2. Order Theory

Content

2. 1 Theory of order (Harmology).

Bibliographic sample :

- S. Augustine (354/430), *De ordine* (On order; the first systematic work),

-F. Schmidt, *Ordnungslehre*, Munich/Basel, 1956; J. Royce, *Principles of Logic*, 1912-1, 1961-2;

E.W. Beth, *The Philosophy of Mathematics* (*From Parmenides to Bolzano*), Antw./Nijmeg., 1944 (O.c., 102vv. *Mathesis universalis*).

Royce sees order theory as the basis of his logic. Schmidt says that the whole metaphysics of the West includes a series of order theories "from Plato to Nietzsche. "Beth's general mathematics is an order theory patterned after mathematical parlance, which was redefined by J. G. Fichte, (1762/1814), German idealist philosopher, F. Von Schelling (1775/1854), German Romantic philosopher, and Hegel in a non-mathematical sense. But to the point.

Logical order theory. Formae are central but as the basis of order and arrangement. To be comprehensible, we take two well-known forms of being, the square and the circle, and apply the comparative method to them. Note that "compare" is not "equate" as more often thought but rather "to consider something including something else," which is to see both similarity or difference, coherence or gap.

Square and circle.

- ***Each in itself***. This is as coinciding (= totally identical) with itself. In itself (not with "in itself," see further under 2.3.) a square is a plane figure with four equal sides and four right angles. In itself, a circle is also a plane figure, and the geometric location of all points that are at the same distance from a fixed center. These definitions express the total identity of both geometric "formae.

- ***Each compared (apart).*** This is like part-identical (analogous). They are similar to each other insofar as they are situated in a plane, have a center and a circumference. These are their "common properties" (or their "part identities"). They differ by the four sides of the square (whose distinct points are at unequal distances from the center) and the circular circumference of the circle (whose points do lie at equal distances from the center). In this they are non-identical. In conclusion, they are partly identic partly non-identic as forma or form of being and thus analogous or part-identic. The judgments which express this are now not definitions (as in the case of total identity just now) but analogical judgments like e.g. "The square and the circle both exhibit a plane, a center, a circumference but both circumferences differ geometrically".

- ***Each compared (in unison).*** This is a "square circle." As wholes, i.e. as totally identical with themselves, they are only existent and therefore conceivable if they are "held apart. The same geometrical forma or form of being cannot "simultaneously" have in the same plane a circumference which is at equal (circle) and unequal (square) distance from the center. The judgment expressing such simultaneous existence is now neither a definition (both in itself) nor an analogical judgment (both apart) but a contradictorily ("inconsistent") judgment involving an inner contradiction. What can only exist (and be thought of) apart cannot possibly exist together! Such a judgment is called 'incongruous' or 'absurd', 'nonsense'. Here is total non-identity, understood as the existence and thinking apart of wholes as wholes.

Identitive. Natural logic thinks of formae in terms of total identity with itself (defining), partial identity of a forma with another forma (analogical judgments) or total non-identity of a forma with another forma (inconceivable, absurd or incongruous judgments). As an aside, the

latter type of judgment plays a role in time in mathematical proofs "from the incongruous" or "from the absurd."

Relation. A relation represents either analogy (partial identity) - similarity / consistency - or total non-identity (contradiction). A relation within natural logic exists only between data that consist of each other. The term "reflexive relation" is a figure of speech. Nothing more. For a forma or thought and knowledge content coincides with itself totally and is impervious to further division as total identity.

Immediately it is abundantly clear that natural logic, although identitive (working with total identity, partial identity and total non-identity), assigns a salient place to relations. Which is not always realized by those who confuse them with logistics.

2. 2 Identity within natural logic.

Bibl. st.: G. Jacoby, *Die Ansprüche der Logistiker auf die Logik und ihre Geschichtschreibung* (Stuttgart, 1962. Briefly put, Jacoby's concept of identity amounts to "that which coincides either with oneself (total identity) or with something else (partial identity)."

Criticism. D. Hilbert-E. Ackermann, *Grundzüge der theoretischen Logik*, Berlin, 1938-2, states, "x is identical with y insofar as every saying that fits x also fits y and vice versa." The identity of "fitting to" x and y is an application of the general notion of identity that is presupposed but not defined. H. Reichenbach, *Der Aufstieg der wissenschaftlichen Philosophie,* Berlin, 1953, says: "Identical means equal to oneself. One can only be equal to something else, not to oneself. That type of similarity itself puts the general concept of identity first. J. Hoffmeister, *Wörterbuch der philosophischen Begriffe,* Hamburg, 1955-2, states, "If two names mean the same thing, there is identity." The term "same" is just another word for "identic. In other words, after that definition, the question arises, "What is 'the same'?". One only defines derivations of 'identity' (one does not see the requested).

