## *3.3. Induction*

*Content*



### *3. 3. 1 Plato's concept of induction*

Bibl.st. : L. Brisson, éd., *Plato, Lettres*, Paris, 1987, 194ss . Steller renders the Seventh Letter with the passus which reads as follows. "For all that is, three elements must be present in order for knowledge of it to be possible. The fourth is that knowledge itself. Fifth is what is the object of that knowledge, and what is real in a real way." Now follows our commentary in two parts.

***1. The socratic part.*** The "three aspects" are the "image" (understand: sample), the name and the definition. Name. E.g., "circle. Definition. This is the conceptual content that the name means: "That whose edge is everywhere the same distance from the center." 'Image' (picture).

E.g., a child draws with his little finger in the sunny Greek sand a "kuklos," a circular figure. Socratically, that accidental (not perfect) circle is a paradigm of "the circle" without more because in and through that one "image" (specimen) our mind grasps the general concept of "circle.

***Note***: "Plato had already as a young man become familiar with Cratylus (Note: a Heraclitean) and the Heraclitean doctrine which states that "all sense-perceptible things are in a ceaselessly flowing state, and therefore of such things no knowledge is possible," and to this he later held." (Aristotle, Metaph. 1:6 (114)).

What the child drew comes into being ("genesis") and perishes ("fthora"). But not so what the definition means, namely, the general essence of the circle as Socrates had taught Plato. The knowledge itself. The fourth aspect is the knowledge itself which includes name, definition and copy.

***2 . The Platonic part.*** The proper object of that three-part knowledge - which is inductive knowledge at its socratic - is "that which is real in a real way." Had the paleopythagoreans predicated all that ever was, now is, ever will be, as "true" (understand: knowable, rational) and "one" (understand: in all multiplicity one), Plato adds to that duality that all that ever was, now is, ever will be, is "being" (real) and "good" (understand: solid, valuable).

***Idea.*** As a result, what the definition means, 'idea' or also 'eidos', is the actual reality which is e.g. "the circle" and which depicts itself in all possible concretely-individual circles however impermanent (emergent/permanent) they may be. Just as the paleopythagoreans taught that sense things are "mimèsis" (image, depiction, imitation, model) of abstract ideas, so Plato teaches that of the really real (and not deceptively real) idea they are a "methexis" (participation, participation, share) and that what is really real in e.g. the circle drawn by the playing child, "exists" in and at the same time above that same material circle as his idea. That then is the induction, Platonically understood. That then is at once Plato's theory of ideas.

"New to this was the name 'share' (participation), for already the Pythagoreans held that things are based on imitation (imitation) of number forms ('arithmoi' usually misleadingly translated by 'numbers'), Plato, however, changed the name to share (participation)." (Aristotle, Metaph. 1:6 -114). Note: 'mimèsis' in ancient language is representation but then representation or 'imitation' or 'image' which is at once 'share', 'participation' as Plato's 'share' is at once 'representation' or 'imitation' or 'image'.

***Note:*** 'Arithmos' in ancient Greek language is both number (e.g. 2) and geometric figure (in the case of the 2 a line) and, if pythagorean, musical sound. Therefore the translation 'number form' is much more appropriate than our 'number'.

### *3. 3. 2 Dialogical induction*

Plato of Athens (-427/-347) in his Apology has Socrates of Athens (-469/-399), his teacher, act as a defendant before his judges: Socrates argumentatively refutes the charges; argumentatively he defends his own choice of life. In other words: he dialogues in the face of

his death sentence. Socrates continued his heuristics (method of definition) with the goal of his maieutics (educating people to define their own thinking) until the end of his life. Behold what may be called the main content of the Platonic dialogues.

***Plato's dialogues.*** He is the only one who ever wrote philosophy (which he called "dialectics") in the form of dramas: with problems of life (of that time) he confronts living persons who are forced to choose while living and especially arguing socratically. Again and again in each dialogue the different opinions on a main theme clash. E. De Strycker, *Concise History of Ancient Philosophy*, Antwerp, 1967, 88. Let us now turn both to the inductive value of such a dialogue and to the role of the idea in it.

