7. Basic Method

Content

7. 1 Compare

When I say “This house is high,” I have thought of “this house” to include “all that is high” and thus speak of “this house” in terms of “being high.” Behold what “comparing” brings about in a contact with a house! Now go into that in more detail.

Identical basis. There is total identity of something with itself (it coincides with itself)

But take note: “What is not distinguishable from something else is identical with it,” so thought G. Leibniz (1646/1716) German philosopher, one of the greatest thinkers of the 17th century, of two 'equal' linden leaves. To which Kant replied, “Even if they are geometrically 'identical' (and in this sense 'indistinguishable'), yet they exist apart, they are in different places, and are therefore distinguishable. Indeed, there is partial identity of one lime leaf with another. There is further total non-identity of something with something else (contradiction, contradiction).

Distributive and collective comparison. A. Guzzo, *Le concept philosophique de “monde*,” in: *Dialectica* 57/58: 15 (13.03.1961), 97ss., emphasizes that with Plato the concept of 'world' is central and includes both 'all' (distributive) and 'whole' (collective). Distributive comparison pays attention to properties spread over a plurality of instances (which therefore resemble each other); collective comparison pays attention to properties peculiar to all that belong within the same whole as a part (which entails coherence as a common property).

Internal and external comparison. H. Pinard de la Boullaye, *Etude comparée des religions, II (Ses méthodes),* Paris, 1929-3, 40 and 87, draws attention to the fact that within the same religion there are relations (sub-identities) amenable to comparison, and there are relations

of a religion to the outside (with e.g. the culture in which it situates itself), also amenable to appropriate comparison. This leads us to the concepts of “system” (religion) and other system (culture), both parts (“subsystems”) of one “supersystem”.

Similarly, e.g., a plant can be viewed 'comparatively' (i.e., paying attention to relations) on its inward relations (its 'structure') and on its outward relations (with its biotope). This leads us quite analogously to the concepts of 'system' (plant) and other system (biotope), both parts ('subsystems') of one 'supersystem'.

Quantitative and qualitative comparison.

1. Quantitative. H. van Praag, *Measuring and Comparing*. Teleac / De Haan, 1966, 24, says: “Measuring is comparison of quantities of quantities”. In model-theoretic language: one looks at the thing to be measured (original) including e.g. the meter (model and indeed measurement model). For example, one can talk about the height of a church (original) in terms of meters (model). Which gives quantitative information.

2. Qualitative. Qualities are also open to comparison. For example, one says, “This stone in the sun (original) feels (somewhat / fairly / very) warm (model).” The stone in question is experienced and thought of including human sensory perception (as a model) such that one can speak of it in terms of that same human sensory experience.

In passing what is called “fuzzy logic” - embedded in e.g. kitchen appliances - replaces such human sense perception with a mechanism that approximates (scanning between 0 and 1 as extreme “values”) e.g. temperature indicates where the “model” is available in the mechanism).

Conclusion. To compare is to pay attention to relations (analogical and contradictory) and that is to pay attention to similarities and coherences as main types of relation. A main concern of any natural logic. Which is sometimes forgotten by some critics of natural logic.

7. 2 The comparative method

Logic hinges on the comparative method. Note “compare” is not “equate. To compare is to view a given including another given. In terms of comparison, three main types can be established: 'concordism' pays one-sided attention to similarity and coherence; differentialism

pays one-sided attention to difference and gap; identitive logic pays attention to the two at the same time (which is unbiased comparison).

Comparative ("comparative") sciences. In this context, we pause to consider the logical in - what is called - "comparatism." Bibl. st.: Ch. Lahr, *Cours*, 608ss. (L' analogy). An application.

GG. Earth and Mars, by virtue of some common properties (partial identities), belong to the same set (spherical, rotating around the axis e.g.) and to the same system (rotating around the sun e.g.). Well, the Earth exhibits an atmosphere (condition of e.g. life).

GV. So wouldn't Mars too exhibit such an atmosphere and perhaps life? That would be one more common feature.

Model theory. One sees it: from Earth as a "model" (providing information) one reasons - comparatively - to Mars as an "original" (asking for information).

Gradation. One reasons from established similarities and coherences to established similarities and coherences, i.e., from some degree of similarity and coherence to a possible (as hypothesized) higher degree of similarity and coherence.