Logic as supported on identity and its variants. C. Twesten, *Die Logik, Schleswig*, 1926 (first edition 1825) builds logic based on the concept of identity. B. von Brandenstein, *Grundlegung der Philosophie*, I, Halle, 1926, and B. von Freytag, *Logik (Ihr System und ihr Verhältnis zur Logistik)*, Stuttgart, 1961-3, do the same.

Tooth. Central to natural logic is not the word or term but the fact to which the word or term refers, called "fact" or forma. So a circumstance exists before we are even aware of it. It is 'subjectless' (independent of any subject) and in that sense 'objective'.

"A term" is not the same as "a word. For example, we can talk about "girls" or "children of the female sex": that is the same term expressed in either one word (term 1) or in five words (term 2).

- Model. GG: this flower here and now. The presence or given being of this flower is captured by the conscious subject as an actuality in what is called an "encounter" (of a subject with this flower). The immediate given being of this flower is expressed - only now comes the term - in e.g. "That flower" or "That flower here." Both expressions refer to the total identity (of that flower with itself).

The subjective processing of the act goes a step further when the subject says, "This is a flower" because this situates this singular flower here and now in the collection of "flowers" (of which it is one specimen: "a" flower). The term "This is a flower" thus refers to its partial identity as a member of a set with the other members of that set. Such 'partial identity' is called "common property" in mathematics. It is 'common' insofar as it is identical in all instances. 'Common' presupposes a type of 'identity'.

- Model. At a further stage of processing the circumstance, the subject says: "This flower is yellow. Not surprising because a closer look reveals that all the flowers of this gorse are yellow". Note: "This flower is yellow" is the stage of judgment. But the addition "Not surprising because (...) all the flowers of this gorse are yellow" points to the stage of processing by the subject through 'reasoning'. This is clarified by the subterm 'because'. The subject may as well say, "If all the flowers of this broom are yellow and this flower is one of them, then it is (necessarily) yellow." What is called "deduction. One distinguishes the three successive steps in reasoning: understanding, then judgment, finally reasoning. We will come back to this in detail.

Concept logic. This term is pleonastic - the word "logic" already presupposes the presence of "concepts" - as evidenced by our analysis of the act or forma, and the subjective reactions to that act.

An "imputation" is a "concept" that can be expressed by a subject in a term, of which the judgments about the imputation, on the one hand, and the reasoning through those judgments about the imputation, on the other hand, are the two logically important types of words.

In all that, the grasp of the identity of the event (or of the event in its identity) with itself (its 'being') and its partial identities with the rest of reality is the basis without more. The 'comprehension' (understanding, grasping) of this makes articulation of terms, judgments and reasoning possible. Logic, as already stated, puts identity and its variants (full, partial and negated) at the center. That is its "being.

2. 3 Formae per se (Knowing and thinking contents).

One does not confuse with what was called "formae in itself" above.

Objective: M. Apel. *Philosophisches Wörterbuch*, Berlin. 1948-2, 170, defines

"objective as business" (that which resembles or is related to the fact or thing itself). Applied here: concepts, judgments. reasoning - the three distinguished formae - are there in themselves. I.e. independent of our mind engaged in them. To speak with the ancient - Greek thinker Parmenides of Elea (-540/. ..): in natural i.e. objective logic, they occur as "according to themselves" (not according to us, i.e. according to me or you or whoever as subject).

Model. Take the statement "The round square exists."

- **1.1**. Inner thought (with the inner word brought to mind) can do this: we mumble in our souls such nonsense as if he existed to something weekly, something objective, outside our mumbling mind and "in itself."

- **1.2.** Externally either said (word sign) or written (writing sign) it can be because our word sounds - "the round square exists" - reverberate as if this were a true, i.e. objective sentence, and the paper of this page - which you, reader/readers are now reading - endures a contradiction (inner contradiction) without a glance,

- **2.** In itself, however, it is not possible! For these geometrical formae - circular square should be at the same time at the same (circular) and not the same (square) distance from its center point. Which is not possible since it contains inner contradiction: in itself a circular square is nothing, absolutely nothing.