***An update***. Current theories of social justice are extremely diverse. Liberalisms, collectivisms, social critiques, communitarianisms, nationalisms, populisms, solidarisms - note the plurals - all talk about the same "idea" viz. both the whole of society and all its parts should "each have their right" to "the good life" (as Plato says).

***Induction.*** Induction is essentially sampling into a comprehensive topic. In this case: social justice. The interlocutors, in works such as The State or Laws (two main dialogues) come to their speaking rights. This was - in passing - an Athenian method common in the "agora" (popular assembly as direct democracy). Herodotos of Halicarnassus (-484/-425) in his Historiai methodically allows other opinions to speak first and then puts forward his opinion. This method thoroughly governs Plato's dialogues: even if one person - usually Socrates - leads the debate, what he states is intimately related to what the others assert. Well, it is clear that the idea of "social justice", once it is raised from a plurality of - sometimes contradictory - interpretations, always shows a plurality of samples ... Even if some views are so wrong, they still illuminate the complex (coherence) that is society as a site of social justice, under one point of view or another. This induction naturally contains generalizations but it is first of all generalization, that is, situating a part within the system of total society. Each speaker, as a sample, exposes one aspect of the complex.

***The idea.*** Plato departs in his dialogues from "accidental" situations but he does not lose himself in anecdotal talk but he leads all opinions to a principle theme. With Plato that is one idea or another. What is an "idea"? It is always a summary of diverse existing data - here the parts with their own interpretations of social law - a summary which includes the general as well as the overall. There are those who deny the Platonic idea but to stay with our actualization

- current social theories - it is obvious that all, however divergent they may think as interlocutors, are talking about the same theme.

***Material object/formal objects***. Scholasticism left us with a pair of opposites: the same material (versta: unspecified) given is amenable to a plurality of "formal" (versta: perspectival) approaches that expose the unfolded richness of the unspecified, i.e. directly given, theme in chunks and pieces (10.4). Thus, social justice is a material object (direct given or phenomenon) amenable to a multiplicity of formal, i.e. one-sided samples (in the case of social justice: one-sided samples determined by partial interests). Now, what is the idea in this case? The one encompassing social justice. An idea is a comprehensive material object that sees its wealth unfold in the history of the formal objects it elicits in people.

### *3. 3. 3 Biological induction*

The term "biology" was introduced by G. R. Treviranus in his treatise *Biologie oder Philosophie der lebenden Natur* (1802) and independently by J. -B. Lamarck (1744/1829) also in 1802 in his *Hydrogéologie*. This is to give a name to all that is study of the living.

Bibl. st.: Ch. Lahr, *Cours*, 604/624 (*Méthode des sciences biologiques*). Lahr designates as the object of biology "living matter." Thereby he separates this type of matter from inanimate matter but without minimizing the material - and therefore physical - character of the living. Indeed, the method of biology is highly physical. One can distinguish several layers in it.

***1. Natural science layer.*** - Indeed, anatomy, physiology, ethology, - pathology (diseaseology) exhibit a physical (including biochemical) slant.

Application Model: A veterinarian, called to a livestock producer with beautiful, milk-rich cows, is confronted with a cow that is "not in good shape." The veterinarian breaks through his animalistic relationship with the animal to get to the bottom of the animal as a natural scientist. Result: symptom examination, questioning of the farmer, anamnesis (examination of the past). Once there, he can prescribe a cure.

***2. Biological layer***. - Biology is science not of "life" or "living matter" but of living individuals. Does science study "facts" (and "laws"), a veterinarian (like a physician) represents individual beings.

***2.1. Individuological layer.*** - This cow - "a particularly cuddly and sweet animal" says the farmer - is not that other one over there. A living being - especially at the animal level - is much more individual than inanimate matter. It is therefore much more unpredictable and complex.

***2.2. Typological layer.*** - The "cuddly - sweet" cow, moreover, is a member of a biological type or species. She is a ruminant. (a) Split hooves, multiple stomach, grinding teeth with flattened crown. (b) Excluding claws, single stomach, canines and grinding teeth with lumps on crown (which defines a predator). Analogical induction. - Analogy is both similarity (a ruminant and a predator are both living creatures) and difference (a ruminant excludes some creature characteristics of a predator. Analogy is both coherence (cows live in their own groups, possibly, as in tropical Africa - next to predators in the same biotope) and gap (ruminants avoid predators). In other words: the induction both as generalization (similarity/difference) and generalization (cohesion/gap) leads to species distinction or typology.

