

Theory of Science (62 p.).

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2. Theory of science.

SL Kwee, philosophy of science, in: *C. Van Peursen/ S. Kwee, finding your way in the sciences , I (Physics, biology, sociology, linguistics, philosophy of science)*, Rotterdam, 1966, 110 126.

Kwee characterizes science based on the fact that real science is a process, that is, an event that extends over time. It is immediately clear that as a process description, the definition of science is a story-like or narrative event. Kwee distinguishes:

a. Collecting the data;

b.1. The identification - i.e. scientific definition - of the data carried out on the basis of research work;

b.2. the arrangement of the data, - preferably within a scientific system. "In science it is about this insight", according to Kwee, ac115.

3. “Esprit de finesse/ esprit géométrique” (Bl. Pascal).

Ch. Lahr, Logique , Paris, 1933-27, 547, mentions a couple which we will define more closely.

1. Power of observation and vision.

In French, for example, “la finesse de l'ouïe” means the degree of hearing ability, “the sharpness, the sensitivity of hearing”. Analogous to this is the ability to

1.1. “of a single view”, to suddenly grasp something as something given (speed of perception)..

1.2. If that perception is hesitant, groping, to adhere to approximate intuition; in that case “one guesses, one supposes, - if necessary, one advises”, hypotheses spring from the faculty of perception that is still searching.

Incidentally, C.S. Peirce, speaking of the understanding of data, thinks in a similar sense. There is in some people a quicker insight and insight than in others, not only in perception but also in conjecture.

2. Reasoning mind.

In French, “esprit géométrique” means to proceed rationally as in classical geometry, that is, to prove theorems step by step from what has gone before.

This distinction comes from Blaise Pascal (1623/1662) a super-gifted man who invented an arithmetic machine at the end of 1642. Physical problems (e.g. the existence of a vacuum, equilibrium of liquids, the weight of air) occupied him. Probability theory (for spelling problems) too.

In 1657 he designed a geometry that postulated an axiomatic other than Euclidean, and from 1658 he occupied himself with infinitesimal calculus.

He was then Jansenist in background: only faith offers human existence and anchoring so that betting on God's existence and learning from that bet is the surest thing. With which Pascal of course indicates modern reason as too limited to gain absolute certainty on this earth regarding the existence of God: there is in faith, however sincere, invariably a dose of gambling - with "l' esprit de finesse", the faculty of observation and conjecture, where "l' esprit de géométrie", the step by step rational proof, falls short. Later S. Kierkegaard will speak about the leap of faith in God.

4. Science theory (epistemology).

'Episteme', in ancient Greek means 'science'. Epistemology is therefore the discussion of what science is.

Herodotus of Halicarnassus (-484/-420), the ancient Greek who described countries and peoples, is known as the father of historiography in the scientific sense. And indeed he already shows a typical scientific narrative structure.

1. First of all, he notes how the data, the phenomena of countries and peoples, are obtained.

a. What he learns through his own observation (because he has travelled through regions) and what he learns from others but has not seen himself. This last is one of the characteristics of historiography: the collection of testimonies that are all more or less reliable.

b. What he calls 'logos', that is, the text composed by him on that two-part basis, that is, his final editing.

5. *Ants, spiders and bees as models of method. (Fr. Bacon).*

Francis Bacon of Verulam (1561/1626), in his *Novum Organum Scientiarum* (1620), in which he proposes a thorough reform of scientific work, characterizes the three basic methods of modernity as follows.

1.1 . *Empirical rationalism.*

The empiricists are like ants: they limit themselves to accumulating loose data. Incidentally, in his *Instauratio magna* (1623) he seems to advocate Anglo-Saxon empiricism

1.2. *Pure or aprioristic rationalism.*

Following in the footsteps of R. Descartes, pure rationalists are like spiders: from their own minds they weave beautiful webs (theoretical insights), independent of empirical data.

2. *Experimentalist rationalism.*

The experimentalists are like bees: a. from flowers they obtain honey (loose empirical data); b. from their own being they produce nectar (theoretical insights).

In other words, experimentalism combines observational data (especially of a sensory nature) with reasoning (of an intellectual nature).

Note: - Immanuel Kant will later formulate the same basic insight as follows: without observations our understanding of things (phenomena in the first place) is empty; without concept formation our observations are blind. Only the synthesis of both aspects of the rationalist method gives the desired result.

But one should note: the gap between sensory experience (perceptions of the external world; inner sensations) and pure reason is a concept that dominates both Francis Bacon and especially Immanuel Kant.

In contrast, there is the scholastic opinion that perception or sensation is in fact already intellectual ('prior', 'rational') given the fundamental unity of man and that our intellectual insights are usually (not the transcendental or all-encompassing ones: these reach radically beyond our everyday experiences) sensory. The medieval scholastic method is somewhat revived in

the phenomenological approach (E. Husserl et al.) which locates the essence in the sensory data themselves, if necessary.

6. Popperian theory of truth and epistemology.

Sophie Lannes/ Alain Boyer, Les chemins de la vérité (l' Express va plus loin avec Karl Popper), in l' Express (Paris) No. 1598 (26.02.82), 82/88.

Karl Raimund Popper

Popper (1902/1994) was one of the great theorists of science of the 20th century. To immediately formulate the main proposition he advocates: "If a statement is 'falsifiable' i.e. can be caught on its weak points (refutable), then it is scientific".

Basic distinction.

People, when they say: "I know", in the sense of "I know the truth", do not enter the domain of the scientific spirit. After all - according to K. Popper in the interview - science is 'guessing', that is, merely hypothetical.

Maw: she does not pretend to possess the truth - understood as absolute - but is constantly on her way to it.

Confusion.

Scientific knowledge spread across the books, the laboratories, the research groups.

Result: no one can know even "the thousandth" (in French: "le millième") of, for example, physics or biology.

Conclusion

Scientific knowledge which we already characterize as hypothetical cannot possibly be possessed by just anyone: we know only fragments of it from hearsay.

Testability as a basic criterion. -

1. Many important ideas are not testable.

2. Scientific ideas are, i.e. we can attempt to refute them (refutability, 'falsifiability' (not in the sense of 'falsifiability' but of "possibility of being found to be false"). If such attempts are sufficiently effective, they may ultimately prove - not that the theory being tested is 'true' (that is impossible) but - that it really does contain a grain of truth.

The example of H. Poincaré (1854/1912).

This French mathematician and epistemologist passes for a conventionalist (*La science et l' hypothèse* (1902); *Science et méthode* (1908)). Conventionalism holds that scientific theories are merely agreements ("One speaks as if") but useful agreements that do not contradict the established facts they claim to discuss.

To claim that they refute the facts as they are in themselves is unworthy. With P. Durkheim (1861/1916), Poincaré is a conventionalist - Poper cites Henri Poincaré's example to illustrate his own rather sceptical position.

7. Geocentrism/ Heliocentric

Poincaré compares both theories. He proved that all sorts of phenomena concerning our globe and the solar system can only be 'explained' (in French: 'expliqué') on the basis of the idea that the earth revolves around the sun.

But surprisingly, in his book '*La Valeur de la Science*' he emphasized that despite its extensive explanatory power, the heliocentric theory is only closer to the truth, but not necessarily true.

Scientism.

'Scientism' has as its main characteristic the conviction, the belief in "science". Those who advocate such a thing are not scientists, because the true scientist does not even have to 'believe' in his own theory.

On the contrary: he must quickly cultivate a critical attitude, that is, know that he can be mistaken and therefore that his theory can be a mistake. Incidentally: that attitude is called 'fallibilism' (awareness of fallibility). Conclusion. Science and scientism are radically opposed.

Anti-authoritarianism (anti-totalitarianism).

The foregoing leads to a "new ethic".

Basic axiom: "An untestable authority, a supreme authority", does not exist. For we are continually mistaken. Of course, this does not prevent us from making as many mistakes as possible. But all of us – as we actually are – doctors, engineers, builders, designers, politicians, we continually make serious mistakes.

Realizing that, on the one hand, we must do everything we can to avoid mistakes, but on the other hand, we cannot escape mistakes, is a basic insight from an ethical point of view.

Democratic system.

This awareness leads to an anti-authoritarian and anti-totalitarian attitude, that is, the attitude that forces us to appeal to another to criticize our opinions.

Man learn to cooperate with others on the basis of equality. That is the foundation of democracy.

Incidentally: this tolerance, based on our ignorance, was already that of Voltaire. Something like this needs to be revived: “Back to Voltaire”. Or: “Back to Socrates”.

8. Falsifiability of tolerance itself.

In “ *The Open Society and its Enemies* ” Popper discussed the paradox of tolerance, in the sense that unlimited tolerance necessarily leads to the disappearance of that same tolerance.

In other words, if one acts tolerantly towards those who display intolerance - in other words, if one does not want to defend the tolerant society against their attacks - then the advocates of tolerance, and with them tolerance itself, will perish.