Comparative sciences. In this connection, Lahr speaks of "analogical induction": one is inclined on the basis of analogy - so he says - to posit a hypothetical resemblance (or connection). That it is "induction" is based on the fact that it involves sampling, i.e. factual material.

Three types of analogy. Lahr distinguishes three distinguished varieties of analogy.

- **1**. ***Means/object***. J. Saint-Hilaire (1772/1844) was the first to note the analogy that exists between the arm of man, the leg of the quadruped, the wing of the bird, the fin of the fish. In the wake of G. Cuvier (1769/1832), founder of paleontology (the study of life through fossils) , Saint Hilaire founded comparative anatomy (the study of the structure of organisms). He saw the organs as means to an end in a variety of life environments.

- **2**. ***Consequences/causes***. J. Priestley (1733/1804) saw the analogy that exists between rust and decomposition of matter, between combustion and decomposition of matter. He concluded that any (which is generalization) oxidation has as a consequence slow combustion.

B. Franklin (1706/1790) was struck by the similarity between the effects of lightning and those of the electric spark: he concluded that atmospheric electricity must exist.

- **3**. ***Being / laws, properties***. Physics saw the analogy connecting heat, light, sound because they are essentially vibrations (waves). Which suggested that all such phenomena might be governed by the same laws. And indeed reflection. interference, polarization etc. are properties common to thermal, optical and even acoustic phenomena.

So much for some insight into what comparatism is in the domain of the natural sciences. Something analogous applies, of course, to the human sciences.

7. 3 Differentiate (mathematical and non-mathematical)

By 'differential' is to be understood a. subjecting a totality (set or system) b. to an internal comparison such that (large or small) differences are exposed. A 'differential' in the strict sense is a set of values situated on either side of a systechia (pair of opposites) according to a standard that is “greater than / less than.”

Mathematical differentiation: The rule of three. In fact, it is usually the percentage rule of three (i.e., expressing percent). One differentiates between the extremes all, and just one, all intermediate values (some). This differential allows one to differentiate the demanded for a given value by reasoning from 100% (universal set) via 1% (one copy) to x%, i.e. the demanded one.

Accuracy. In the percentage rule of three, one is accurate to the nearest 1/100. One can make the same rule of three more accurate by identifying all (universal set) by 1000, 10,000, 100,000 etc. and thus be accurate to 1/1000, 1/10,000 etc.

Exactness. This is that accuracy which is accurate to the nearest so many numbers. This, of course, is the power of mathematical accuracy.

Non - mathematical differentiation. Here the set of differences (in identity) is classified (differentiated) according to qualitative jumps in virtue of quantitative changes.

- **a. *Measurable jumps***. Ice (0°C.) / liquid water (temperature greater than 0°C.) / water vapor (temperature greater than 100°C.). Here, material nature (H2O) itself, with gradually gradual (i.e. differences forming) temperature change, shows qualitative jumps: ice is not a liquid and vapor is not a liquid.

- **b. *Non - measurable leaps***. A garment can be "very demure / demure / less demure / tending toward immoral / immoral / exasperatingly immoral." The differentiation is situated in the preconceived notion of "demure. It is evident that cultural differences play a leading role here, although ethnological research shows that in all cultures, no matter how different, the differential mentioned here applies, except among members of a culture who place themselves outside the normative morality.-

- ***c. Floating measurability.*** A small amount (pocket money), a small sum / an amount (sum money) / a large amount (capital) form a differential in which the range "small / intermediate value / large" can be understood, but represent floating qualitative jumps.

7.4. This chapter summarized:

All comparison has an identitarian basis: there is total identity, partial identity or analogy, and total non-identity when comparing two data to each other. Comparison reveals similarities and correlations. Comparison can be distributive, within a collection, or collective, within a system. Comparison can be internal and external, quantitative and qualitative.

'Concordism' pays one-sided attention to similarity and coherence; different(ial)ism pays one-sided attention to difference and gap; identitarian logic pays attention to both simultaneously.

Analogical induction looks for similarities and correlations between means and end, effect and cause, and being and manifestation through sampling.

Differentiation also presupposes comparison, and reveals differences. Mathematical differentiation can be done via the so-called rule of three. One can also do non-mathematical differentiation. Here the jumps are not always measurable.