Logic. Thinking, then, is not a matter of inner, spoken or written word but of incorporeal mind that does not tolerate objective contradiction where language (word) without mind does not even sense the problem of nonsense.

Deviations:

- Logical psychologism pays attention only to the mental acts that are concepts, judgments and reasoning.

- Logical sociologism pays attention only to the fact that these mental phenomena are the product of groups. Such one-sidedness salvages truth yet as long as they do not pay attention to what is objective in the mental or social products, they are practicing psychology or sociology but are not up to logic.

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- Logical physicalism. Bibl. St.: M. Kistler. Physicalism, in: O. Houdé et al, *Vocabulaire des sciences cognitives (Neurosciences, psychologie, intelligence artificielle, linguistique et philosophie),* PUF, 1995, 309s.. Physicalism is a kind of ontology (theory regarding reality) that pays attention exclusively to all that is physical. As the proposer himself admits, there are types of physicalism (functionalism, anomalous monism, epiphenomenism, eliminativism). which we will not discuss further here now. Remember that there is a reductionist physicalism that ideologically reduces ('reduces') all reality to physical reality, and an 'open', non-reductionist physicalism that is merely methodical and does not exclude non-physical realities. Indeed, one can view logical data insofar as they are physically ascertainable (and explainable). Thus, spoken or written concepts, judgments, reasonings are physically observable and thus amenable to physical attention. But whether one thereby gives justice to the objective contents of knowledge and thought associated with those physically observable data is still not universally acceptedhaar proven.

- Logical neuroscientism. Bibl. st.: O. Houdé / B. Mazoyer / N. Tourio-Mazoyer, *Cerveau et psychologie (Introduction à l' imagerie cérébrale et fonctionnelle).* PUF, 2002, 547/582 (*Le raisonnement logique*). - Deductive and inductive reasoning can be investigated brain scientifically, at least insofar as (apart from purely physical) biological (including brain operations concerning) phenomena are related to concepts, judgments and reasoning. But studying something via what is related to that something is not yet a direct study of that something itself. Whether logical operations are directly accessible via related brain operations is highly questionable.

2. 4 Model theory

Bibl. St. : K. Bertels / D. Nauta. *Introduction to the concept of model*, Bussum. I969 ; P. Nouvel, dir., *Enquéte sur te concept de modèle*, PUF, 2002. We define: "Something, if thanks to resemblance or coherence it provides truth ('information') about something else, then that something is 'a model' of that other called 'the original'." The original asks for truth; the model provides it. Three main types can be distinguished: the total model, partial models and the counter-model.

- 1. Total model. Every true definition is the total model of the definite (which is definable) because the similarity between the two is general. For example, there is general similarity between "the circle" on the one hand and "the geometric location of all points lying at the same distance from a fixed center" on the other.

- 2. Partial models. - The analogical model is twofold.

2.1 "Johnny is the rooster of the children". There is a proportionality between two subsets. Just as the rooster relates to the chickens, so too does Jantje relate to the children, namely, to be the forerunner. Another name for this analogical model is "proportional analogy."

(1)Comparatively "As the rooster stands to the chickens, so does Johnny stand to the children." Model-theoretic: Rooster is the original that asks for truth; "rooster at the forefront" is the model that provides it.

(2)Metaphor. A comparison, once abbreviated (indicating language economy), becomes a "trope" and here as a metaphor or similarity model. To precede is both common characteristic (= partial identity). The trope therefore identifies both under one point of view: going before. There is distributive analogy. The trait "going in front" is distributed and about the rooster and about Jantje. So they both belong to the same set (distributive understanding) o.g. metaphorical or similarity analogy.

- 2.2 "Where there is smoke there is fire". There is a proportionality between two parts of a whole. Just as a cause relates to an effect, so too does fire relate to smoke. Another name for this model: "attributive analogy."

(1) Comparative: "As the cause stands to its effect, so the fire stands to its smoke." Model-theoretic: fire is the original that asks for truth; smoke is the model that provides it.

(2) Metonymy: An equation, once abbreviated (language economy), becomes trope and here as metonymy or coherence model. Indeed the smoke does not resemble the fire but is related to it and provides information about the fire. Just as in a triangle an angle provides information about the opposite side (cf. 6.9). The common property of fire and smoke is to form a whole together ("fire that smokes begets smoke"). They belong to the same system (whole, system). The trope therefore identifies both under that one point of view. There is collective analogy. Fire and smoke share the same property jointly, (not each separately as in the collection) fire and smoke do not resemble each other but hang together as belonging to the same whole (collective concept) in virtue of metonymic or coherence analogy.