Intolerant theories.

This does not mean that more theories defending intolerance should never be allowed to have a say: as long as it is still possible to combat such theories with rational arguments and to keep them within bounds with the help of public opinion, it would be irresponsible to ban them. But one should claim the right to ban them, if necessary, and even by force.

It is conceivable that the proponents of such theories refuse discussion and teach their followers to counter rational arguments with fist violence or weapons. “In the name of tolerance, we should in such a case claim the right not to tolerate intolerance.” So literally K. Popper.

Open society.

The best defense is to form the minds of the people. To teach people that an open society, whose main characteristic is rational discussion and tolerance, is something rare and precious.

People can be surprisingly influenced by ideologies (thought constructs). For example, those ideologies that lead to terrorism and - which is an extreme form of injustice - to the elimination of the victims of terror, most of whom are innocent.

Terrorists themselves see this clearly and distinctly because they believe in this terrible theory - "The worse things are, the better". - Which gives them the so-called 'right' to cause all kinds of mischief in order to supposedly "make things go well".

9. The survival of more tolerant societies.

Popper confesses that he does not know under what necessary and sufficient conditions an open society can survive. According to them, it will always remain under threat. For example, a century of peace is certainly

enough to make many young people completely forget what the world was a hundred years ago and how invaluable an open society is. Unless those young people take an interest in history, at least if that subject is taught well. Which is generally not the case.

A war of extermination.

“It is of course true that we are threatened by a devastating war. We have to live with that and - who knows - that threat will benefit us.” (ac83).

Konrad Lorenz (1903/1989), the ornithologist and pioneer of ethology, that is, biology insofar as it studies the animal kingdom, a friend of Popper, claims that man is aggression and thus causes conflicts and wars. - Popper appreciates Lorenz as a great thinker but does not believe his view of aggression. Lorenz's opinion is refuted by the fact that mankind knows periods of peace for several generations. "But, of course, as in the case of the sexual instinct, one can 'explain' everything by the instinct of aggression or by its repression." (ac, 83)

To appreciate words at their true value.

Popper considers not to quibble about words an ethical duty that arises from our ignorance and fallibility in the following sense. Words in themselves have no importance. They are only the means to formulate judgments. These judgments, however, can be true or false, of course. One can always use other words to express the same idea. (...).

Truth.

If “we know nothing,” then what is meant is that, even if we do in fact speak the truth, we do not, generally speaking, have absolute certainty that what we say is true. Reason: we are fallible. For example, the death penalty is an irreversible judgment. The main argument against the death penalty is that we can be wrong.

10. Absolute truth in our ignorance.

The concept of “absolute truth” and the concept of “that we know nothing” go together. If there is no absolute truth, then everything I say is “true.” Only by being able to compare with an absolute truth are we able to become aware of our ignorance in this matter. The concept of “absolute truth” is necessary for our uninterrupted awareness of our fallibility.

Relativism.

The concept of “absolute truth” prevents us from resorting to all kinds of excuses or assertions that may be defensible in themselves, but which are not “(absolutely) true”.

That proposition makes relativism impossible.

The relativist assumes that there is no (meaning: absolute) truth. By this he wants to lead us to conclude, from the fact that we do not possess “the

truth”, that we do not even mention it anymore. Paradoxically, such an axiom leads to a form of (absolute) authority.

What the relativist does not even realize. Namely: if there is no truth accessible to us, then the claim of the strongest applies and not the claim that contains truth. That is “the” law of the strongest.

Knowledge and the “intuition/criticism” couple.

All ideas come through intuition. This is very important. But intuition alone does not allow knowledge of the world. To believe that you are rich in an idea thanks to your intuition and that this idea is true is to show a lack of critical spirit. It is to be naive, yes, to cherish a dogmatic attitude.

That is a mistake that many people make and many scientists too. So that we arrive at the couple “critical thinking and dogmatic thinking”.

Dogmatic attitude.

This is justifiable in the sense that if you do not defend your new intuition, expressed in a new theory, you will never discover its real cognitive content. Those who try to dismantle your new idea - in their own way 'dogmatically', i.e. defending it as stubbornly as possible - together with your 'dogmatically' defended intuition, form a kind of dialogue which provokes discussion.

Which brings us back to the essence of democracy, where dogmatically defended positions lead to a discussion, a debate, and thus we learn to experience its limits.

11. Criticism of democracy.

It is 1982. In the West, there is a kind of disillusionment with democracy. *Friedrich Hayek* (1899/1992), Austrian economist, one of the leading figures of neoliberalism, a friend of Popper, expressed his great concern about this in *l'express in 1981*.

Popper. - For many years now, an ideological propaganda (based on purely thought constructions) has been going on with great success, which claims that Western democracies are a disgusting phenomenon. (...) We do not indeed live in an ideal world - according to Popper, - but, despite the many construction errors that he shows, it is the best, the most just that humanity has ever constructed. For we live in that society that guarantees maximum freedom. (...)

The conspiracy theory.

This theory claims that all the ills in society such as war, poverty, unemployment, are due solely to evil intent: someone wanted it that way and of course benefits from it.

Popper called this postulate “the conspiracy theory.” It is falsifiable: a multitude of things happen in our societies that are caused by the unwanted and unpredictable consequences of our actions.

Inequalities.

There will never be a completely just world. Indeed, in our Western democracies there are inequalities where most people would rather live in a world where not only freedom reigns but also equality.

Paradoxical: it is as if - until now - in order to create equality, one must impose it by force, that is, by creating unfreedom. (...). Moreover, in the movement for equality there is an unpleasant element at work, namely the envy that some people harbor towards rich people.

May Popper used to attach more importance to equality in property - in his youth he was once a Marxist for a while.

All in all, despite its ills, which he by no means denies or even minimizes, Western democracy is the best possible form of society.

12 Xenophanes of Kolophon (-580/-490).

Bibl. st.: W. Röd, *History of Philosophy*, I (*Die Phil. der Antike 1 (Von Thales bis Demokrit)*), Munich, 1976, 75/82 (Xenophanes) Let us begin with the example of Xenophanes.

1. The term 'Iris' meant
a. the natural phenomenon of the 'rainbow',
b. the goddess Iris, - perhaps because rainbows connect 'sky' and 'earth', she was thought of as a messenger of the gods.

2. “What the mass is called 'Iris' is also, according to its 'fūsis' (nature), merely an aerial phenomenon which, when observed, shows purple, bright red and yellow-green colours” (Fragm. 32).

Note: - 'Fūsis' (Lat.: natura) is here the observed reality (here: of the rainbow) before any interpretation takes place.

Incidentally: since Thales of Miletus (-625/-547) a natural philosophy had begun in this sense, namely as the study of data as made available by direct observation. Here Xenophanes reduces 'iris' or 'Iris' to that which is immediately observed.

Original (subject)/ model (saying).

“These data were presented as a mere opinion ('dedoxaitho'), insofar as they somewhat resemble the originally experienced reality. (“etomōisi eoikota”). (Fr. 35). This is how Xenophanes speaks about the value of what

he cherishes as his own opinion. In other words, he makes a sharp distinction between what appears in a sentence as subject ('onoma', Lat.: nomen, later in Platon) and as blessed ('rhèma', Lat.: verbum, later in Platon).

The subject is the given as given and therefore original (which asks for information); the predicate is the interpretation of that given (Aristotle will later speak of 'hermeneia', Lat.: interpretatio) as information and therefore model (which provides information). If one puts these two parts separately within each judgment as judgment about something, then both fragments become very clear.

By the way: in Xenophanes (according to Röd, ov, 80) 'eidenai' means "to know on the basis of direct observation", while 'dokos' (think of Platon's later 'doxa') means the mere opinion based on what is directly observed. The 'eidenai' provides the subject (original) and the 'dokos', the saying (model).

Progress.

There are thus data that have more than one interpretation (versatility). Progress - according to X. - lies in 'zetountes', search work, research and, in their case, this occurs under divine guidance.

13. The phenomenological reduction.

In logic, 'reduction' means the opposite of deduction: the reduction concludes logically from the singular or particular to the general (generalization).

In phenomenology, 'reduction' means the reduction of the whole real object that consciousness notices to what is directly shown of that object in the perception. One can also use the term 'reduction'.

An example.

I look at the electric light in my room. The object of the phenomenon description is only that which I perceive of that electric light. The rest - for example that electric light is created by an electron current - I do not see directly. This is what physics teaches us, which logically explains the phenomenon of 'electric light'. This physical insight is phenomenologically "put between brackets" (in German 'Einklammerung').

Maw: what electric light is physically, is neglected as not directly given in the experience of the common understanding. There remains after that elimination "the pure phenomenon". To that phenomenology reduces itself.

Note: - In Husserlian phenomenology one speaks of the 'eidetic' reduction, i.e. the reduction of the pure phenomenon as just outlined to its general concept.

