

A teacher has improved all the homeworks individually. She goes through them all again to "sum up" (lat.: summa.) them. This happens daily and very spontaneously ... as a matter of course.

The wording.

If e1, e2, ... e(n) are the elements of a set and are all of its elements (the sum), and if the knowledge attribute k (so e.g., "I have improved") is a property of each element individually, then k is a property of all elements collectively.

Again I.M. Bochenski, o.c., 146: "This too is not induction in the proper sense but *a kind of deduction*. Indeed, there occurs in mathematical logic (logistics) a law by virtue of which this rule can be infallibly established. By the way, its application is often useful (...).

Note -- Bochenski understands "actual induction" to mean the natural science very useful 'amplificational' (information-expanding) induction that decides from a portion of the specimens (tested cases) to the sum or totality of the specimens (testable cases).

For us, summative induction is the capstone for all totalizations. Reread *E.L. 22* (*Collection; 27: Generalization*)); (*23system; 27 generalization*)). It is immediately evident that "if all separately, then all together"! This is how "the common mind" reasons!

Sample 66.-- The a-fortiori reasoning

Note the common sense: “One would already jump out of his skin for less.” Understand: “Already one gets angry for less injustice. The more one gets angry for more injustice”.

As we saw *E.L. 58* (*Measuring qualities*) that a quality is susceptible of measurement (of gradation) o.g. comparing intensities, so also here injustice (a quality) is susceptible of “less-or-more” (quantity). It is precisely this quantity that can act as a (sufficient) reason in a reasoning.

Bibl. sample: *A. Lalande, Vocabulaire technique et critique de la philosophie*, (Technical and critical vocabulary of philosophy), Paris, 1968-10, 32.

1. -- *Reasoning that concludes from a judgment to another judgment.*

So, however, that, in addition to the reasons justifying the first, other reasons apply to the second.-- “already ..., all the more so.”

Appl. model. - “As an inconstant, I already loved you. Now that I have become steadfast, I love you all the more”.

A quality - constancy of character - is amenable to quantity (and therefore qualitative measurement). The comparison “unsteady/steady” reveals gradation. It is precisely this gradation that is built into a reasoning in the form of two sentences that articulate a well-organized fact. Some ‘immediate’ derivation is based on a general axiom “already ..... the more ....”, of which the two sentences give one instance (application).

2. -- *Reasoning that from a quantity ...*

(in one sentence, worded) decides on a different quantity (in another sentence, worded).

The second quantity is either greater than or less than (*E.l. 71 (62))* the first thereby it is that the first quantity cannot be reached or exceeded without the second also being reached or exceeded.

According to Lalande, this rule (immediate derivation) applies to all that is less or more. Which betrays the concealed axiom.

Appl. model.

Cicero, in his *Pro Milone*, speaks of the (sufficient) reasons that justify “lawful” self-defense: “if one may already kill a thief, all the more so a murderer. -- Presupposing of course : a murderer is ethically a worse evil than a thief.

Conclusion.-- “A fortiori” means, in Latin, “the stronger.” Namely in regard to justification.

Sample 67.-- The analogical 'induction'.

Master has been teaching about the solar system (and the planets). Jantje raises a finger: "Master, if Earth and Mars are all two planets, would Mars, like our Earth (model), also have an atmosphere?" Behold what "the common mind" thinks it sees in Johnny,--reasoning from model to original, immediately deducing

Bibl. sample: *Ch. Lahr, Logique,* 608/611 (*L'analogie*).-- Cf. *E.L. 25* (*Metaphorical and metonymical analogy or partial identity*).

1. Comparison**.** two being are compared.

2. Testing reveals a number of common features (here: round shape, axis rotation, orbit around the sun,--at Earth: atmosphere, living things).

3.-And now: from established resemblance one reasons to established resemblance.-- Which is a kind of gradation: from a degree of resemblance to a greater degree (yes, total degree) of resemblance reasoning.

Comparative sciences.

When one compares, variants become apparent. Some emphasize the similarities (concordists). The others emphasize the differences (differentists). In the middle: the identifiers who keep in mind both similarities and differences -- Comparative sciences usually emphasize the similarities. Are concordist.

G. Saint-Hilaire (1772/1844), founder of embryology, was the first to pay attention to the similarity (regarding role) between arm (human), paw (quadruped), fin (fish).

In the wake of this, G. Cuvier (1769/1832), founder of paleontology, founded the "comparative anatomy".

Similarity types.

Each time it is about consistency.

1.-- *Organ/ function (paleontology).*

Thus, the fin of the present fish 'refers' (sign: *E.L. 06*) to an appropriate biotope (water). So does the wing of the present bird (biotope: air).

Through fossil fins and wings, the biotopes of prehistoric living beings (as originals) become known. In virtue of similarity of 'references'.

2.-- *Cause / Effect.*

J. Priestley (1733/1804): rust and combustion are oxidations. Both build something off.-- Generalization: "Would all other oxidations resemble these and therefore also build off?" (Hypothesis).

3.-- *Phenomenon/ Lawfulness.*

Light, ultraviolet rays, heat are vibrational types (similarity). "Would equal (natural) laws govern them?".

Sample 68.-- Immediate derivation of an opposing judgment.

Bibl. sample: -- *F.C. Barlett, Exercises in Logic*, London, 1913, 51ff. (*Immediate Inferences*).

-- *Ch. Lahr, Logique*, 511/513 (*L'opposition*).