- 3. Counter-model. Johnny is not without more cock; fire is not without more smoke. To identify them totally would overtake the trope and constitute contradiction. As wholes they exist apart, not together!

'Being' . "John is ..." or "fire is ...". The term 'being' in a model-theoretic sense is either total identity (in the definition) or partial identity (in the tropes) or contradiction (in the counter-model). 'Being' is thus not simply plural but identitive in a threefold way.

Note: The synecdoche is either similarity analogy (The officer: "'A soldier is always on time!": one copy stands for the whole set, "the soldiers") or coherence analogy (The staff member: "The beard is there" one part, the beard, stands for the whole, e.g., the boss). Again that economy of language ("What can be said with fewer words is not said with more words") that contrasts with the full comparison the trope.

Note: Some terms show both metaphorical and metonymic analogy. For example 'skirt chaser'. The skirts do not resemble the women but are related to them (metonymy). The Hunter resembles the one who 'hunts' women (metaphor). Coherence and resemblance! Logic, if natural, is thoroughly at home in relations but on an identitive basis (i.e., threefold (total / partial (analogical) / not at all)). Models and tropes are its "element.

The distinction between metaphor / metonymy and synecdoche.

Both tropes rely on analogy (partial identity). The examples provided by the textbooks seem to put following distinctions first: metaphor and metonymy interpret analogy between specimens of a collection among themselves and of parts of a system (whole) among themselves as well, while the two types of synecdoche betray analogy between specimen and collection and between part and whole. The theoretical explanations force one to say "seem" because the

lack of clear theory portrays itself in the unclarified examples. The proportional basis shows the difference.

As one or some specimens stand to one or some other specimens of the same collection, so, e.g., Johnny stands to the children and the rooster stands to the chickens.

As one or some portions stand to one or some other portions of the same system, so fire stands to smoke.

But note the synecdochs. As one or some specimens stand to their (universal) collection, so, e.g., a soldier stands to all soldiers.

Result: the officer says to a tardy officer, "Soldiers are never late." He says

'soldiers' (all) but means this one soldier. By virtue of similarity analogy. It is a metaphorical synecdoche.

As one or some parts stand to their whole (system, system), so, e.g., the beard stands to the whole man. Consequence: a staff member sees the boss coming and says, "The beard is there." The staff member says "the beard" but means the (whole) boss. By virtue of coherence analogy (the beard does not resemble the boss but is related to it). It is a metonymic synecdoche.

The pair "says / means" is represented in the term "syn.ec.doche," co-meaning or co-meaning. Synecdochic speech is therefore suggestive what one does not say, one insinuates in virtue of resemblance or coherence (partial identity, analogy), basic concepts that are already very much at work in the minds of children.

Note. The synecdochs also occur in reverse: to all soldiers present the officer says: "A soldier here is never late" (where all are meant). Or metonymically, "This hospitable shelter" (where the whole house is meant) can also read: "This hospitable house" (by which the landlord means "sheltering").

Remark. Bibl.st.: A. Benmakhlouf, *Analogy*, in: D. Lecourt, dir., *Dict. historique et philosophique des sciences,* PUF, 1999, 32/36. Steller concludes the article with the observation that analogy is "a difficult concept to formalize." First of all, is formalizing it without the basis of natural logic in the matter even feasible? Aristotle, of course, is cited.

1. The proportional (metaphorical) analogy (*Topica* 1: 17: 108, a7), described as "a/b = c/d".

The attributive, "participatory" (metonymic) analogy comes out much poorer. Aristotle limits the examples to the relations between substance and its accidents (is treated separately). To which Benmakhlouf forgets that the notion concerns all relations (beyond those of categories). He talks about "connections of phenomena" and "model" without putting the basic natural - logical concepts first. Which leads to confusing reflections.

Extensive knowledge expansion. Benmakhlouf talks about analogical reasoning and its evidential value. "God is the creator," said to someone who wants to hear about God, presupposes that one (the speaker himself, the hearer) knows by direct experience what "creating" is. The speaker must first know by direct experience what God is, if not what he claims hangs in the air. All analogical speech, if it is to be real, relies on direct knowledge of both terms of comparison. Thus: if I want to say something about reasoning consciousness in terms of brain operations, this presupposes that I first know what 'reasoning consciousness' is, what 'brain operations' are and what precisely is the connection between both terms of the equation. If one of the terms is a blind spot, then I am talking in thin air.