1. In Platonic philosophy, 'eidos' (the same practically as the 'idea') is that which is to be found in all instances of a collection as a common property. Husserl himself gives as an example "the red". A red flower, red cheeks, red sunset etc. are instances of red colour. The term 'red' summarizes all possible cases of red. It expresses the 'eidos' or the 'idea'. Plato meant the whole object 'red', Husserl as a phenomenologist only that which is immediately perceived as red. Conclusion.

2. Husserlian phenomenology first reduces the real given - for example this red flower - phenomenologically to the pure phenomenon in order to then reduce that real given to its general property in a second degree. To the "general concept" as traditional logic says. However, there is also a phenomenology of the singular: Guido Gezelle speaks in a poem about "this red rose" as a unique case. That is therefore non-eidetic phenomenology.

14. The phenomenological reduction concerning what is called 'existence'

In everyday language, 'existence' often means "existence outside our inner (mental) life".

For example, I dream that my aunt comes. Whether that coming of my aunt actually exists lies outside my dream of it. In fact, I have to wait until she is or is not actually there. - Now, the phenomenology of the dream content "my aunt comes" is limited to what I directly perceive of it in my dream.

As a description of a phenomenon, the representation of the dream phenomenon in question reduces itself to that dream experience of the arrival of my aunt. Phenomenology of that dream experience reduces it to the pure phenomenon without expressing itself on whether or not that arrival occurs in "reality" (as everyday language usually says, that is, that reality that is situated outside my inner life. In short, one says: "phenomenology switches off existence").

Note: - Everything that occurs in our direct perception concerning fantastic things (e.g. the phantasms of psychoanalytic patients), science fiction, postmodern word networks etc. that to begin with only exist in our 'inside' (this time it concerns a purely mental existence), is pure phenomenon for phenomenology. Here one touches upon the ontological meaning of 'existence' (existence): the content of a night dream, the content of a purely constructed theory in the mind of a professional scientist, those whether or not sexual phantasms on the lounge chair of a psychoanalyst etc. are not nothing, but something.

In other words, they exist only in the mind, in the interiority, and therefore have not an extramental but a mental existence. In this ontological, non-everyday sense, existence is central to the spirit of phenomenology:

everything that it does not establish as given (and therefore as existing, at least in the interiority) is for phenomenology non-existent, without any existence and apart from its object, the pure phenomenon.

Incidentally: mathematical formulas exist in the mind and are the object of phenomenology. Let us recall what was said in the introduction: “given: $a < a$ ” 'a' exists only in the mind of the mathematician, that is, mentally. That mental existence interests the phenomenologist.

15. Note: - “Zu den Sachen selbst”.

This German expression means that, instead of always placing the subject or I at the centre in whose psychic life the object is situated in order to 'understand' it, true phenomenology keeps the object in mind directly as a given without grasping it in that subjective - psychic or even subjective - social sphere. Again and again the phenomenological reduction.

The exclusion of the self.

E. Husserl, *Die Idee der Phänomenologie*, The Hague, 1950, 44, says that the I or psychic subject, insofar as it does not show itself directly, i.e. as given to our consciousness, must be radically eliminated in order to describe the given 'purely', i.e. unmixed, unconfused, with what is not directly given. The I with its conscious life can namely be interpreted as the seat and source of the psychic acts within which the phenomenon shows itself and thus be thought along with the given. No: “only and only the given in itself” (oc, 44) is the object of representation.

RAMall, *Experience and Reason (The Phenomenology of Husserl and its relation to Hume's Philosophy)*, The Hague, 1973, does emphasize that reflective (loop-shaped, self-attentive) consciousness is functioning while the description of the directly given is in progress.

However, this is no reason to confuse this fact with reflective consciousness.

Turn off “all the subjective”.

I. M. Bochenski, *Philosophical Methods in Modern Science*, 32, specifies “all that is subjective”

a. Everything that obscures the purely cognitive, that is, the grasping with the senses and mind of what is immediately given, is called subjective.

b. Subjective also means anything that is practical or pragmatic (result-oriented) in its assessment of the object to be described.

Bochenski rightly believes that disabling something like this is not so easy to implement.

Subjective illuminations of the object.

A positivist describes phenomena but it is noticeable that his presentation proceeds within the track of the special sciences and their

axioms and in harmony with the established research community. Yet it is clear that he grasps and describes data, phenomena, but not as purely as, for example, a Husserlian phenomenologist does.

It is the same when a Marxist describes phenomena: he grasps directly given realities but within the traces of Marxist ideology and in unity with the research community of Marxists.

Thus a social fact - for example a strike - will be understood and described differently by a positivist than by a Marxist. This difference indicates that the object is mixed up, indeed confused, with something other than the terrain object.

16. The elimination of “anything that is theoretical about the object”.

By this one means (according to Bochenski, op. cit., 29) hypotheses, lines of proof and knowledge acquired from elsewhere (*note*: from outside the directly conscious phenomenon).

Maw: the only theory that is valid - in the still indirect, as a framework - is the theory concerning phenomenology itself. - We have already seen it: it is something else to observe the electric light directly and something else to know that through the line and electron flow is at work.

The elimination of “anything that is tradition concerning the object”.

'Tradition' is anything that others than phenomenologists descriptively assert about the object - except for predecessors in phenomenology.

Let us think of what St. Thomas Aquinas (1225/1274; leading figure of scholasticism) says. *Werner Jaeger, Humanisme et théologie* , Paris, 1956, 112, quotes him:

“Whatever the true state of affairs in these matters may be, we are not much concerned about it. The reason is that philosophy as an investigation does not serve to know “what people say” but rather “qualiter se habeat veritas rerum”, the true state of things.” (*Thomas Aquinas, Expositio in libros Aristotelis De coelo et mundo, Roniac, Editio leonina* , kl. I, lect. 32, n. 8 (p.91)).

Renaissance scholars and even more in their wake the 18th century enlighteners considered the Middle Ages to be “dark times”, especially because they were bound by tradition and subject to authority. Contemporaries lived off that tradition and let what they thought and said about medieval thinkers be clouded by that prejudice. Werner Jaeger, himself a Protestant, felt he had to quote Thomas' text to improve that image, that visual impression, and in so doing he saw the Middle Ages as a phenomenon much more purely than many others.

Note: - How difficult it is to practice pure phenomenology is evident from what an expert, A. de Waelhens, says when he asks the question as a phenomenologist: "What is phenomenology?" The answer to that is very controversial. It is usually very difficult to determine what a single phenomenologist understands by 'phenomenology'.

Let us note, however, that de Waelhens speaks of nuances in one and the same phenomenologist and among phenomenologists among themselves. What we have described above as the essence of the phenomenological method - and what stands or falls with the basic concept of "the pure phenomenon", i.e. the given and nothing but the given - is not questioned by any real phenomenologist.

Phenomenology as the Beginning

“(With the provisional elimination of every theory concerning the object) phenomenologists do not want to deny the value of knowing the indirect at all. They consider this permissible, but only after the phenomenological foundation. This forms the absolute beginning and motivates to conclude the legal validity of the rules of the”. IM Bochenski , oi,35). In other words: first the given, only then the requested and the solution.

17. The situation of phenomenology within scientific methods. –

Bochenski distinguishes between direct and indirect methods.

a. The phenomenology,

Phenomenology, Husserlian or more broadly and generally defined - 'observes' (observes) and describes what is immediately given and therefore does not need to be demonstrated but shows itself.

b. The methods of reasoning.

Drawing on William Stanley Jevons (1835/1862 and Jan Lukasiewicz (1878/1956), Bochenski distinguishes between deductive and reductive reasoning (deductive: if A, then B; well a, therefore B) reductive: if A, then B; well B, therefore a).

c. Semiotic methods.

Since meaning and language play a major role (also in phenomenology), language analysis does not resemble the object intended by language but rather language about that object. Thus one can invent formalized thought constructions and then apply them to data (phenomena) that fill in the empty shells.

Yet it turns out that language itself is a phenomenon that must first and continuously be approached phenomenologically. The reasoning methods (and the semiotic methods, but with reservations about the latter) can be used as indirect methods.

Note:- In all this it has become apparent that phenomenology is nothing else than observing what is given (phenomenon, showing itself) and representing what is observed as accurately as possible as it is in itself, as Parmenides of Elea says, and not according to us.

Moreover, perception occurs both with the intellect that perceives something and with a sense that notices a gift.

When Lorenz, seated in front of the screen, follows the curves in their evolution, he naturally perceives them coming into motion with his eye (we call this, as psychologists, “sensory perception”), but he perceives more than that and in a purely sensory way: he is literally with his perceiving consciousness present at the time (we call the latter “intellectual perception”).

In other words, the distinctions that psychologists make in the course of their analyses disappear in direct experience. Lorenz pays attention to the weather in evolution both sensory (via simulation) and intellectual (through the simulation). It is the direct, not yet clouded by theory about sensory and intellectual perception, contact with the phenomenon itself in its purity.