The basis.-- Cfr *E.L. 31* (Logical v.).-- ***The logical square.***

All girls are beautiful (all though: model)	(A)	contrair	(E)	all girls are not beautiful. (all not (none): counter model)
Not all m. are beautiful (some are)	(I)	subcontrary	(D)	non-all m. are not beautiful (some not)

A to I or E to D: subaltern, diagonal: A - D or I - E: contradictory.

Definitions.-- Bartlett, o.c., 52.

Given.-- All people who do not think are superstitious.

Asked.-- What immediately to infer from this with respect to people who do think?". -- One sees the counter model / model. -- Up to there an example.

1. Two judgments are opposed if, although they have the same subject and the same saying, they nevertheless differ with respect to quantity or quality (*E.L. 57*).

2. To immediately infer from the affirmation or denial of a given judgment the affirmation or denial of the opposite judgment is to infer to the contrary.

Typology of opposites. Within the logical square, the couples or systechies "contrair / subcontrair", "subaltern / subaltern" and "contradictory / contradictory" show up.

If two propositions differ both from the point of view of quantity (all/some yes/some no/ none) and from the point of view of quality (affirmative/ negative), then they are contradictory (so the sentences A and D or E and I).-- Subaltern are those sentences which differ only in quantity (so A and I and E and D).

Explanation of the example.-- In rationalist circles one can, easily hear the judgment "All people who do not think are superstitious." Understood, "who do not think rationalistically" 'confusing the universal concept of thinking with the private concept of rationalist thinking.

Insinuating figure of speech. One then insinuates that "merely" thinking people are not superstitious. Which is far from proven.

Note -- We lapse into the unsaid (*E.L. 64*). One does just say that thinking people are not superstitious, but insinuates it (infers it) ... on the basis of an unstated and immediately uncritically examined immediate deduction.

Sample 69.-- Immediate derivation of a reversed judgment.
Bibl. sample: *Ch. Lahr, Logique*, 513s. (*La conversion*).

Given.-- Within the same judgment, one alternates between subject and saying so that the said part (model) becomes subject (original) and vice versa.

Asked.-- What immediate distractions does this give?

Rule.-- The general rule of any exchange (conversion) reads: the proposition in its exchanged form must not assert anything different as to magnitude than in its non-exchanged form. In other words, no term of it may exhibit greater magnitude.

Reason.-- If one does deduce from all (universal collection) some (private collection/single case) immediately, then one still may not conclude from some immediately to all.

Note -- Unless in the amplificational (knowledge-expanding) induction, as it is valid e.g. in the experiential sciences, has been ruled out by sufficient inductive sampling.

From the fact that this water and that water boil at 100° C., one may inductively conclude that the rest of all water will also boil at 100° C..

Both quantity (all/all/not all/not all) and quality (yes/no) play a role of course.

1.-- *Universal affirmative*.-- “All girls are beautiful”. -- “So some beautiful beings are girls”. -- The set of “beautiful beings” exceeds (is greater than) the set of “girls” which is a subset of it.

2.-- *Private affirmative*.-- “Some girls are beautiful”. -- “So some beautiful beings are girls”. -- The two terms are and remain private.

3.-- *Universal negation*.-- “All girls are not beautiful”. -- “So all (well)-beautiful beings are not girls”. -- Or: If no girls are beautiful, then no beautiful beings are girls”.

4.-- *Private denial*.-- “Some girls are not pretty”. -- No immediate distractions apply.

Conclusion. - With this we close the chapter of immediate derivations (two sentences; clearly given). Seems like sophisticated thinking, yet it also turns out to have practical supports.

Sample 70.-- The 'mediate' derivation (concluding speech).

Let us dwell for a moment on the distinction between immediate and intermediate derivation.

1. -- ***The immediate distraction.***

This one still belongs. Somewhat (see the caveat) to direct knowledge (*E.L. 05*). The reasoned fact itself insinuates an as-yet obvious sense "if, then".

2. -- ***The indirect derivation.***

We saw that - in order to "close" - the immediate reasoning surreptitiously prefixed a general preposition (axiom), which expresses the sufficient reason.- The closing speech (Gr.: sullogismos, syllogism) explicitly mentions the sufficient reason.

An example.

sentence 1.-- All that thinks, is.

Note -- 'Is' here is in the sense of "exists (factually)". The reasoning that works covertly in that VZ 1 reads, "All that thinks has as its premise o.w. actual existence."

sentence 2.-- Well, I think.

Conclusion -- So I am.

Note -- *I.M. Bochenski, Philosophical methods in modern science*, Utr./ Antw., 1961, 91.-- The author gives a more "technical" (understand: logistic) explanation.

The derivation rule.

"Has one, in a system (*note:* here the whole which is the text of the syllogism),

1.-- a conditional statement "if A, then B" and

2.-- an utterance that is similar to its prefix A (deduction) or its postfix (reduction) then one may, in that system, introduce an utterance that is similar to the postfix B (deduction) or to the prefix A (reduction)."

Simpler.-- Since Platon, there have been two main types of reasoning.

1.-- The 'sunthesis' (deduction).-- All that thinks, is. Well, I think. So I am.-- Symbol shortening: "if A. Then B. Well, A. So B".

2.-- The 'analusis' (reduction).-- All that thinks, is. Well, I am. So I think.-- Symbol shortening: "if A, then B. Well B. So A".