Anyone who really deals with animals, even if in the form of a pet or so, (circus people first and foremost) will agree with the above based on experience - with animals being more than "living matter" in the materialistic sense.

***Facts but also "beings***. Biology - always according to Lahr - pays attention to facts representing life phenomena, such that laws can be drawn up but it also pays attention to beings - living beings - whose being forms and individuals can be summarized in

"types. In this latter sense, biology includes its own typology (theory of types). It is this latter aspect that interests us a bit more here and now.

***Note***: Ethology.- (a) In a first sense, "ethology" dates back to 1. Stuart Mill (1806 /1873) and W. Wundt (1832/1920) who positively studied the habits of human beings within historically evolved societies. (b) Konrad Lorenz (1903/1989) and Nik. Tinbergen (1907/1988) and their thinkers turned it into a kind of natural science - derived from zoology - whose object is animals and their behaviors within their natural environments. Such study intertwines with other biological subjects such as physiology, ecology as well as psychology.

***Type Theory***. Take a rancher standing in front of his cows. He looks at one. This living "being" - the term "being" here is in the sense of "individual being" - is an individual to begin with: "this cow here and now"! He distinguishes her from all others by her unique

characteristics, her stature, hair color, markings of her coat, inclination to him and so on. But - according to Lahr - she is at the same time a biological type or species, namely a ruminant. There is no law here, only type. A "law" formulates at least two phenomena insofar as they mutually obey a necessary order. A type is a correlation of inclusion of some characteristics and exclusion of some other characteristics. For example, ruminants and predators do not belong to the same type.

***Induction***. This form of induction has two characteristics. 1. Observation: not so much experimentation and 2. generalization: namely, from a summative induction (a number of individuals observed) one concludes to amplificative induction (generalization to all specimens of the same type).

***Teleology***. Lahr argues that the in-and-out structure of type finds its reason in the purposefulness of living. So many mutually independent individuals, in the midst of so diverse environments, collectively survive from generation to generation passing on type.

***Ideal type.*** Lahr realizes that type goes hand in hand with greater or lesser deviations (among others by virtue of evolution). This makes him speak of "un type idéal," an ideal type that plays a summary role amidst deviations.

***Note***: Lahr here refers to comparative sciences as the basis par excellence of uncovering type. Thus, among other things, the connection "organ / function" is central. The ruminant is "cut" as e.g. herbivore which refers to the environment in which the ruminant moves naturally.

### *3. 3. 4 Human induction (understanding).*

Bibl. st.*: Sciences de l'homme compréhensives*, in: G. Thinès / A. Lempereur, dir., *Dictionnaire général des sciences humaines*, Paris, 1975, 199/202. It may be that D. Lecourt, dir., *Dictionnaire d'histoire et philosophie des sciences*, PUF, 1999, does not mention W. Dilthey (1833/ 1911) at all, we at least grant this figure a place in our logic!

Joh. G. Droysen (1808/1884), the historian of Hellenism, argues that the "Verstehen" is the strict and autonomous method of interpreting history. W.Dilthey, H. Rickert (1863/1936) and especially M. Weber (1864/1920) further elaborate Droysen's specifically human-scientific method.

A first step is the intuitive "understanding" ("understanding") of a singular phenomenon that offers a probable, plausible and particularly obvious explanation if the phenomenon to be understood is "zweckrational," i.e., rational handling of instruments

A scientifically valid interpretation, however, uses an "Idealtypus. Dilthey derives such type theory from "the organic world view" of his teacher Fr. Ad. Trendelenburg (1802/1872), an Aristotelian. The "ideal type" is a construction - it is a quasi-unattainable ideal - such that cultural phenomena are "understood" not in terms of the passages of individuals but in terms of a summary overview of a cultural whole.

Two of Dilthey's works stand out in this regard: *Einleitung in die Geisteswissenschaften* (1883) and *ldeen über eine beschreibende und zergliedernde Psychologie* (1894).