2. 5 The term 'being'

Criticism. I. Kant (1724/1804), L. Coutural (1868/1914), G. Frege (1848/1925), B. Russell (1872/1979) and others criticized the concept of being. Similarly, I.M. Bochenski, *Philosophical Methods in Modern Science*, Utr. / Antw., 1961, 61: "Most words of colloquial language are ambiguous. For example, the word 'is' has at least a dozen meanings that vary. It is therefore expedient instead of such words to use artificial but unambiguous symbols." So much for a first fact. A second is the fact that all the critics, Bochenski among others - write books in everyday language in which the term "his" is regularly used - among other things to explain mathematical and logistic texts in which exact terms are unavoidable - which are nevertheless perfectly unambiguous! The question is: "How to understand this contradiction - critical and at the same time very useful?".

Are.

1. "Being," "being as all of reality" are nouns that pose few problems (matter of agreement on meaning).   Verbally used, the problems begin.

a. "All that is, is." 'Is' there clearly and plainly means 'exists,' "is attainable." That is the existence rendering meaning.

b. "All that is so is so." Copulatively (used as a linking verb) "is," here with "so" denoting being, forms one term that has essence descriptive meaning. And it does so in three main meanings:

1. total identity of something with itself (total model, as in the definition),

2. partial identity of something with something else (partial model), i.e., analogical language,

3. total non-identity of something with something else (counter-model) as in contradiction.

Conclusion: identitive use.

Its own 'akribeia,' accuracy of the colloquial language. This is already evident from the fact that the above-mentioned critics commit texts that show a lot of 'akribeia'. Yet there is more: logicians in their critiques isolate the term 'is' e.g. from any context. Thus R. Blanché, *Introduction à la logique contemporaine*, Paris, 1957, 17. "The copula 'is' exhibits a multiplicity of meanings. Thus the belonging of a proverb to a subject in "'Pieter is a man'" and the belonging of an individual to a class in "Pieter is a man." Thus the implication of a saying by a subject in "Artists are sentient" AND the inclusion of a class in a class in "Mammals are vertebrates." So the equivalence in the affirmed form in "Paris is the capital of France" and in the form of an expressed definition in "The circle is the geometric location of points that are at the same distance from a fixed center."

Bringing down the colloquial language in this way is simply a projection: Blanché pretends that the colloquial language is an exact language and demands of it what he must demand of a logistical text! Situate the phrases he mentions in their real context within which they are uttered in life, and they lose their ambiguity. However, they lose that ambiguity in Blanché's book in which he uses colloquial language throughout! Surely one does not confuse the two uses of language, the colloquial and the mathematical-logistical! They each have their accuracy type. And note: "context" regarding colloquial language is twofold: the text before and after the phrases he quotes, and the overall life situation in which such phrases are uttered. To take a text out of context is to subject it to arbitrariness.

2. 6 Sign Theory.

By way of introduction. A map is a sign that refers to a landscape. A signpost is also a sign that refers to a landscape. What is the difference regarding "reference"?

Let us address this for a moment because both provide truth and are thus 'models' of their original, the landscape. When we are traveling - e.g., in the south of France - we look at it as if

the map is, in a certain sense (i.e., analogically), the landscape itself: through those 'signs' we see the 'signified'. And yet, what a distance between sign and signified!

Definition. Something, if it refers to something else by similarity or consistency, then it is a sign (model providing information) of that other something (its original asking for information). This is the core of all semantics (sign theory).

Typology. Go figure.

1. Resemblance. A portrait, a painting: - they are signs in virtue of likeness (like the map of a moment ago). Sign and signified are copies of the same set.

2. Coherence. The relationship "part / whole" is the basis here. This one is manifold. As cause stands to effect, so fire stands to smoke (and fire is a sign of smoke and vice versa). As the means to the end, so the plow stands to cultivation (and is a sign of it). As the symptom stands to the disease, e.g., high fever stands to a severe flu (and that fever is a sign of being sick). But the connection can be limited to pure simultaneity: for example, the arrival of swallows in our regions is 'sign' of spring. And black clothing can be "sign" of mourning.