Whoever finds the expression “intellectual perception” implausible betrays an a priori view: why should our perception, that is, our direct contact with reality, not be possible with our intellect? Man is a real unity of mind and senses and this is asserted in phenomenology.

18. Hermeneutic Method.

Bibliographical sample -- Arvon, *La philosophie allemande* , Paris, 1970, 116/120 (l' hermeneutique),

-- Hans Ineichen, *Philosophische Hermeneutik* , Freiburg/Munich, Alber, 1991.

Incidentally: Ineichen distinguishes between 'understanding', i.e. acquiring penetrating knowledge in the life of the soul, the understanding or 'verstehen' of texts and the understanding of human behaviour. According to him, text and behavioural understanding give access to the "ontological destination" of man - let us say: a conception of man with an ontology (theory of reality) as its basis. This is how the entire philosophy and theory of meaning are.

Ineichen reviews Schleiermacher, Boeck, Droysen, Dilthey, Rickert, and then points to Heidegger and Gadamer, whom he identifies as the high point. He then discusses Habermas, Apel, Ricœur and language analysis.

In ancient Greek “hè hermèneusis” means interpretation, explanation, - paraphrase. “Hè techne hermèneutikè” is the skill of interpretation.

1. Traditional.

Hermeneutics was an auxiliary method to actualize handed down texts (sacred books, legal texts), that is to say to make them applicable in - sometimes very new circumstances. Let us think of the fasting that some Biblical texts and traditional fasting times recommend, if not impose: how to measure that 'interpretation' of our industrial society?

2. Recent.

We distinguished with three variants.

2.1 . *Friedr. Daniel Schleiermacher* (1768/1834) left a posthumous work '*Dialectik*' (1839). He refounded traditional hermeneutics and turned it into a theory of knowledge (gnoseology, resp. epistemology, the theory of science): what an existing - sometimes centuries-old - text contains in terms of knowledge and thought content, is fully understood thanks to experiencing it.

Note:- This process involves two stages.

a. Meaning.

First, one must understand the sentence as the author of the text intended it, in his situation.

b. Meaning foundation .

The current data can then be taken into account to enable an adjusted interpretation if necessary.

Together we call the two 'meaning-making' or 'interpretation' from a two-part “Sitz im leben”, a situation in life, i.e. the life of the text author and that of the hermeneutics that actualizes.

19. The “historical school”.

2.2. The “historical school”. As a method of historical science, the Schleiermachian method is re-established by historians. FK Von Savigny (1779/1861) is the founder of the historical school. In his footsteps JG Eichhorn, W. Grimm, especially Von Ranke. By tracing through the remains of witnesses of the lives of people in the past, as many details as possible are gathered so that a total view – as far as the past allows such a thing – arises in the mind of the historian. It is a form of empathizing through the signs (remains of witnesses mean something from the past) in the – if necessary inner – life of previous generations.

2.3. *Wilh. Dilthey* (1833/1911). - His *Einleitung in die Geisteswissenschaften* (1883) inspired people like Eduard Spranger, M. Frischeisen-Köhler, Theodor Litt, H. Nohl, G. Misch and others.

a. Following the example of mathematical physics, a way gradually emerged to scientifically explain human behaviour ('Erklären'). Preferably as causally explanatory as possible.

b. Dilthey accepts this scientific anthropology but sees its limitations: he introduces the 'hermeneutic' or 'comprehensive' method to arrive at a spiritual science.

(1) The expressions in behavior and the behavioral products (e.g. a historical event, a painting, etc.)

(2) are interpreted as signs, i.e. exposing data

(3) of the inner life (the soul, the spirit) of fellow human beings. To penetrate through these signs to what fellow human beings think, feel, and intend inwardly is the purpose of such 'Geisteswissenschaft', or as one now calls - although often meant quite differently - 'human science' (1950+).

Sign interpretation.

What *Johann G. Droysen* (1808/1884); *Geschichte des Hellenismus* (1877/1878) calls "die Ueberreste", i.e. the remains, of the past (i.e. the sources of knowledge of the historian) Dilthey calls "die Ausdrücke", the expressions. Of what? Of what in the romantic atmosphere Dilthey places central "das Leben", life. And in the first place the life of "der geist", the spirit. "The expression (of life) is the bridge, in a certain sense, between living through ('Erleben') and understanding ('Verstehen')". "Understanding ('Verstehen') is a process in which we, from signs that are given to us from outside ourselves - think of the remains of witnesses, i.e. the expressions, ('Ausdrücke'), live through and know inwardly" Thus W. Dilthey himself.

3

In summary: "Experience, Impression, Understanding": these three aspects together form one single inseparable unity". (*H. Diwald, Wilhelm Dilthey (Erkenntnistheorie und Philosophie der Geschichte)*, Göttingen/ Berlin/ Frankfurt, 1963, 153 ff. (*der Ausdruck als Mittelglied zwischen Erlebnis und Verstehen*). One sees that behavioral observation and observation of products of external behavior are an essential aspect of 'understanding'. However, in contrast to a certain - moreover quickly abandoned as too limited - behavioral psychology (behaviorism, Pavlovism), here the soul, spirit, inner life are placed central.

20. The Hermeneutic Method.

The word 'duiden' has become very common in our Dutch-speaking circles, especially since +/- 1970. 'Duiden' used to mean "to make it understandable to the people". Its root can be found, for example, in 'indicate something' (to attract attention to something), in 'indicate' (to point out), 'betekenden' (to indicate something), in 'ten euvel betekenis' (to indicate something badly).

Hermeneutics.

Comes from the ancient Greek “hermèneutikè techne” (Lat.: ars interpretationis), the ability to (1) express what one thinks and feels inside, (2) to explain a statement, possibly by interpreting or translating it.

Traditionally, hermeneutics was an auxiliary science in explaining statements and texts: theologians and biblical exegetes exemplified texts; jurists further elucidated legal texts. Above all, it came down to clarifying a given text as an illumination of a situation, as for example applicable to a case, a concrete case. For example, murder without premeditation falls under another text from the code of law, - text that legally elucidates killing without premeditation.

Recently, especially since Friedrich Daniël Schleiermacher (1762/1834), hermeneutics has become a real epistemology instead of a subordinate method based on texts: the entire process of knowing - certainly knowing what goes on in a person - becomes a matter of explanation or interpretation.

In Schleiermacher's work, the translation of a text into action is very prominent: one only 'understands' (verstehen) a Bible text to the extent that one experiences it practically, making it 'true' while living it.

Note:- This brings German hermeneutics close to CS Peirce (1839/1914) who states that a movement only becomes clear in its true scope if it leads to action according to that assertion. This is called Peirce's "pragmatic maxim", his pragmatic rule. Incidentally, Peirce's entire conception of man is 'hermeneutic': man is simply an interpretant or interpreter.

The German historical school (F. von Savigny (1779/1861)) sees hermeneutics as a historical method: if the historian immerses himself as completely as possible in what the past has left us, he will know that past as truly as possible and interpret it as truly as possible.

Here the monuments, the inscriptions, the chronicles, in a word: all the usable materials of the past play the role of signs, as expressions of that past: through these signs the historian can empathize with what the past once was - within the limits of both the remains of witnesses and of empathy, of course.

Note:- The existential method of Sören Kierkegaard (1813/1855; the father of existentialism) contains a historical-hermeneutical moment: through the reading of the biblical texts one becomes Jesus' contemporary and, for example, one truly 'understands' the evangelical texts, as Schleiermacher's method tries to achieve.

21. Wilhelm Dilthey

Dilthey : (1833/1911).

Bibl. st.: Henri Arvon, *La philosophie allemande*, Paris, 1970, 116/117. - The interpretative method briefly outlined above is elevated by Dilthey to the method of the 'Geisteswissenschaften', of the 'spiritual sciences', i.e. the precursors of our current human sciences (cf. his *Einführung in die Geisteswissenschaften* (1883).

The prevailing method of natural science, which, following in the footsteps of modern physics, attempts to discover lawful and causal connections (what Dilthey calls 'Erklären', scientific explanation), Dilthey considers insufficient to truly understand the human soul (spirit), whether of an individual or of an entire cultural period. Only a further step, which he calls the 'verstehende' (comprehensive, understanding) method, exposes the soul: through the signs of the soul's life that are visible and tangible in observable external behaviour, one penetrates that soul's life.

Note: this does not eliminate the value of the natural-scientific anthropology; it surpasses it as an access to the 'Geist', 'Seele', of man.

With this, the hermeneutic method makes its full entry into today's world.

We point to two samples.

Paul Ricoeur, since his *Le conflit des interprétations* (*Essais d'hermeneutique*), Paris, 1969, re-establishes his reflective method by broadening it hermeneutically.