***Hermeneutics.*** That is the name of the method as understanding human soul-life. The fellow human being experiences something. That is "Erlebnis" (experience). He makes this manifest. That is 'Ausdruck' (expression). Such expressions are 'signs' that make the inner life of the soul (spirit) perceptible: through these expressions getting to know the neighbor is 'Verständnis'. (H. Diwald, Wilhelm Dilthey (Erkenntnistheorie und Philosophie der Geschichte), Göttingen, 1963, 153/170 (Der Ausdruck als Mittelglied zwischen Erlebnis und Verständnis). One can see: a kind of psychology plays an essential role.

The fellow man also expresses himself in cultural systems that transcend the individual and his experience: he expresses soul life in art, science, religion, the legal system, etc. These "objective" expressions are also objects of understanding.

***Type Theory.*** Dilthey studies "beings," individual being, as achievements of types. Which is a form of induction, starting from historical facts that are thus given a "structure. Thus, he distinguishes three basic worldviews as cultural types: naturalism (the soul is oriented toward satisfactions of man as a biological being in the midst of material conditions of life), freedom idealism (the soul of man as through his spirit independent of material conditions of life seeks free unfoldment in creative work), objective idealism (the soul of man seeks a balance between the individual and the world whole in harmony).

***Philosophy of life***. For Dilthey, "life" is the basic concept: "Life is the basic fact that must be the starting point of philosophizing. After all, that is what we know from within". It is clear that this hermeneutic view of man as an animated being is thoroughly opposed to any physics-

oriented humanity (cf. 1.4, H. Bergon's intuition) . Which does not prevent Dilthey from assigning such physics-oriented human science a place but not an absolute one, of course.

### *3. 3. 5 Probability in syllogism form*

Bibl. st.: Ch. Peirce, *Deduction, Induction and Hypothesis*, in: *Popular Science Monthly* 13 (1878): 470/482. In simple terms, Peirce sought to clarify the probable. In front a differential: none - but few / most - all (whole).

***Barbara.*** GG. Most of the beans in this bag are white.

This handful of beans comes from this bag.

GV. Probably most of the beans in this bag are white.

Deduction. From the GM that of the beans in this bag, most are white AND that this handful comes from this bag, one concludes that probably most of the beans in that handful are white. Like the universal set, so does - probably (because the GM includes a statistical component) - the subset. From most to probably most.

***Bocardo.*** GG. Most of the beans in this handful are not white.

This handful comes from this bag.

GV. Probably most of the beans in this bag are not white.

Or somewhat rearranged:

GG. But few of the beans in this handful are white.

This handful comes from this bag.

GV. Probably few of the beans in this bag are white.

Reduction. From the GM that in this handful few beans are white AND that it comes from this bag, one concludes that probably in this bag too few beans are white. As is the subset, so is probably the universal set. From but few to probably but few.

***Baroco***. GG. Most of the beans in this bag are white.

Most of the beans in this handful are not white

GV. Probably this handful is not from this bag.

Or somewhat rearranged:

GG. But few of the beans in this handful are white.

Most of the beans in this bag are white.

GV. Probably this handful is not from this bag.

Reduction. From the GM that few beans in this handful are white AND that most of the beans in this bag are white, one concludes that probably this handful is not from this bag.

Compare: GG. Most of the beans in this handful are white.

Most of the beans in this bag are white.

GV. Probably this handful comes from this bag.

This too is a reduction. So also this reduction only leads to a probable afterthought, like any reduction for that matter. But the reverse percent in the Baroco - reasoning above leads to an enhanced negative probability. Yet even this after-sentence is not more than probable, because the statistical component plays the role of "dog - in - skittles."

One recognizes Peirce's triad: "deduction / generalizing reduction / generalizing reduction." Some have a hard time distinguishing the generalization from the generalization. This is because Peirce has taken as a model "this bag" to denote the whole but take another model, and one sees the difference clearly.

GG. All the flowers on this gorse are yellow.

Well, this handful of flowers is from this gorse.

GV. So this handful of flowers is yellow.

Which is a deduction (one might call it a particularization)

GG. This handful of flowers is from this gorse.

Well, this handful of flowers is yellow.

GV. So all the flowers of this gorse are yellow.

Which is a generalized reduction or induction.

GG. This handful of flowers is yellow.