- *Natural and non-natural signs*. A signal, a password, - they are agreed-upon signs. Just as the black attire of a moment ago is a socially agreed upon sign of mourning. The connection - similarity and especially coherence - is there but o.g. human will. A sign can be associative. If a mother notices a young man in his twenties, she easily thinks of her son in his twenties in virtue of resemblance. A fragrant handkerchief reminds a lover of his fiancée who gave it to him as a gift. In virtue of consistency. Books of algebra and logistics are full of symbols that are signs of concepts in virtue of agreement that created coherence between material sign on paper and some concept.

- *Unequivocal or multiple sign*. A bloodstain refers to hurt or moonshine. But already the plural ("or hurt or moonshot") shows the ambiguity of a "bloodstain. And, if hurt sign, what hurt? In the Marcus Gospel (13:22) Jesus says "There will appear false Christs and false prophets who will perform signs ('sèmeia') and miracles ('terata') to deceive, if possible, the elect." Jesus points clearly and plainly to the multiplicity of "signs" (of extra- or supernatural power) and "miracles" (unusual but impressive things that testify to something higher) and advises Christians not to be naïve about them.

- ***Sign and reality***. One hears it more often: "A sign is not reality." Beware: those who speak in this way are speaking conversational language. Ontological language calls a sign one kind of reality in the sense of "not - nothing but something." After all, were the sign absolutely nothing, it could bear neither resemblance nor connection to anything else.

- ***Syntax and pragmatics.*** The signs in addition and subtraction '+' and '-' are signs that connect other signs - e.g., numbers. In themselves they are incomplete but situated between numbers they 'mean' fully what they are, syntactic (connecting) signs. "He is coming!" can be a signal to attack someone e.g.. That phrase is both an observation and a signal, i.e. sign with an intention, - with an orientation toward an outcome. This second aspect makes it a "pragmatic" (result-oriented) sign.

Metaphoric and metonymic sign. It is simple: if similarity sign, then metaphorical sign; if coherence sign, then metonymic sign. For example, a map is a metaphorical sign of the landscape and the signpost is a metonymic sign.

2. 7 Similarity and coherence in premodern thought

Bibl. st.: G. Welter, *Les croyances primitives et leurs survivances*, Paris, 1950, 72ss . Steller mentions L. Lévy-Bruhl (1857/1939); *La mentalité primitive* (1922) who, after more thorough study, no longer dismissed premodern mentality as "prelogical": premoderns reason as we do, but starting from partially different axioms.

Dynamism (manaism). A main axiom among primitives reads, "All that is real is carrier of life force." In ancient Greek 'dunamis', in Latin 'virtus'. In the Bible 'ruah' (= spirit). In modern language 'fluid' as a representation of the temporal, of the subtle of that life force that sails through everything. 'Manaism' comes from 'mana', charged with life force. Cf. G. van der Leeuw*, Phänomenologie der Religion*, Tübingen, 1956-2, 3/9 (Power).

- ***Magic.*** Magic and tabooism are two applications of dynamism. In acting magically, an initiative is taken to achieve a certain goal through fine matter. Magic consists in acting with fine dust on the fine dust of something else. Icy dust can be manipulated by the concentration of thought. In observing a taboo, one seeks to evade or counteract a harmful life force.

- ***Similarity and consistency***. Bibl. st.: J. Frazer (1854/1941; *The Golden Bough* (1890)) argues that magic and avoidance always work icy or fine material (= fluidic) contact. This he

calls "sympathy. As a result of effort and sacrifice, things and their processes work on an aiming point even at a distance through a rarefied contact. Frazer sees this happening in two ways.

- ***Remark.*** Avoidance (tabooism) is, as has been said, opposing a life force perceived as harmful. Thus: while her husband is hunting, the wife does not show herself to a neighbor to 'avoid' that through her the dunamis, the life force that brings hunting happiness, of her husband is weakened. The neighbor is "taboo," to be avoided during hunting time. For the neighbor's life force can harm happiness regarding hunting through tenuous contact.