Wilfried Daim, *Tiefenpsychologie und Erlösung*, Vienna/ Munich, 1954, 18/23 (*Three Methods*) proceeds phenomenologically (Edm. Husserl) but according to the hermeneutic method (W. Dilthey) which he deepens into the depth psychological method (S. Freud et al.): he penetratingly interprets the observable expressions of the (in the Biblical sense) unredeemed soul down to the un- and subconscious layers of the soul's life.

Meaning-making (meaning-conception, meaning-foundation).

Jaap Kruithof, *The Meaning Giver* (*an introduction to the study of man as a signifying, appreciative and acting being*), Antwerp, 1968.

We quote the definition. "We call 'meaning-making' the activity of man whereby, with the help of principles, he structures himself as a totality, situates himself in the environment in which he is placed, and orients himself towards the development of this environment. (oc 505).

Kruithof's starting point is man as a cognitive (meaningful) evaluative (appreciative) and active (acting) being. If you like: a classical - modern triad.

Hermeneutic.

If one defines 'hermeneutics' as the study of man as the being that grasps data and interprets them, then one sees that Kruithof's definition of

'meaning' is one form of 'interpretation' but then an interpretation of the entire human being and his entire life. Signifying, i.e. providing with signs (e.g. in a language), valuing (estimating) and acting, i.e. actively performing are indeed hermeneutical acts: they attribute a judgment to the data.

22. Supplement and elaboration.

In current language usage we can hear: “He does not understand the meaning of it”. We call 'meaning-conception' that hermetic act that assigns a meaning to something, i.e. a scope for something or someone, that is located in that something itself. 'Sense-making' is then assigning a scope to something that is not simply located in that something as a given.

Let us consider an example.

On September 11, 2001, the two towers (World Trade Center) that adorn the landscape of New York as a world metropolis, are destroyed by two airplanes in an attack. It is suspected that the mastermind behind that attack is Osama Ben Laden, born in 1957 in Riyadh (South Arabia), known as a wealthy leader of Islamic terrorist actions.

When the American-English attacks on Afghanistan begin on October 7, the highly sought-after Ben Laden appears on Al-Jazeera TV (Qatar) with a message: what until then was an attack, becomes through his message a sign of the entire Islamic world and even of the anti-globalists of the world. The meaning of the attack itself is known through meaning perception, Osama ben Laden puts a new meaning in it and commits meaning creation.

Elaboration of the hermetic method.

Departure point.

Elisabeth Kübler-Ross, Lessons for the Living (Conversations with the Dying), Bilthoven, Ambo, 1970 (Or.: *On Death and Dying* , New York, 1969), distinguishes five stages in interpreting approaching death for the dying (oc 48/140)

1. Denial (“That's not possible yet. I can't believe it.”) and as a result a kind of isolation.

2. Anger (“How unfair! Why me already?”).

3. Things (bargaining, i.e. trying to reach an “amicable settlement” (“If God permits, there may be a delay”).

4. Depression (“There is nothing more that can be done.”)

5. Acceptance (“It is basically understandable that I should die now.”).

Note:- Kübler-Ross calls these 'stages'. They are rather 'types' of indications that are not strictly bound to that order.

The schedule.

Given (phenomenon): the fact that something occurs that points to that approaching death.

Requested: the way in which something like this should be processed “in my soul life”. We do say: “in my soul life”, because everyone knows that

death will come one day, but when it concerns “me personally - directly”, it becomes an 'existential' given, i.e. it becomes - usually suddenly - a coincidence in the normal (or perceived as normal) life that I lead.

We say 'coincidence', because, however structurally necessary death may be in itself, objectively, I, once confronted with it as approaching or even imminent, experience it as a surprise, i.e. as unforeseen, yes, (at least for me personally) unpredictable. In that sense, death as a naturally necessary event (objectively, i.e. in itself) is a coincidental event (cognitively, i.e. insofar as I can foresee it).

23. Typology.

The first two indications betray that personal death is experienced as accidental. The last two betray that the same personal death is experienced as a natural necessity.

One sees, then, that life - conceived of me - as a course with phases, with coincidences, turns unforeseen by me, forms the actual background of those types who are nothing other than (learning to) process a coincidence that causes suffering, i.e. as an 'evil' (mainly of a physical nature).

Meaning.

It was noted that one and the same objective fact - the near or as near experienced physical death - provokes more than one interpretation. This shows that there is first of all a conception of meaning - one understands that death is near - but immediately also a construction of meaning: one interprets that objective fact according to the possibilities of the moment.

So: initially, one does not have time to get used to the fact that one's life is in jeopardy, and one 'denies' ('It can't be possible!') or is furious about the surprise and disappointment.

Both together, meaning-conception and meaning-foundation, we call (total) meaning-making or explanation or interpretation.

The “frustration-aggression” hypothesis.

Bibl. Sample: R. Dercker, *Aggression* (Kant, Darwin, Freud, Lorenz), Amsterdam, 1967 (or.: *Aufklärung uber Agression* , Stuttgart, 196), 76/78 (frustration-aggression hypothesis of the Yale school).

= John Dollard in 1937 suggests a connection between disappointment and attacking instincts.

= J. Dollard/ L. Doob/ O. Mowre / R. Sears, *Frustration and Aggression* , New Haven, Yale Univ. Press, 1939, formulate the connection as follows: “If frustration (effort inhibition), then always aggression, attacking act”. In

terms of natural judgment logic: the subject (original, asking for information) is interpreted in a model, which provides information. The original is disappointment; the model aggression. In other words, one speaks of a frustration in terms of what provokes aggression.

= N. Miller, R. Sears, O. Mowrer, L. Doob, J. Dollard, *The Frustration-Aggression Hypothesis* in: *Psychological Review* 1941 (48/: 337/ 342, reformulates:

“If frustration, then aggressive tendency (first reaction) that may not lead to action”.

note here: resentment, delayed revenge dawn here.

Note:- Psychologists easily limit themselves to inner reactions. Instead of starting from the cause of the frustration, they start with the emotional reaction to the cause. As a result, the emotional world is 'hanging' 'in the air'. It is clear that 'the cause' of frustration is some form of evil, i.e. a course that deviates from its goal.

For example: someone is not becoming what he expects in life; someone is suffering a great financial loss or some other of the endless list of ailments on this earth.

So that the frustration itself is already an indication, however spontaneous, of the evil suffered. According to the Yale school, this rather 'natural' indication, the disappointment, is followed by at least an outburst that can lead to some kind of aggressive action.

This last action is in itself again an indication of the feeling of aggression, because apparently that action is not necessarily connected with the aggressive emotional reaction, except in very impulsive people.

24. The ABC theory (Alb. Ellis / E. Sagarin).

Bibliographical sample ,

-- A. Ellis, *Reason and Emotion in Psychotherapy* , New York, 1961, id, *The theory and practice of Rational-Emotive Psychotherapy* , New York 1964;

-- A. Ellis/ E. Sagarin, *Nymphomania (A Study of the Oversexed Woman)* , Amsterdam, 1965 (orig.: *Nymphomania (A Study of the Oversexed Woman; New York, 1964)*).

From this last work, an application of the rational-emotive psychology of both authors, we highlight pages 137/139 (the ABC theory of personality).

Here, reduced to its essential essence, they explain the processing - the interpretation - of evil in its basic components.

It is evident that the frustration-aggression hypothesis is the underlying theory. But the rational emotive hypothesis is more nuanced.

A is the given, that is, a course in personal - individual life that disappoints and, as 'evil', leads to suffering - and sorrow.

B are the personal - individual axioms, expressed in sentences; for example, "I'm never lucky in love either". It is here in the first place that the rational element is exposed as a co-cause of the emotion that is frustration.

C is the ultimate reaction to the negative given A; we say the form of behavior that reveals both the evil to be processed and the individual axioms ('principles', 'mentality'). It is the task of psychologists to fathom the axiomatics (B) and the cause (A) through these externally observable behaviors.

This is similar to W. Dilthey's scheme "Erleben, Ausdruck, Verstehen", where the 'Ausdruck' is C and 'Erleben' is B. .

Schematic.

It can be formulated rationally as follows: "A. is interpreted by someone in terms of B so that C follows". More strictly logical:

"If A and B (known), then C (understandable)". This is expressed in terms of sufficient reason or ground (A and B) that generate logical understanding (C is then understandable). One sees that Ellis and Sagarin try to trace the cognitive process to find the 'rational' "in all that is emotional". And to activate it therapeutically.

25. Common sense/neurotic sense.

In the interpretation of A, authors distinguish two main types.

1. The healthy interpretation.

After a serious miscalculation (A), someone judges: "I'll digest that" (B) and acts like "someone with a lot of common sense". Calm. Determines to get over it.

2. The neurotic interpretation.

After a similar serious miscalculation (A), someone judges: "I will never get over this." (B) and becomes upset, tense, - lets go.