Note -- Reread *E.L. 40* and *41* (*Categoremen / categories*).-- A thinking being encompasses existence. But not vice versa! Not everything that exists is a thinking being.

Conclusion.-- The reduction is a hypothesis. Possible. Nothing more.

Sample 71.-- Deduction and reduction.

Let us briefly discuss similarity and difference between de- and reduce.

1.-- *Deduction. "If A, then B. Well, A. So B".*

More purely logical: "If A, then B AND if (in fact) A, then B". This last sentence is the purely hypothetical form which, according to traditional logic, is the actual (non-epistemological) object of logic.

Note -- Reason is the law of generalization (*E. L. 22* (*Collection*); 27). One reasons from all (universal collection) to some (just one). The derivation is necessary (*E. L. 70: Modality*).

2.-- *Reduction.-- "if A, then B. Well, B. So A".*

Note -- Reread *E. L. 76* (*Knowledge Expanding Samples*).-- The derivation is non-necessary. Cfr *E. L. 70*: *Modality*. No sufficient reason is present (for the time being, i.e. before further investigation takes place).

Appl. models.-- We take the following examples as illustrations.

1.-- *Deduction*.

If all water boils at 100° C., then this water and that water (samples).-- Well, all water boils at 100° C.. So this water and that water (samples) boil at 100° C.

2.-- *Reduction.*

If all water boils at 100° C., then this water and that water (samples).-- Well, this water and that water (samples) boil at 100° C.. So all water boils at 100° C..

Note -- Since Platon, two variants have been known.

1.-- *Deductive: proof from the preposterous.*

Either A (model) or -A (counter model). Where A does not appear to be directly provable. Detour: if -A, then incongruous (absurd) conclusion.-- One sees that this is a detour argument, i.e., an indirect but - for the sake of the strict dilemma (either A or non-A) - valid proof. It is a subdeduction.

2.-- *Reductive: lemmatic-analytic evidence.*

"If X, then B. Well, B. So X". -- In other words: one faces a given, B. But does not know the reason.-- One introduces a roundabout reasoning: one calls the unknown reason 'X' and pretends it is 'A', the true reason. Then one tests by sampling until it turns out that x is actually A.

E.L. 53 (*Hypothesis*) gave one example. *E.L. 49* (X) was another example: the realistic "being" is a lemma, an X.

Sample 72.-- Concept content and scope in reasoning.

We emphasized that traditional logic is a logic of concepts, and it is a logic of well-defined (and therefore non-fuzzy) concepts. It is precisely on this that reasoning is done! We clarify this by means of an application.

1.-- *Definitions.*

In women's magazines especially, one finds the terms 'star' and '(top) model'.-- Do we pay attention to the size.-- The term 'star' includes e.g. 'pop star', 'movie star', 'theater star'. A 'model' (fashion model), resp. 'top model' is one type of 'star!

In other words, top models are always stars, otherwise they will not make it "to the top"! But stars are not always top models.

2.-- *Reasoning.*

We now see the picture of those definitions in, the structures of reasoning.

Deductive.

If Tyra Banks is a top model, then she is a star.
Well, Tyra Banks is a top model.
So she is a star.

(Red.: Note: Tyra Lynne Banks (1973°) is an American supermodel, presenter and businesswoman. She is one of the few supermodels of African descent. Source: Wikipedia 2018).

Reductive.

If Tyra banks as a top model, then she is a star.
Well, Tyra banks is a star.
So Tyra Danks is a photographic model.

Explanation.-- This one is plural.

1.-- One sees that ***three terms*** are used within the system of reasoning.-- Here: Tyra Banks (singular), top model (private) and star (universal). Cfr. *E.L. 36* (Distributive).

2.-- *Validity*.-- One can decide from top model to star but not vice versa. In other words: if the beautiful Californian negro Tyra Banks is a star, then that can be - a priori, i.e. without testing against reality outside the purely linguistic term (*E.L. 65*: Synthetic judgment) - a pop star, a movie star, a theater star, a top model. In reduction, without tests afterwards, one only comes to the (tentative) conclusion that Tyra Banks might be a top model.

Modal assessment.

1. Deductive from top model to star decision is necessary. One also says "analytical.

2. Reducing from star to top model decisions is non-necessary. Possible. And therefore risky. It is at best a hypothesis. One does say "synthetic reasoning".

Sample 73.-- Two types of reduction: induction / hypothesis.

Bibl. sample: *Ch. Peirce, Deduction, Induction and Hypothesis,* in: *Popular Science Monthly* 1878, 13, 470/482.

In it, Peirce gives us a configuration (*E.L. 29*) that clearly demonstrates similarity and difference between the inductive hypothesis and the explanatory hypothesis. One generalizes. The other generalizes. Cfr. *E.L. 31*: *Collective and distributive understanding; esp. 27:Generalization / 'Whole-ization'.*

Note.-- Sometimes the term "induction" is used for the two.

1.-- *Deduction*.-- Rule.-- All the beans in this bag are white.
Application.-- Well, these beans come from this bag.
Result.-- So these beans are white.

2.1.-- *Induction*.-- Application.-- These beans come from this bag.
Result.-- So these beans are white.
Rule.-- All beans in this bag are white.

2.2.-- *Hypothesis*-- Rule.-- All the beans in this bag are white
Result.-- Well, these beans are white.
Application.-- These beans come from this bag

Modal.-- The deduction is necessary. -- The induction and the hypothesis are not -- necessary and in that broad sense 'hypothetical'.