Well, all the flowers of this gorse are yellow.

GV. So this handful of flowers is from this gorse.

Which is a generalized reduction or hypothesis or abduction.

We have successively a particularization, a generalization and a generalization. Where "this bag," because the coherence between the beans in it and him is merely local, leaves doubt, there "this gorse," because the coherence between his flowers and himself is not merely local but organic, undoubtedly designates a whole (system) and thus clearly the basis of generalization, not generalization. But Peirce who primarily had causal coherence - not general coherence - in mind seems not to have seen this important nuance. Which does not prevent his triad from proving very revelatory.

### *3. 3. 6 Statistical induction*

Bibl. st.: w. Salmon, *Logic*, Englewood Cliffs (New Jersey), 1963, 55f. 'Universal' is called an induction when it is conclusive about 0 (none) or 100 (all) percent. It is called 'statistical' if it rules out, not 0% or 100%, but all values in between.

***Syllogistic.*** X % of the specimens in a collection exhibit the trait.

Well, e is one copy of it.

So e exhibits X % the probability (likelihood) of exhibiting the property k.

This is deductive reasoning (from all copies to just one copy).

***Syllogistic***. Retrieved from Ch. Peirce.

These beans come from this bag.

Well, these beans are 75% white (summative induction).

So all the beans from this bag are probably 75% white.

Which is an amplifying or knowledge-expanding induction. This is reductive reasoning: from "this" (subset) to "all" (universal set).

***Sampling***. Induction is essentially sampling. So e.g., in opinion polls:

proceeding on 1,000 interviewees (summative induction) one extends the information gained to e.g. 6,000,000 Flemish people (amplificative induction). Which is reductive method.

***1. Concept size*** (quantitative aspect). The larger the number of samples the more the generalization is approached. Note the a-fortiori reasoning: the reason of probability or chance increases with the multiplication of the samples. If one tests only two beans from Peirce's bag for its whiteness, that is a very narrow base.

***2. Understanding content*** (qualitative aspect). The more haphazard ("at random") the samples the more objective (more truthful) the samples are. Again, note the afortiori reasoning: the reason of chance to interpret correctly increases. Primitives often speak to strangers at the mouth (which ethnologists have experienced more than once): a reason to pay attention to the content of the sample! The way of asking questions can influence the answer: a reason to pay attention to that aspect of the content of the interview.

An application. A list is circulating of men baptized and raised Catholic who held high political office as extreme right-wingers: Hitler (Germany), Mussolini (Italy), Franco (Spain), Salazar (Portugal), Pétain (France), Pilsoedski (Poland), Horthy (Hungary), Dollfusz (Austria), Schusznigg (Austria), Tiso (Slovenia), Degrelle (Belgium), Pavelich (Croatia). Behold the GG. The GV reads, "What probative value does this sample have in the overall Catholic world?".

***Sample response.***

**1.** This sample should certainly be supplemented ("method of counter models") with a list of Catholics who were also baptized and raised Catholic and held high political office but were convinced Democrats.

**2.** The sheer enumeration that is the list does not mention the time conditions that favored the far-right which would show itself if one were to test non-Catholics on their political choice within the very same period.

***Conclusion***. One should therefore exercise caution when drawing conclusions - especially generalizations about the entire Catholic world - based on the theory of statistical induction. The fact remains that in the same period so many Catholics - baptized/educated - came to power as far-rightists, which gives reason to think about the atmosphere that prevailed in Catholic circles in that period. A sample - however small - always gives hàr information, - however limited.

### *3. 3. 7 Hume's concept of 'induction'*

Bibl. St.: J. Hacking, *L'émergence de la probabilité*, Paris, 2002. O.c., 23, Hacking argues with M. Poovey, *History of the Modem Fact*, Chicago, 1998 among other things, "The fact in the modern sense is an atomic, separated, independent fact admittedly but which can nevertheless serve as 'indicium' (designation) and even as positive evidence for another separated, independent fact". The "other separated, independent fact" is, among other things, a future fact.

***Critique***. In all that ever was, now is, ever will be, is there anything at all that is "atomic"? Is there any fact that is radically similar to nothing or related to nothing? The concept "Atomic fact" is at best a fiction. Every relation (partial identity) is tacked on afterwards which makes it an artificial relation, - not an organic - concrete one.