Speakers. - Disturbed people - unfortunately in our society countless people are emotionally disturbed - usually not according to the healthy train of thought". (oc, 139). It is in point B that they cherish false axioms.

Irrational ideas.

Oc, 991ff. Ellis and Sagarin give samples of it.

- "If things do not go as one would like them to, then this is horrible and disastrous."

- "If something is or may be dangerous, one must be terribly concerned about it and constantly consider the possibility that it will happen that way."

- "If and only if a mature human being enjoys the appreciation and love of virtually every person of any significance in his or her environment, then he or she is truly saved."

- "If something happened in the past that left a deep impression, then - given the decisive influence of everything that happened in the past - that event will continue to exert the same influence".

This is what the neurotic person "tells himself" in point B, as the authors put it.

It is immediately clear that the negative sense-founding prevails in the neurotic soul over the business sense-conception. In other words, the sense-making in B is disturbed.

26. Interpretation of oracles.

G. Daniëls, *Religious-historical study on Herodotus*, Antwerp/Nijmegen, 1946, at 71, discusses oracle or interpretation of divine speech.

An example.

For example, Herodotus of Halicarnassus (-484/-425) tells us that after the legislation of Likorgus (-900/-800), the Spartans became a powerful people but fell into 'pleonexia', immoderation: out of hunger for land - now one would say 'imperialism' - they wanted to conquer all of Arcadia.

Oracle.

The puthia (Lat.: pythia) at Delfoi (La.: Delphi) consulted by the Spartan delegation, answers: "I will grant you that you... orchèsasthai..."

The interpretation configuration.

The versatility - certainly of sacred oracles which excel in this - can be described as follows: "precisely one piece of information (the text per boast) interpretation 1, interpretation 2, interpretation 3, i.e. more than one interpretation".

In their 'hubris', transgression of boundaries, due to their excess, the Spartans use the term 'orchèsasthai' as "dancing (for joy)".

But they lose the campaign and then, only then, do they realize that in ancient Greek 'orchèsasthai' can also mean "working in the gardens".

The second interpretation was: "to work as prisoners of war in the gardens of the Arcadians." They had rashly and judgmentally projected their self-assurance into the oracle of the Pythia.

Decision.

The ancient religions are full of oracles spoken by seers and prophets. After experience in correctly understanding what those who utter a boast mean in their minds, those religious traditions were rich in a real practical hermeneutics or interpretation: they distinguish sharply between the given, the oracle, as it was observable, and the interpretation, the correct understanding, of it.

It is therefore not surprising that a Heraclitus of Ephesus (Heraclites of Ephesus; -535/- 465) conceived of the fusi, nature, that is, the entire experienceable reality, as a 'grifos', a riddle that must first be deciphered before one knows what it means.

Now, it is not surprising in this so-called 'dark' thinking that he sees the enigmatic: - he was at home in religious tradition.

27. Alkmaion (= Alkmeon) of Kroton (-520/-450).

Bibl. st.:

-- J. Zafiropulo, *Empédocle d' Agrigente*, Paris, 1953, 99ss.;
-- W. Röd, *Die Philosophie der Antike 1 (Von Thales bis Demokrit)*, Munich, 1976, 71/73.

J. Zafiropulo writes: "Alcmeon, the great physician of the 'sect' of Croton, - whose fame was brilliant at that time". Croton is the city where Puthagoras of Samos (-480/-500) ended up so that Alcmeon may have known him.

Arts.

He was first and foremost a physician, coming from an independent tradition of healing that was linked to Dèmokèdès (Cat.: Democedes) of Croton in southern Italy.

Hermeneutics.

This is the current name of the doctrine concerning the interpretation of signs (whatever they may be) that show the behavior of living beings. Among physicians this is the medical form of 'semeiology'; symptom interpretation, on. - Suppose: a woman shows a tumor on her leg. The interpretation requires the questions: "Is this due to a sprain? Or is it a malignant tumor?" The problem is the ambiguity of one and the same directly observed fact. The term, 'tekmèrion', sign, understood here as a symptom, contains this ambiguity.

To observe ('□□□□□□□□□□')/ to indicate ('□□□□□□□□').

Röd, oc72: "In Alcmaion's theory of knowledge a sharp distinction is made between perception - direct knowledge - and interpretation - indirect knowledge".

'Xuniēnai' means to bring together in thought the subject (e.g. the symptom above) as an original that asks for information, and the predicate (e.g. one of the interpretations) as a model that provides information. To know and think the one including the other.

A hierarchy.

In the Pythagorean spirit, Alcmaion distinguishes three facts of knowledge.

- a. Animals perceive but miss our human interpretations
- b. People perceive but their input is some kind of interpretation.
- c. Deities see directly and with absolute certainty.

That is to say: the given immediately, without reasoning and the like, reveals the correct information for the perceptive faculty of the higher beings who are deities. This is how fragment 1a is understood: Man differs from the rest in that only he '□□□□□□□ □' indicates, while the rest only observe and do not indicate.

28. Note:- An element from an ancient theory of perception.

According to Röd, oc72, Alcmaion explained the mechanism of perception on the basis of "an airy substance". For this he could fall back on Pythagoras (Gr.: Puthagoras): perception, especially seeing, is taking in a thin or subtle matter in the eyes and brain that emanates from the perceived.

Just as Democritus of Abdera (-460/-370), the atomist, will later assert, Alcmaion asserts that something like a subtle image or at least stimulus enters the eye and the brain and 'works' so that man sees. That is 'aisthanestai' or 'aisthēsis', to perceive.

Incidentally, humans have this type of knowledge in common with animals.

Röd, oc, 72, says that this 'theory' - under the name of "doctrine concerning the spirits of life" (Lat.: doctrine de spiritus animalibus) - will live on into the thinking of Francis Bacon of Verulam (1561/1626; founder of the inductive method concerning causal processes) and of René Descartes ('Cartesius'; 1596/1650; the father of typical modern rationalism in its intellectualistic variant).

The concept of “thin or fine or subtle matter” is scientifically banished but it lives on in all kinds of occultisms in which one still distinguishes between 'astral' and 'ethereal' subtle materiality. The first is immortal like the human soul and shows itself in the twilight of the deceased; the second is mortal and perishes in the wake of the deceased biological body.

Incidentally, especially primitives and (what are called) sensitives claim to perceive this subtle matter.

Note:- Besides the subtle soul or soul-body, the doctrine of Alcmaion shows other Paleo-Pythagorean elements. For instance, his doctrine concerning the soul as an immortal being, indeed as to a certain extent a 'divine' being, since the soul "moves of itself", i.e. does not show the inertia or inertia of gross matter.

As a model of moving by itself, and not being 'pushed' by another reality, Alcmaion mentions the ever-moving heavenly bodies that, at least to the observations of that time, seem to move by themselves. Just like the heavenly bodies, the Paleopythagoreans called the soul 'divine' for that reason (astrotheological aspect).

29. Dream Interpretation.

Sigmund Freud (1856/1939), the father of the psychoanalytic method, wrote about dreams as the breakthrough into the conscious soul life of un- or subconscious data. We think of his *Traumdeutung* (1900). Now everyone knows that in certain primitive cultures dreams and dream interpretations sometimes play a major role. These primitive phenomena live on through the ancient, medieval, and modern cultural stages into our postmodern era.

Dream interpretations can also be found in certain paranormally oriented methods: there are even dictionaries with interpretations of dreams or dream aspects or dream types.

The interpretation already present in the dream data.

Freud believed that he could establish that a fact that can be tested can emerge in a dream in three striking ways.

1. The denial.

I dream that my eyes are well and healthy.

Symbol shortening: A becomes not-A, because I hear the next day that he died that night.

2. The displacement .

I dream that my aunt has died, where it was her husband who left this life. Symbol shortening: A becomes A'.

3. The omission or absence .

I dream that, when visiting my uncle, I see my aunt but my uncle is nowhere to be seen. Symbol shortening: A becomes O.

From this Freud concludes that in our unconscious soul life we deal with reality in more than one way: instead of A is A, A becomes either not-A or A' or O.

The interpretation of dreams, if it is not done naively, immediately involves two interpretation processes:

1. The dream is already an interpretation in more than one way,

2. The interpretation of that interpretation is then the responsible dream interpretation or dream analysis. This is what onirology, dream science, can lead to in terms of hermeneutics.

Note:- Let us note that children, for example, when they are bored with confessing something that deserves blame, often use the three distortions to save their sense of honor. "I didn't do it"; "He bumped into me, that's how I did it", "I don't know anything", if a flower pot has been knocked over in the classroom.

30. Science of Signs

There were two names (and also views on what a sign is) in circulation

1. Semiotics .

Since CH. S. Peirce (1839/1914) and also *Charles Morris* (1901/1971) *Foundation of the theory of signs* (1938).

2. Semiology .

Since *Ferdinand de Saussure* (1857/1913) with his work, *Cours de linguistique générale* (1916), compiled by three students, a work that initiated structural linguistic expression.