The welnu sentence.

This is word-for-word the same in the reductive reasoning but the emphasis is sometimes on white (generalization) then again on this bag ('*Whole-ization'*.).

1.-- *Generalization*.-- From a sample or several - taken haphazardly ("at random") (randomization) -, i.e., "these beans" (private collection), one reasons to "all beans" (universal collection).

2. – *'Whole-ization' or Globalisation.* -- From a sample -- "these beans" -- one reasons to "this bag" (collective concept).-- If there is only "this bag" and "these beans," it is clear that "these beans" come from "this bag." If not, they may have as their origin another bag.

***Conclusion*.--** In the induction it is about all. In hypothesis, it is about whole. Cfr *E.L. 22* (*Collection*); (*23System*).

Sometimes "these beans are a metaphorical sign. Then again they are a metonymic sign.- See also *E.L. 06* (*Signs*).-- Seeing the reference to all or to whole is reducing!

Sample 74.-- syllogism : three terms.

1.-- "***Terminus esto triplex! ".*** -- There are three terms..

2.-- ***Chain reasoning***.-- More than three terms give rise to a plurality of syllogisms.

A.—*poly-syllogism*

'Poly-'(many) + 'syllogism'.

What does not consist of elements that can exist independently never disintegrates as a whole.

Well, the pure incorporeal soul of man is not composed of elements that can exist independently.

So the pure incorporeal soul of man as a whole never disintegrates.

Well, all that as a whole never disintegrates is immortal.

So the pure incorporeal human soul is immortal.

Note.-- The multiple syllogism consists of more than one syllogism such that the conclusions of the preceding one serve as prepositions of the next.

B.-- ***sorites***.

'Sorites'(ancient Greek) is 'accumulation'. -- There are two forms of accumulated syllogism.

B.1.-- ***The backward (regressive) accumulation.***

Montaigne (1533/1592), famous for his *Essais* (1580), puts in the fox's mouth, "This river fizzes. What fizzes, moves. What moves is not frozen solid. What is not frozen solid cannot carry me.-- So this river cannot carry me.

Note.-- The "so 's'" are omitted.-- Such reasoning is a series of judgments such that:
1.the saying of the preceding becomes the subject of the following,
2. until the final judgment of the first subject pronounces the final sentence.

B.2.-- ***the forward (progressive) accumulation***.

"Athens controls Greece. I control Athens. My wife controls me. My ten-year-old son controls my wife. So this child controls Greece".

A series of judgments so that:

1. the subject of the preceding becomes the predicate of the following,

2. until the last judgment of the last subject pronounces the first saying.-

Note.-- Themistoklès of Athens (-525/-464), statesman and strategist, is known for these sorites.-- There is a fallacy in this: the term "controlling" is used in more than one sentence!

But as a Greek, Themistoklès knew that too: he uses a syllogistic figure of speech to gush (denounce) his wife. Something that corresponded to the personality of the smooth Greek.

Sample 75.-- 19/256 syllogism are valid.

Bibl. sample: *Ch. Lahr, Logique*, 519/528.-- One can experiment with syllogisms. See here what that gives. if reduced to the main thing.

Note.-- Every normal syllogism includes three terms that are compared in pairs (E.L. 58; 59). Nl. the major term (largest size) or maior, the minor term (smallest size or minor and the middle term (comparison term) .

1.1.-- ***Four "figures" ("schemata").***

The middle term can take four places.

a.-- Subject in the major and saying in the minor (sub / prae).

b.-- Saying in the major and saying in the minor (prae / prae)

c.-- Subject in the major and subject in the minor (sub/sub).

d.-- Proverb in the major and subject in the minor (prae / sub).

'Sub' means 'subiectum' (subject) and 'prae' means 'praedicatum' (saying).

1.2.-- ***Sixty-four "modes of utterance" ("modes").***

From the subject, the proverb is pronounced according to quantity and quality (*E.L. 57; 75*).-- This gives, in full elaboration of the possible judgments, 64 attributions of the proverb to the subject.

2.-- ***Forms of syllogism***.-- 4 x 64 = 256.

Practical. -- The combinatorics is one. Practice is two!

a. -- Only 19 forms are valid.-- These carry since the middle ages Latin combination names like Barbara, Celarent, Darii, Ferio,-- Baroco, -- Bocardo. And others.

b.-- "***Only five or six are used."*** (Lahr, o.c., 520).

Note.-- Aprior and aposterior figures.-- Lahr, o.c., 522/524. --

J. Lachelier (1832/1918), Kantian thinker, author among others of *Du fondement de l'induction* (1872), distinguishes syllogisms in:

1.1.-- aprioric (sub / prae and prae / prae).

1.2.-- aposterior (sub/sub).

2.-- invalid (prae / sub).

The comparison of two concepts via a third (middle term) can be either 'analytic' or 'synthetic'. Cfr *E.L. 65* (*Leibniz*). See also E.*L. 70.*

The former gives aprioric, the latter aposterioric closing reason.

Sample 76.-- the Eulerian models.

The prepositions lead, logically, to the after sentence. These ‘premises’ (from the Latin ‘praemissa’, presupposition) and the after-phrase which can be derived from them are governed by the identitivity of the (three) concepts involved. Cfr *E.L. 25* (*Total and partial identity; non-identity*).