***Induction***. It is in this light that Hacking situates D. Hume (1711/1778) with his inductive statement: "Will this bread feed me?". Or again, "How does one know that the sun will rise tomorrow as well?". In general terms, how can we predict events in the future based on past determinations? We explain. Everything starts with singular, resp. private atomic facts: several times Hume fed on bread (which is summative induction). These facts make future facts (which are equally singular, resp. private) 'probably': 'Will this bread feed me here and now?' Which is amplificatory induction. La Logique de Port-Royal (1662) says to this effect: "One must believe that a fact is likely to occur if the circumstances are given which are usually followed by the fact in question." (Cited in Hacking, o.c., 21).

Thus, if Hume can expect - by virtue of 'habit' - that just as in the past (knowledge summary induction), future bread will feed him (knowledge extension induction), then the term 'habitually' implies minimal similarity to the previous bread and minimal consistency with it (e.g., same method of baking, same bakery). Atomic facts cannot satisfy this probability unless one introduces similarity and consistency.

***Clarification***. The previous bread had its being total identity with itself. The future bread likewise has its total identity (with which it coincides with itself). In this sense, the difference between the two is undeniable. To think of both total identity as one is to contradict, for they exist essentially apart. What is simultaneously true is that both breads are part-identical: similarity and coherence between them are undeniable. That involves predictive value and immediately the probability on which Hacking so emphasizes.

***Novelty***. Hacking argues that the Renaissance first exposed this likely. Nevertheless, we refer to the ancient Greek term "to eikos" or (plural) "ta eikota" by Aristotle (Analytica priora 2:27; Rhet. 1: 2: 15 e.g.). He contrasts a positive fact with a sentence expressing the probable. The terms in question are already common with Herodotos (Rist. 1: 155) and with Thucydides (1: 121; 4: 17). They mean "It is probable." Curiously, the Greek term 'eikos / eikota' means first of all 'similar' (which shows resemblance) and in that track 'probable'. Immediately also 'reasonable' in the sense of 'plausible'. If one were to ask an Antique Greek, "Will this bread feed me?", he would say - probably - 'Eikotos' (likely, plausible, with reason yes). 'Eikos' with Aristotle also means "what is usually but not necessarily always to be found." Thus it is 'eikos' that parents love their children,-with exceptions! The predictability of "Will these parents love their children?" is for Aristotle 'eikos' (yes, but not necessarily always) which implies that individually taken parental love for children for reasons in the past (summative induction) is 'eikos', probable, but never certain, though it is certain that "usually" parents love their children. Whether the gap - at his Foucault's - between the cognition that precedes the Renaissance, and the cognition that sees the Renaissance show up, is therefore as deep as Hacking seems to argue, is highly questionable.

### *3. 3. 8 Analogical reasoning*

Bibl. st.: J.F. Harris, Jr., *The Epistemic Status of Analogical Language*, in: *International*

*Journal for Philosophy of Religion* (The Hague), 1 (1970): 4 (Winter), 211/219. Steller claims : "Only if something literal is known about X, is any analogical speaking about X justifiable." He cites on this point W. Quine, Word and Object, New York, 1960, 15 : "Analogy in its basic meaning speaks of things already known beyond analogy." Also W. Blackstone, *Religious Language and Analogical Predication*, in: *The Iliff Review* XVII: 2 (1960: Spring), 24, it is stated: "If concerning God (or any other object) one must know something analogically, then one must know something of God (or any other object)." We explain this further.

***Analogy.***

" Johnny is the rooster in front of the children" (cf. 2.4) asserts that, as the rooster is to the chickens, so Johnny is to the children. There is consistency twice but the emphasis is on the similarity of consistency (going in front) such that the rooster and Rooster are interchanged. Those who speak in this way do so from given knowledge of both terms of comparison.

- "Fire is smoke" asserts that, as cause stands to effect, so fire stands to smoke. There is correlation twice but the emphasis is now on the correlation (causation) such that fire is partially identified (causal) with smoke. Those who speak in this way do so from given knowledge of both terms of the equation.

- ***Summary***.

If GG is the role of the rooster and that of Johnny, then Johnny appears to be the rooster of the children.