- ***Likeness***. Sympathy, understand: fluid contact, can be brought about, caused by similarity. In Latin: "Similia similibus," the like through the like. This produces "imitative" magic. An infertile woman makes a doll representing her desired baby, gives it ritual sucking as if the baby were already there (what is now called "positive thinking"). That effort or sacrifice affects fertility in the ethereal sphere such that a child comes. The doll resembles the baby and, precisely because of this, sympathy or contact is created with the baby to be received. In this way the image is one (ethereal) with the depicted. In Java at that time, when the rice plants were blooming, the farmer and his wife engaged in sexual intercourse in the rice field in order to show the rice plants - mean: their fertility spirits - a model of fertilization. That effort that likeness occurs establishes contact on a rarefied plane to which the intended spirits respond. One drums on a cauldron to imitate the sound of thunder. That effort or sacrifice produces an effect in the rarefied origin of the desired thunderstorm with fertile rain.

- ***Coherence.*** Sympathy can be worked through something related to the intended. This produces "contagious" magic. A barren woman borrows the clothes of a child-rich neighbor - clothes loaded with that neighbor's child-rich life force - puts them on and appropriates some of the neighbor's life force. That effort makes contact with the tenuous principle of a future baby.

- ***Black magic.*** "Black" here means "unscrupulous. One rubs one's diseased organ with a package of herbs (absorbing the illy material principle of the disease by contact) in order to place those mischievous herbs on the public road in such a way that whoever passes by it (walks on it (physical contact)) will pick up the illy material principle of the disease: thus one transfers the disease to a victim. This is a form of casting lots. The scapegoat that the Israelites drove into the desert laden with their sins is an example of such a "transfer" to an animal. Thus one takes possession of someone's lock of hair, which continues to maintain a tenuous contact even

apart from the person, in order to act through its life force on the person to whom the lock of hair belonged,-mean: on the life force of that person.

Conclusion. Similarity and consistency are basic concepts, even in premoderns.

2. 8 Tropological value sense

Bibl. st. Th. Ribot, *La psychologie des sentiments*, Paris, 1917-10, 171/182 (*Les sentiments et l'association des idées*). - Ribot (1839/1916) was and experimental psychologist and sage. The little chapter now quoted shows how our minds (understand mind/reason, value-feeling and volition), especially now seen as value-sense, value something including something else o.g. similarity or association.

- **Definition**. A, if on A (model) o.g. similarity or consistency is instinctively reacted as if A, B (original) was, then A is an association of B.

- Association. - If something thinks of something else, then that other something is an association of that something. Ribot replaces "thinking of something" with "appreciating," "responding emotionally."

- **1. Metaphorical appreciation**. For a young man, if he resembles her beloved son e.g. has the same age - a mother feels within her the same - at least a very related feeling of sympathy arises as if it were her own son.

- Trope. Troop is reference. A kind of secret trail runs from the noticed young man to the mother's son, - son who is precisely not physically present. In the noted one, as it were, her own son is "present. The noted one is a parable - or metaphorical sign.

- **2. Metonymic appreciation**. A strongly in love lover - says always Ribot - passionately experiences an erotic feeling for the person of his "beloved. Consequence: if he sees or merely thinks about her clothes, her home, her furniture, then o.g.v. coherence he transfers his eros to "all that is hers." The same or at least an analogous feeling arises in him as if the beloved herself were present. Note: What is called "fetishism" springs somewhere from the same psychological mechanism.

- Trope. In the present that is "hers," the absent - or rather the absent beloved - emerges. What is present of her is cohesive or metonymic sign. Again that mysterious "trace" from the present to the absent.

- Identifying Feeling. All people know what Ribot describes. After all, they themselves live through it spontaneously. Mass psychology is frequent. Let us think of manifestations in which Iraqis, for example, burn the American flag on the grounds of consistency - the flag does not resemble the USA but is related to it - or tear up the portrait of the American president on the grounds of resemblance. Meanwhile, the trope-affected man knows very well that there is a distinction, indeed a gap, between the burned and the torn. Yet he identifies. Identifying is ingrained in us.

- Transfer. Ribot speaks of: "transfert par ressemblance" / "transfert par contiguité". This is "transfer by resemblance / transfer by 'aanpaling' (coherence)." All human experts, all psychologists know this very frequent phenomenon of mind. With sometimes its problems. What is sometimes affectionately called "association psychology," had a past, still has a present and certainly has much future.

2. 9 The concept of collection.

Since Georg Cantor (1845/1918), German mathematician, defined "set" as "elements (data of any kind) insofar as they exhibit one or more common properties. That definition has been argued over following Russell's paradox (which we will not go into here now). That also belongs to logistics (formalized logic).

Our basis in this matter is the concept of being as an element of the total set of all that is. People in ontological circles also call that total set "being." So that one can say that a being or something is an element of being. In other words, everything that is even something or not - nothing, is element of being or the whole of reality.