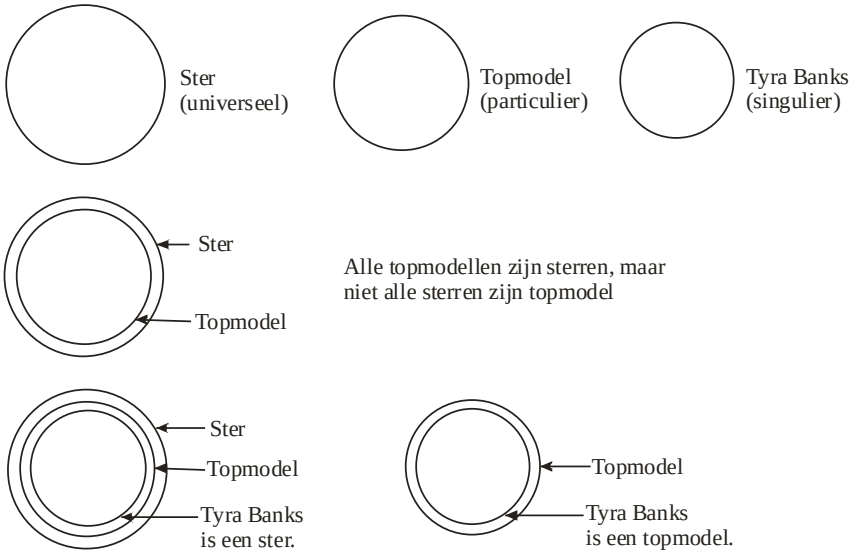
As we saw above, the circumferences play a decisive role in this in a visible way.

The original by means of the model made more insightful.-- The versatile Swiss mathematician Leonhard Euler (1707/1763) depicted, visualized the circumferences as originals in space mathematical figures as models (similarity models).

They are reminiscent of the diagrams of Venn. So note the full or partial coincidence (= visualized identity) of the figures.

1.1.-- *partial identity.*

Or analogy.-- Let’s take the closing statement “All top models are stars. Well, Tyra Banks is a top model. So Tyra Banks is a star”



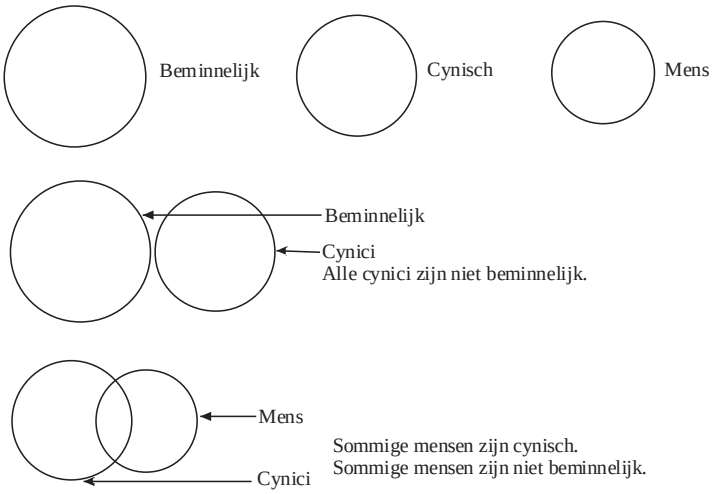
= All top models are stars (but not all stars are top models) top model
= 3 circles in each other: T. Banks is a star, because top model
= 2 circles into each other: T. Banks is a top model

The comprehension dimensions are revealed by the radius lengths of the circles. Thus ‘top model’ includes ‘Tyra Banks’ (as a copy of it). Thus, ‘star’ includes ‘top model’ (as a subset of star).

The (partial or analogous) coincidence of the figures visualizes the (partial) identities.

1.2.-- *Partial identity.*

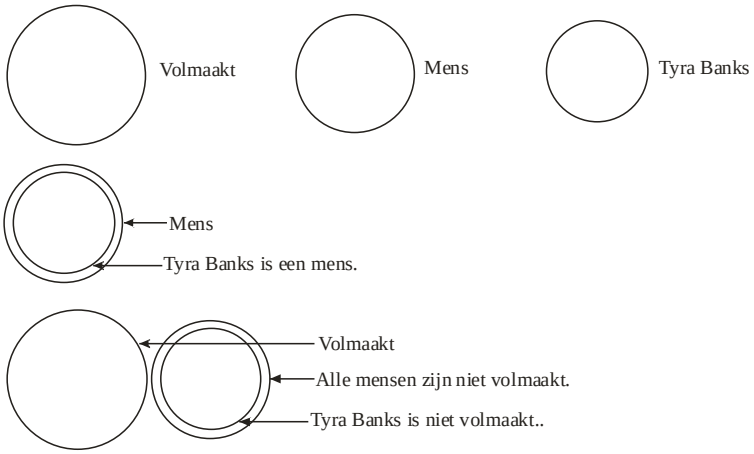
"All cynical people are not lovable. Well, some people are cynical. So: some people are not lovable". -- A deductive scheme: from all to some.



The circles do not intersect when the relation "cynical / amiable" is visualized. They do intersect, when the relation "people / cynical" is visualized.

2. -- *Total non-identity.*

"All humans are not perfect. Well, Tyra Banks is a human being. So Tyra Banks is not perfect".



Conclusion.-- The identity -- the partial identity and the non-identity -- was the question. The answer varies in the examples above.

Note how, in Euler's models, the negation, the total non-identity, is ready visualized by the non-cutting figures.