Winfried Nöth, Handbuch der Semiotiek , Stuttgart, 1985, unites both under the one title 'semiotics'. As semiotic pioneers he mentions Peirce, Morris, de Saussure, Hjelmslöv. The work breaks down into six chapters: foundations, communication and codification, verbal and vocal communication, non-verbal communication, aesthetic and visual communication, text semiotics.

Paul Ricoeur, (1913/2005), as a hermeneutic (interpretation theorist) tries to unite semiotics and semiology.

She mentions *Umberto Eco, La structure absente (Introduction to semiotic research)*, Paris 1372.

Gottfried Wilhelm Leibniz (1646/1726) Characteristica universalis . H. Burckhardt, Logik und semiotik in der Philosophie von Leibniz , Munich, 1980, is a study on Leibniz logic and sign theory in five chapters, supervised by *JM Bochenski* :

1. Leibniz' syllogistic (definitions), immediate deduction (opposition, conversion, etc.), figures and modes of the syllogism,

2. design of a rational grammar on logical-semantic foundations,

3. Semiotics, based on Aristotle's concept of signs, which studies three aspects: reality, the concept in our mind, the sign (especially the linguistic sign).

Here we find the famous *Characteristica universalis*, i.e. a construction of a general sign language as an axiom for all sciences - the precursor of later logistics,

4. *Ars combinatoria* (1666), a combinatorics, in the line of Ramon Lull (Lullens), 1235/1315, *Ars Magna* (1273/1275, a combinatorics), a logistic construction also starting from basic concepts as axiom for all sciences too. A logic logic inventionis.

5. Leibniz' logic (formal and applied) in its relation to mathematics and metaphysics.

31. Science of Signs (Edmund Husserl).

We link up with *F Schipper, Some comments on Husserl's theory of signs* , in: *Tijdschr. v. filosofie* (Leuven) 46 (1984): 2 (June), 302/318.

In his first period E. Husserl (1857/1938) thinks about the foundations of mathematics and logic, but psychologically (as he admits later). Language as one type of sign system naturally attracts his attention. Among other things: the question of what a sign is. For example, he writes:

“Language consists in the symbolic expression of psychic phenomena which we need, now to communicate these phenomena, now as sensory supports in the service of our own inner stream of thoughts,” in a review of *Ernst Schröder, Vorlesungen über die Algebra des Logik (Exakte Logic)*, vol. I, Leipzig, 1840, 258. Sensory supports are spoken word and writing.

Definition.

Sign of sign of something (of a thought content without more) can be anything that characterizes that something (that content), i.e. that is suited

to distinguish that something (that content) from the rest (...) ”. (*Philosophie der Arithmetik*, The Hague, 1970, 341). - The condition of possibility of this is “that we have clearly noticed the relationship between the sign and what is signified by it” (oc 342).

Species.

Husserl distinguishes two types.

(1) External signs indicate something without the content of those external signs showing anything that corresponds to what they indicate. Thus, linguistic signs are 'external' signs situated outside the cognitive and thought content of what they indicate. For example, we indicate a donkey with the term 'donkey', while in France one says 'âne'. Neither of the two sound forms betrays anything of the animal.

(2) Conceptual signs show a substantive connection with the signified: “hiha” imitates the braying of the donkey.

Note: It is noticeable that in a second period Husserl thinks more phenomenologically and, although he conceives the phenomenon as an objective reality, he nevertheless (especially in his third and last period) makes the sign depend on consciousness (intersubjective or not).

Which still keeps the psyche central, even if not in a 'psychological' sense (as he puts it).

32. Semiology and the phenomenological value of the sign..

Semiology .

CH. Bally, A. Sèchéhaye, A. Riedlinger, *Cours de linguistique générale* , Paris, 1916-1, is the work of three former students of *Ferdinand de Saussure* (1857/1913), who compiled a book from his courses after his death.

We will consider what appears to be useful from his science of signs (semiology). In this respect we will follow *Daniël Parrochia, Sciences Precises et sciences de l'homme (Les grandes étapes)*, Ellipses, Paris, 1997, 90 (La sémiologie).

Language.

According to Saussure, language is “a system of signs (signes) expressing ideas ('idées') - a system which thus resembles writing, the alphabet of the deaf and dumb, symbolic rites, forms of politeness, military signals, etc.

Semiology .

According to him, language was only the most important system among those systems that a science in the making, semiology, has as its object of study. 'Semiology' is defined by the father of what will be called

structuralism after him, "the science of the life of signs in the bosom of social life", with the aims of defining what a sign is, the laws that govern signs and their applications.

Sign.

Every sign is a duality "signifier (Sag)/signified (Seg)". A signifier is the sound 'cow'; a signified is the cow it designates; in other words, the sound 'cow' refers to (the referent).

Sign laws.

The main law is the system character, i.e. all signs are situated as components in an encompassing and coherent whole (the system) that partly determines its meaning. The phenomenon as a system is clearly depicted.

To cohere.

Saussure sees two types of linguistic phenomena.

33. Relations

a. Syntagmatic relations.

An example: "This rose is beautiful."

a.1. In space the words come next to each other;

a.2. in time (in the spoken word) they come one after the other.

In other words, although they exist as close as possible to each other in space and time, they are nevertheless separated (do not coincide). Each component (word) means something as a sign because it is opposed to (opposed to) the component that precedes and the component of the sentence that follows.

b. Associative (paradigmatic) relations.

The sentence "This rose is beautiful" is spoken or written by someone with a memory. That memory shows the following types of relations in sign science. 'Rose' makes you think of 'box' for example. 'Beautiful' is associated with 'cute'. But 'rose' also evokes 'plant' (as a type of plant).

Unlike syntagmatic relations, which are at home in space (and time), associative relations are at home in the brain ("or – let us add today – in a computer", according to Parrochia), where they represent "the external treasure that language is in each individual" (according to de Saussure).

Studyability.

The syntagmatic 'chain' of language units is relatively easy to study, because the overall system contains a well-defined number of elements (language units), (in the language of formalized logic, that is) connected to each other by an anti-reflexive, anti-symmetric and transitive relation.

The associative relations: that is something else. The 'structure' is uncertain. Predicting in advance what number of language units someone's memory (language) will recall is impossible; their order is also unpredictable. Indeed: "That rose is beautiful", "Beautiful is that rose", "Is that rose beautiful!" are all three possible and it is also possible: "What is that flower (that rose is meant) beautiful". Or "Is that rose now beautiful, say". In other words: Every language unit belongs to a constellation, i.e. a meeting point within which other language units that represent an indefinite number seek their place.

Note: This outlines the essential core of a structural language or rather sign science:

1. First of all, it fragments the language into language units, as small and incomprehensible and as meaningless as possible;

2. she combines them in all sorts of ways into a system upon system so that, if one has one linguistic unit - e.g. 'rose' or 'the', one must consider the rest, the complement, as also bringing it about.

Within that system, loving attention is paid, for example, to contrasts between language units.

Note: One aspect is educationally valuable: the language treasure or (in plain language) the vocabulary. The richer it is, the more nuanced and comprehensive the human mind and data can be described with it. That is its phenomenological, phenomenon-representing value.

34. 'Nomenclature';

'Nomenclature'; list of names by Saussure.

RC Kwant, *Structuralists and Structuralism*, Alphen aan de Rijn, 1978,18, says that Saussure linked the chain "the given things, the concepts they represent, the words as carriers of those concepts" under the list of names as a language treasure. He rejects this view radically and tries to prove it.

a. Some nouns (and then only apparently) can be interpreted as such under vocabulary;

b. the great mass of words do not fit as words that carry concepts that represent things. For example, "the weather" can pass as the image in concept and word of the weather. But "it is cold weather" or "There is no water" are not such representations.

Comments.

First of all, it is striking that Saussure speaks of 'things' as the object of conceptualization and vocabulary. Loose things that he designates as data that exist in sight.

Incidentally, something similar can be found in early logistics: loose 'things', thought of as separate from any relation, but usually designated by the term 'events', with the result that, in order to treat them logistically in their mutual relations, one has to introduce a separate branch of logistics, the "logic of relations".

Not so natural logic.

There, 'terms' are central. Well, a term can consist of one or more words. For example: "a marble palace" or "bigger than" or 'darling of'. It is possible in natural logic that one term can be represented by a plural of words. For example: "I sing" can mean: "I am singing" or "My profession is singing".

In both cases - in the semiology of Saussure and in (incipient) logistics - one starts with fragmented data, units, as simple as possible, in order to subject them to some combinatorics defined by well-defined axioms. In this sense, natural logic is the phenomenological-logical stage or level of natural language use:

a phenomenon (simple or complex) is observed, is assigned an appropriate term and thus enters the domain of natural logic which from the outset thinks of relations and nuances in terms - not in separate words.