If GG is the role of the cause and that of fire, then fire "is" (the cause of) smoke. The GG means "the already known." Only then can analogy with cause be ventured.

- ***Analogical reasoning.***

This is knowledge extension reduction. Earth is a planet within the solar system with, e.g., an atmosphere that makes life possible. Mars is likewise a planet within the same solar system. Would Mars - therein similar to Earth - also have an atmosphere with life? One reasons from given (GG) similarity to possibly more similarity. As long as Mars has not been tested on the matter, it remains a hypothesis.

"God is infinite insight." If both God and insight as well as infinite are not already known - GG - the sentence is irresponsible. Those who speak in this way are doing it from an experience of God and that is as infinitely sublime being and from an experience of insight in people and in God.

- ***Analogical reasoning.***

"God saves man in need". Just as a man in need is helped by a fellow man because of his ability to help and his willingness to help, would God, who has the ability to help and the willingness to help in an infinitely elevated way, also help a man out of need? He who reasons this way, does it from a human model (= analogy) and extends his already given (GG) knowledge of God (as capable of helping and helpful in his exalted way) - on the basis of resemblance to human behavior - to the conclusion that reads: "Would God also help in human

distress?". However, as long as the one who so reasons has not actually and verifiably established that God helps, the reasoning remains a hypothesis.

Speaking about God. Harris sees three types of theological speaking. Those who speak of God in too human terms speak "anthropomorphically" and reduce Him to something creaturely. Those who speak about Him in "a holy silence" because He is too exalted to speak about Him (which would degrade Him to something below Him), disregard responsible human speaking. Those who speak of God in analogical ways acknowledge a minimal and essential resemblance (and coherence) to God (which always comes across as anthropomorphic speaking) but also acknowledge the difference (and gap) that separates us from God (which always has something of the holy silence about Him).

### *3. 3. 9. This chapter summarized.*

*For knowledge of to be possible, the image, name and definition must be present. Then our mind grasps the general understanding. For Plato, in addition, in and at the same time above the understanding, there exists the idea. That is the Platonically understood induction.*

*Through different opinions and through socratic argumentation, dialogic induction aims to educate people to think independently.*

*Induction is essentially sampling in a comprehensive theme. Of course it contains generalizations, but it is first and foremost generalization, i.e. situating a component within the system of society as a whole. Each speaker as a sample exposes one aspect of the complex. Thus one arrives at a summary of disparate existing data: many material objects lead to one formal object.*

*Biological induction attempts to summarize biological facts into being forms and types, which intertwines with physiology, ecology and psychology.*

*This form of induction observes and generalizes.*

*'Verstehen' as a method of interpreting history begins with the intuitive 'understanding' of a phenomenon. And that brings us to humanistic induction. A scientifically valid interpretation, however, uses an "ideal type," a construction such that cultural phenomena are "understood" not on the basis of the passages of individuals but on the basis of a summary overview of a cultural whole.*

*Hermeneutics is a method of understanding human soul life. The fellow man expresses his perception through signs. In art, religion, science, etc., such signs can transcend individual experience. Dilthey discovers certain types of worldview in people: naturalism, freedom*

*idealism and objective idealism. With "life" the basic concept, Dilthey's hermeneutic view contrasts with any physics-oriented humanism.*

*In simple terms, Peirce sought to clarify "probability" in a number of deductive and reductive syllogisms.*

*Induction is essentially sampling; deriving a general rule from established phenomena. It can be universal or statistical. Valid sampling requires a sufficiently large concept size, and a correctly defined concept content.*

*Hume sees reality "atomically," as separated facts, and asks how we can predict events in the future on the basis of past observations. This is Hume's concept of induction. Given the many similarities and correlations in reality, atomic facts are rather a fiction. Which involves the predictive value and immediately the probability that facts can be repeated in the future.*

*'Probability' as a philosophical concept was already familiar to the ancient Greeks.*

*Analogical reasoning is possible only when both terms, in which the analogy is expressed, are known. Such analogical reasoning is a knowledge-expanding reduction.*

*One reasons from given similarity to possibly more similarity. As long as such is not actually tested, it remains a hypothesis.*

*So much for some forms of and reflections on induction.*