- Fallacy. A fallacy is false, deceptive reasoning. In logistical circles it is called a sophism. - An example - Eubulides of Miletus (-380/- 320) left us with what follows.

1. Removing one hair from someone's head of hair does not make them bald. Nor does taking away two or three. Nor does taking away one hair after another.

2. One grain of wheat is not yet a heap of grain. Adding a second, a third to it does not. So adding one after one to it does not yet make a heap of grain. The reasoning error. - We cite the dialectical criticism. Eubulides focuses attention on the elements of a collection (head of hair, heap of grain) when in fact it is a language issue.

One grain does not yet make up a heap of grain, neither does two, three, four and so every grain. So a hundred, ten thousand grains do not make up a grain heap either. Where is the sophistry? That is, the deliberately practiced invalid reasoning. First of all, one grain of wheat is assigned the property of being "(not yet) a heap of grain." Which is true. But one deliberately skips, with increasing quantitative change in the number (summa or sum) of heaped grains, the qualitative leap. Three grains is already "a tiny heap." Ten thousand is already an impressive heap of grains. The term "heap" includes two characteristics: 1. a sufficient number to, compared with just one grain or at most a few that show at a glance an orderly number of grains, 2. with a qualitative leap to provoke the notion of a grain heap.

A feature of dialectical thinking existing from Greek antiquity is to pay attention to a gradient. P. Foulquié, *La dialectique*, PUF; 1949, 64s.s., explains how the Marxist dialectic pays attention to a progression insofar as gradual quantitative (set-related) changes occur such that at certain moments a qualitative jump is ascertainable. Ice, liquid water, water vapor, among other things, are the result of such qualitative jumps when the temperature gradually increases. The needle of a scale, when the weight on one side gradually increases, will suddenly skip. Arsenic at gradual quantitative change becomes from medicine to deadly poison. Bullying becomes from psychological negligible over still tolerable to insufferable.... One euro is not yet an amount, two, three ... not yet either. But four thousand euros is an amount. A million euros we call a capital.

One sees that for just one element over a subset to a universal or total set is reasoned by Eubulides without taking quantitative jumps (depicted in the language) into account. Meanwhile we note the dialectical jumps: element, subset, universal set. One thinks of grain of wheat, heap of grains, heap of grain.

Or still: At a gas station. "How much does one drop of gasoline actually cost, ma'am?" "A staple, of course." "Then just fill up my tank." Compare the drop of gasoline to Eubolides' grain and "the tank full" to his "grain heap. Again, with quantitative change occurs a qualitative jump (here: the price) that is scornfully belied. As humor, it is a synecdoche: one does say "Just drip my tank full (for a nonsense number)" but one humorously means in part that the full tank nevertheless involves a price that takes into account the qualitative leap (full tank) (which is quantity regarding money).

2.10 This chapter summarized:

The correct understanding of given and asked and reasoning out to a solution - the basic structure of logic - requires an orderly proceeding. Consequently, the whole of Western metaphysics has in its history a series of order theories in which the forma, as the basis of order and arrangement, is central.

Thinking appeals to a disembodied mind. Psychologism, sociologism, physicalism or neuroscientism remain underpowered as explanations of logical operations. Natural logic thinks formae in terms of total identity with itself and partial or total non - identity of two formae with each other. The comparative method remains central. Similarities or correlations with data existing apart are represented in a relation. Model-theoretically, definitions apply on the one hand as total models, and tropes - metaphor, metonymy and synecdoche, on the other hand - as partial models.

In all this, it is apparent how important the role of the verb "to be" is, and how in the use of colloquial language, any gaps and ambiguities therein are compensated and clarified by the whole context in which the language use is situated. Reasoning out data and queries requires a theory of signs. Signs are there on the one hand by virtue of resemblance, like a map resembles the land depicted, but on the other hand also by virtue of coherence, like a signpost is coherent with the place to which it refers. Similarity and coherence are also found in many older cultures, where this is seen in connection with the concept of "life force," the basis of all that is real. The so-called tropological sense in psychology also testifies to similarity and coherence. For example, whatever resembles the beloved, or is related to it, refers to it. The concept of collecting also relates to ordering: one brings together that which has common characteristics. The total collection of all that exists is called being. Finally, a number of fallacies arise precisely because or because they do not take into account qualitative changes in quantitative leaps.