Immediately apparent is the identitarian nature of classical logic. Clarified thanks to Euler's models. One brilliant application of model theory (*E.L. 25*).

Sample 77.-- The collective syllogism.

So far it seemed that syllogisms are purely distributive or at least usually so. *E.L. 80* (Generalization) showed us one exception "these beans" (in the hypothesis) are a collective concept to be situated within a collective concept ("this bag"). The part refers to the whole.

Bibl. sample: *D.J. Mercier, Logique*, Louvain/ Paris, 1922-7, 177/185 (*Nature et fondement du syllogisme*).

Schema: If A, then B. Well, A. So B. Deduction.

Sentence 1. -- All triangles that exhibit two equal sides immediately (necessarily) also exhibit two equal angles.

Sentence 2. --Well, this triangle here and now, ABC, exhibits two equal sides.

Conclusion.-- So ABC immediately exhibits two equal angles.

Note that the property "two equal sides" and the property "two equal angles" are not similar to each other (distributive: metaphorical model) but related to each other (collective: metonymic model) .

The geometrists give us the proof of that. That does not interest us here.-- What interests us is what follows.

1.-- ***Consistency is necessary (lawful).***

As soon as a triangle with two equal sides is posited (subject), one is compelled to assume that it has two equal angles (saying).

Or: "Two equal sides" imply (involve) - within a triangle - necessarily "two equal angles".

Note **--** Model theoretic. -- That is, of "two equal sides" (the original) "two equal angles" are the metonymic model. Not because they resemble those sides but because they are related to them, they provide information about the equal sides.

2.-- ***To see the connection is to abstract or ideate.***

Whether it is a merely imagined or a materialized (in wood, metal, ink on paper, or chalk on board) triangle,--whatever the length of the sides and the width of the triangles are,--wherever and whenever they are situated, the coherence is there. Unchanged. Eternal.

Some (Aristotelians) call this "abstraction" the others (Platonists) "ideation.

Cfr. *E.L. 49* (*The Being*): the eternal being is thereby exposed.

Sample 78.-- Authority argument.

Bibl. sample: *W.C. Salmon, Logic, Englewood* Cliffs (N.J.), 1963, 63/67 (*Argument from authority*).

One can formulate an authority argument both deductively and reductively.

1.-- *Deductive*.

X is a reliable authority because, when he judges, he is an expert. Well, X asserts p. So p is reliable.

Orthodox (rightist) thinkers put authority first. Without question. It is their / her basis for life and thought. What comes across as 'dogmatic'.

Preferring to presuppose as valid a "thesis" (opinion) favored in free discussion is, in his/her way, "dogmatic" (as if all that emerges as valid from free, democratic discussion was already valid because of that alone).

2.-- *Reductive.*

If the vast majority/a majority/a sufficient number of X's judgments regarding his domain of expertise are true, then X possesses very great/a great/a some authority.

Well, the vast majority/a majority/a sufficient number of statements of X regarding his domain are found to be true (inductive sampling).

So X possesses very great/ great/some authority. Regarding his domain. Scientific thinkers accept 'authority' in this way. Neither orthodox nor preferential. And thus not 'dogmatic' or 'authoritarian'.

Domain of authority. -- One paid attention to the caveat regarding a domain of expertise. -- What is outside that domain is outside authority. For authority is like a concept: **a.** it is a content **b**. which refers to a scope or domain. Cfr. *E.L. 33.*

Value-free professional science.

Bibl. sample: --- *G. Del Vecchio, Droit et économie*, (Law and economics), in: *Bulletin européen* 1962: janv./ févr. 10/12.

Luigi Einaudi (1894/1961), economist, argues that his profession, economics, is a partial and therefore hypothetical science.

1. -- *Freedom of Values.*

A value-free science knows only those values that are valid within its domain. Thus economics recognizes only economic values (capital, goods, services, etc.). Thus the economist is a "homo oeconomicus", an economic person. A scientist.

2. -- *Ethics.*

Einaudi "The economist as a professional (*E.L. 42; 54; 66: formal object*) does not say, 'Thou shouldst ethically act in such or such a way.'

In that case he would go beyond his domain and into an area in which he is not an expert. He would be doing ethics.-- "well he says, 'If you act ethically in such or such a way, then given economic laws your ethical actions will have such or such economic consequences!

Appl. mod.-- If a government, out of spirit of distributive justice (ethical motive), allows an increase in wages in one or more sectors, this is a social measure but is at the same time an economic measure.

Note -- Cf. *E.L. 83v*: Circles that intersect. The economic and the social-ethical concepts 'intersect' in their domains. Thus the wage measure has its image ('repercussion') in the competitiveness of companies. This can make the patrons rebel. Not that they are antisocial but simply because they come out disadvantaged.

Authority domain. -- Relativity.

Albert Einstein (1879/1955) elaborated a theory of the universe - a cosmology - that goes by the name of 'theory of relativity'. In the micro- and macro-physical field, judgments become at least partially non-absolute ('relative'), if only because every physicist himself is situated within the system that is the universe ... and therefore limited in his observations and judgments. His observations are not 'absolute' but 'relative' (dependent on circumstances).

Well, some deduced that, apart from cosmological statements, our traditional value judgments (*E.L. 66:* Plurality of formal goods) are also non-absolute, "relative" (depending on situations).

a. Synchronicity: we live, planetarily speaking, in a multitude of cultures, each honoring its scale of values.

b. Diachronic: the same culture evolves,-- also in its scale of values, in the course of history which thereby becomes cultural history.-- The people who experience those differences, is, disputes, "relativize" the values.

a. -- ***Einstein's theory*** is strictly natural science. His authority is limited to that domain.

b.-- *Relativistic cultural theory* is strictly human science. Its authority is limited to culturological phenomena. There is, however, partial identity between the two. But they are no more than analogous.

Sample 79.-- Sullogism with embedded evidence.

In Ancient Greek: ‘epi.cheirèma’, approach, basis of operation. Aristotle, Topika, defines as “short held argument” viz. syllogism in which each preposition is provided with a (short) proof.

1. -- *Mathematical.* *J. Anderson / H. Johnstone, Natural Deduction* (*The Logical Basis of Axiom Systems*), Belmont (Clf.), 1962,, 4.

Requested.

The theorem to be proved.-- Show that x ((y + z) + w) = (xy + xz) + xw.

As an axiom won± premise x(y + z) = xy + xz.

This axiom is partly given. Because as a proof possibility needed.

Solution.

x((y + z) + w)= x(y + z) + xw (by virtue of the axiom). This operation counts, in axiomatic-deductive systems, as a ‘proof’.

Second step.-- x(y + z) + xw = (xy + xz) + xw (by virtue also of the axiom).

The authors: “A mathematical assertion is proved by exhibiting it as the consequence of assumptions”. A mathematical assertion is proved by showing that it is the consequence (derivation) of assumptions (axioms e.g.).

2.-- *Legal.*

M.T. Cicero (-106/-43), in his *Pro Milone*, develops an epicheirèma.

Sentence 1.--, For all cases, it is justifiable in conscience to kill an unjust assailant - in legitimate self-defense - first himself.

***Evidence.*-- 1.**The natural law (i.e., the rules of conscience imparted with the general nature of humanity) and

2. the positive or stellar (= laws introduced by humans) law justify such lawful self-defense.

***Note.*--** Cicero here indicates the premises of his proof (what the axioms are to mathematical proof, the ‘principles’ of morality are to law).

Sentence 2.-- Well, Clodius was such an unjust assailant.-- Proof.--

1. Clodius’s criminal past, **2.**his questionable escort, **3.**the weapons found demonstrate this.

Conclusion.-- So Milo in conscience was allowed to kill Clodius himself first.-- This last is the thesis or ‘thesis’,lat.: propositio, to be proved.

***Conclusion.*--** Notwithstanding the differences of the domains (sizes), the same rules of reasoning apply to the same domains:

1. general assumptions

2. fulfilled in. applications (private / singular).

Sample 80.-- Dilemmatic shutterbug.

Bibl. sample: *W.C. Salmon, Logic*, Englewood Cliffs (N.J.), 1963, 32/34 (*The dilemma*).-- The author cites wee types.

1. -- *Same afterthought.*

"Either p or -p (= model and counter-model). If p, then r. If -p, then also r".

Appl. model.

A sentry failed to sound the alarm.-- "Either ye were on post or not.-- If ye were on post, ye did not do your duty. If ye were not at post, ye did not do your duty.

2.-- *Twofold afterthought.*

"Either p or q.-- If p, then r. If, q, then s".

Appl. model.-- A person appears before a judge, charged with a void traffic offense in which he is not at fault.-- "Either I admit guilt, but then I am sentenced to a sum of money for a wrong I did not commit.-- Or I do not admit guilt, but then I must still spend the entire next day in jail."

Note.-- A strict dilemma applies only if the enumeration of possibilities is complete. Cfr. *E.L. 37.*

Appl. model.-- *Ch. Lahr, Logique*, 528.-- Epikouros of Samos (-341/-271), founder of Epicureanism, is known for a dilemma.

Either with the dying body also the soul of man perishes. In that case, all sentient life ceases. Thus, at death she feels nothing.

Either she survives at death. In that case, she escapes the woes of embodied life and is happier about it than before. Thus, she feels an increased state of happiness after death. In either case, the soul need not fear death.

One sees one and the same conclusion. Whereupon Lahr.-- Either she survives the death of her body yet such that, for reasons of unscrupulous deeds, she is subject to regret and remorse. In that case the soul fears death with some reason.

What Lahr wants to show is that Epikouros' enumeration of possible cases is incomplete. And thus that his conclusion should be treated with great reservation.

In other words: he would first have to prove that there are only two possibilities. Which even believing pagans doubted.

Sample 81.-- Evidence from the Incongruity.

D. Nauta, Logic and model, Bussum, 1970, 27; 280.

Prepositioning: Either model or counter model.

The counter-model **a.** answers the given. **b.** but not the asked. That is shown by the fact that, if, the counter-model is asserted, then from it follows what that counter-model refutes. It leads to something absurd.-- This is clearly a detour proof. Cfr. *E.L. 78.*

Appl. model.-- *W.C. Salmon, Logic*, Englewood Cliffs (N.J.), 1963, 30. --

The socratic method was to define. Ethical definitions were especially prominent. In dialogue form.-- Central value: 'justice' (= conscientious living).

1.-- ***Kefalos' limp definition.***

"Very well, Cephalos" I (= Socrates) replied. "But just what is 'justice'?"

Kefalos : "To tell the truth and to return what is owed".

Socrates : "Is that definition correct? In other words: are there no exceptions to it?". The weaknesses of the definition (the exceptions) are discussed.

"Supposedly: a friend in his right mind entrusts me with weapons and asks for them back when he is no longer in his right mind. Is it 'righteous' (in conscience justifiable) then to give them back to him (*note:* as your definition insinuates)? No one (*opm.:* who is sensible) will argue that I should give them back. (...).

Note.-- If thou, Cephalos: asserts that, it follows what thou lays again (as a conscientious man)! In Popperian language: from Kefalos's assertion, Socrates derives an inference that is the application of it but leads to something unacceptable, something ethically incongruous. This is called Popper 'falsification' (demonstrating that something is untenable}

2.-- ***The unscrupulous sophist definition.***

The protosophists (-450/-350) defined "virtuous man" as "knowledgeable man."

From which Socrates deduced, "A thief is an expert on larceny of goods. Thus a thief is a "virtuous man."

By which Socrates insinuated that true virtue is more than 'technè', expertise, skill. It is governed by 'righteousness' (conscientious living): a person can be expert and also unscrupulous.

For Socrates, expertise and conscience ideally go hand in hand in a livable society.

Sample 82.-- Lemmatic-analytic reasoning.

O. Willmann, Geschichte des Idealismus, III (*Der Idealismus der Neuzeit*), Braunschweig, 1907-2, 48:

"One of the most fruitful methods of modern mathematics - the 'analytic' principle - is of antique and specifically Platonic origin: it is reported of Platon that he was the first to hand the investigation by 'analusis' (backward reasoning) to the Thasian Leodamas." (Diogenes Laërtios 3:4)".

Given / Requested.

The reductive, backwards reasoning is a searching reasoning: 'If A, then B. Well, B. So A'. 'A' is the wanted.

1.-- In the proof from the absurd, that which leads to something absurd did answer to the given, not to the demanded.

2.-- In lemmatic-analytic reasoning, the systechy "Given/ Asked again plays the leading role: the Asked (A) is unknown (X). But one pretends that the unknown (wanted) was already known. And thus was already Given, as it were.

1.-- ***Lemma.***

Or still 'prolèpsis', Lat.: anticipatio, anticipation.-- The term 'lèmma' in Ancient Greek meant, among other things, 'point of gain',-- in logic 'premise' (preposition),-- in rhetoric 'given to be developed' (*E.L. 42* (*Theme*)). It is this latter meaning that weighs through here.

Hypothetical model.

Instead of "If A, then B. Well, B. So A" one reasons "If X, then B. Well, B. So X". Since the A from the deductive reasoning type is unknown, A is replaced by X. In other words, X faces A as the model faces the original. X provides preliminary information and is thus a hypothetical (assumed with reservations) model.-- Since one seeks A through X, lemmatic-analytic reasoning is a detour reasoning. (*E.L. 78*).

Analytical.

The ordinary designation of such reasoning is called "analytic. Actually, that is an abbreviated name, because the lemma makes analusis, reduction, a variant of analusis, i.e., the lemmatic-analytic analusis.

Generalization or 'Whole-izatin'.

Cfr *E.L. 80* (*Origin*); *85 Coherence*).-- The actual 'analysis', which tests the lemma against the reality of the data, situates X in the complex of data. It is examined for its relations (coherence in the first place but also similarity).

Thus in the "rule of three" (*E.L. 30*), where "15%" is the X, the requested, which is situated in a structure "100% / 1% / X%" (universal / singular / private). Whereby the requested is made findable.

Simple model.

Given.-- The children, led by Jw Anita, are in the forest.

Suddenly, a girl walks up to the teacher with a feather in her hand: “Look. miss. a feather!”.

Asked-- The teacher: “Guess which bird that feather might belong to!”. Lemmata.-- One girl says: “That is of the black blackbird”.

To which another said: “No! It is too little black for that! It is from a thrush”.

One compares with *E.L. 06* (*Sèmeion*): the feather is *an ambiguous sign* (cf. 54: No more virgin; 80).-- One also compares with *E.L. 80: ‘Whole-ization’* (*the origin of the bean portion*). For the plume is a part of a whole in which it can be situated.

Analysis.-- The names the children give are not given haphazardly: the children’s observations portray themselves in their guesses (lemmas). They aim with reasons.

Those names are the (provisional or hypothetical) model of the original. The analysis will test that.- Here by sampling and thus inductively. Not as above by fitting into a rigid mathematical structure. Cf. *E.L. 53* (*Cumulative definition*): the demanded is a correct definition of the whole into which the plume fits (its ‘origin’).

Back in class.

Jw. Anita pulls out one of her bird books, -full of color photos. First she shows the black blackbird: “The plume is too brown, Miss!” all exclaim. One sees the comparative method! The plume found and the photographic model.

So I looked elsewhere: she shows the thrush. “That looks much better!”. But the lady is not satisfied yet: she shows the female blackbird, which is less black than the male. “Hey! It could also be from such a female blackbird!”.

Conclusion.-- undecidability! For now, the plume is either of a thrush or a female blackbird.

Note.-- Dialectics.-- Zenon of Elea (-500/ ...) once said to his opponents, “neither thou nor I prove what thou dost assert”.

Here: “Ye who defend the thrush, . neither do I who defend the female blackbird prove what you claim”. When there is both for and against, Aristotle calls such a situation “dialectical” (there are only dialectical, contradictory, arguments available), i.e. Undecidable.

1996-1997: 1st year Elements of logic (*E.L. 1- 92****)***

Content.