35. Some basic concepts from Pierce's semiotics.

Its ontological background.

In some places, CS Peirce (1839/1914), as a pragmatist (as he called himself to oppose a pragmatism common in the USA that he found lacking in conceptual realism), speaks of "a first, a second and a third". In one of the interpretations, these terms mean what follows.

A 'first' is according to him that which to begin with perceives an observation (in the broad sense of "reality whatever it may be, grasp") as the first given. For example: "I see a girl coming into the sun". That girl who is coming into the sun is "a first", a first.

A 'second' is anything that is immediately grasped as paired with the first. In our case: the fact that she is in a landscape, for example. The first is imperceptible without the second. Let us call that for convenience "the second given" or "the co-given".

A 'third' is the fact that every perception, as grasping of reality, is a conscious act that in an emerging inner word expresses the given, the first

including the second, in a sentence. Here: "I see a girl coming into the sun". The third thing that imposes itself upon analysis of grasping reality is a given that is bound to a subject - in our case: I. Peirce calls that: a sign in the psychic sense (the act-with-the-content-of-that-act).

Such is the ontological basis of Peirce's theory of signs.

Note: Charles Morris (1901/1971); *Foundation of the Theory Signs* (1998) distinguishes three aspects of every sign in the above sense.

a. Syntactic aspect.

The sentence "I see a girl coming into the sun" consists of meaningful sounds (words and parts of words) that are pronounced one after the other and written one next to the other in a well-defined logical - grammatical order.

b. Semantic aspect.

The sentence expresses in signs - first internally spoken, then externally observable - what the content of a first, a second and a third is.

c. Pragmatic aspect.

That sentence is thought by someone, usually to establish a fact, and spoken with an intended result: for example, my friend is indoors and he doesn't see the girl: I say the sentence to inform him, for example, or to make him react with surprise. That is then, pragmatically speaking, a result.

36. Theory of interpretation or interpretation.

Peirce and, following in his footsteps, Josiah Royce (1855/1916; pragmatic idealist) base a theory of interpretation on the foregoing.

(1) Indeed, when I see a girl coming into the sun, I formulate this in an inner word, which is the inner, spirit-situated sign of it and

(2) I may express that inner word in a spoken language which is then the language sign of the first, second and third given. That there is interpretation involved, depends on my individual form of perception and on my inner and outer language treasure. A three-year-old girl, for example, will see the same girl coming into the sun but still sensitively different than I do as an adult. And her childish language will be correspondingly.

Explanation

Interpretation always involves a given that, once observed, is grasped by an interpreting agency. The individual, the collective ("we see a girl coming in the sun"), the subjective (which is very clearly evident in the pragmatic aspect) colour the given and the co-given (the first and second).

'Interpretation' means that the third datum adds something that is not given or co-given to the datum and the co-given. That added thing does not have to be unreal, i.e. not wrongly, added. That I draw my friend's attention to the girl coming into the sun indoors is added (the third) but is perfectly in place in the whole context (where 'context' means the whole of everything that is given with the first datum (as second datum)).

Note: - In this connection reference is made to an idea of Josiah Royce, namely "The interpreting community".

In fact, we do not live solely within the framework of a community of interpreters, and our perception and our expression of it reflects our fellow human beings as interpreters of reality. –

Incidentally, Lady Welby's signification, who understood the term as "the doctrine concerning the means of understanding by which men communicate with each other", is situated here, namely within the signifying community and above all pragmatically, namely the signifying community that aims at genuine mutual understanding and thus wants to arrive at understanding.

37. The concept of 'truth' in the great tradition of metaphysics.

O. Willmann's threefold concept of 'truth'.

Bibliogr. Sample pr . - O. Willmann, *Abriss der Philosophie* , Wien, 1959-5, id., *Geschichte des Idealismus* , I-III, Braunschweig, 1907-2.

This Platonist distinguishes three aspects.

1. The 'mystical' aspect.

Through contact with God, God's idea comes through to our very finite human mind. This exists "from all eternity" in God's mind. It is therefore pre-existent.

2. The 'rational' aspect.

Our overall experience (perception and perception) brings us into contact with the experiential reality that we cognitively process into concepts, judgments and reasoning.

3. The 'deontic' aspect.

Our mystical view of the divine idea that becomes a human concept in an experienced reality that we come to know rationally, prompts us through our conscience to act in accordance with the divine idea and the human concept.

Three types of 'truth' correspond to this.

These are the following:

1. If the things experienced are according to their divine idea, then they are 'true', in the sense of 'ideal', but then theologically understood ideally understood 'ideally'.

2. If our knowledge through concepts is a faithful representation of experienced reality, then it is 'true' in the sense of corresponding to objective reality.

3. If our actions correspond both to God's ideas of the data and to our concepts of the data, then our actions are 'true' in the practical sense of behavior that is based on reality. This threefold division of 'true' illuminates what follows.

The Czech tradition of truth.

Bibliogr. Sample . - Guido Van Heeswijck, Jan Patoika , in *Streven* (Antw.) 59 (1992): 12 (Oct.), 1065/1074; id., Laidislaw Hejdanek (*Thinking and Surviving*), in *Streven* (Antw.) 59 (1992): 14 (Dec.), 1297/1304.

Incidentally, Hajdanek is a student of Patoika (1908/1977).

Ezra III: 4 (38/41). - According to Lad. Hejdanek, the traditional Czech idea of truth is clearly expressed in an apocryphal work Ezra. The text is often quoted by the Church Fathers.

By the way: the Patristics (33/800) is the cultural vanguard of Christendom of the first eight centuries of Christianity.

38. The basic text regarding 'truth'.

Someone is speaking: "Truth is permanent, is eternally strong; it lives and reigns forever. With it there is no respect of persons; also: it makes no distinctions. On the contrary, it executes what is right and abstains from everything that is unjust and unconscionable. All therefore fall in with what it does, for in its judgment there is no injustice.

She is the power and the kingdom and the might and the glory throughout all ages. Blessed be the God of truth." Then the speaker falls silent. Silence. The people as one voice then cry out: "Great is the Truth and strong is She above all."

Note: - Patoika and Hejdanek stand in a tradition: figures such as Johannes Hus (1369/1415; Czech reformer; was burned alive), Jan Amos Komensky (= Comenius (1592/1670); Czech humanist, adhered to that view of the truth.

It is clear that God is invoked here as the primal source of truth in a liturgical way. He is thought of as "the truth". This corresponds to Willmann's mystical interpretation of truth: in God "the truth" about things is to be found in an ideal way.

“Trying to live in the truth”.

J an patoika: *Selected Writings on Philosophy and Phenomenology* , in: E. Kohak, *Jan Patoika, Philosophy and selected Writings* , The university of Chicago Press, Chicago) London, 137/347, takes up in that text the motto of Alexander Solzhenitsyn (1918/2008) about “trying to live in the truth” - first against the Nazi system, then against the communist system.

Reality is 'autonomous'.

Patoika argues that reality is 'autonomous', that is, independent of our subjective attitudes towards it. As such, it precedes man, however 'autonomous' that man may designate himself as a subject and indeed as an autonomous subject. 'Autonomous subject', a typically modern thesis, means that man is an I that makes itself and invents and imposes rules on itself.

Consequence. - Not a Husserlian, overly subjectivistic phenomenology but an ontology that posits 'truth' as autonomous data is the way out of our current cultural crisis.

39. Hejdanek's Twofold Truth.

In the European tradition, Hejdanck distinguishes a 'Greek' and a 'Jewish' conception of truth.

1. Greek.

Greek philosophy defines 'truth' as “the correspondence of thought with reality”.

According to Hejdanck, this has a threefold meaning.

a. Truth as correspondence.

Our concepts are the representation of the experienced data; they correspond to it.

b.1 . The pragmatic truth.

If a concept in our mind, once applied in our life or in a scientific experiment, produces a result, then that result is the cognitive content of the concept that was tested in life or in the laboratory.

Note: - This can be called the tested degree of correspondence: through experience or experiment we know whether the tested concept 'corresponds' to reality.

b.2. Truth as coherence.

If a collection of judgments exhibits an unmistakable 'coherence' or 'coherence' of a logical nature (or of a logistic nature) in which consistency, i.e. the absence of contradiction, is essential, then that collection as a system is 'true'.

Note: - Whether this still fits into the correspondence theory is very questionable. Not whether the concepts correspond to the reality intended by them but whether they are mutually coherent without contradiction is the main concern in defining truth. There is only one way out to save the correspondence, which is to assume that the separate judgments 'correspond' to the reality intended by them while they are tested as a system for their coherence.

2 . Jewish.

In the Jewish definition, reality is dependent on truth. 'Truth' is after all 'autonomous', given in advance, as Erza III: 4 (38/41) puts it. This autonomy of reality is especially palpable in the definition: "Where is all that must be".

That is the practical-ethical or deontic (obligations prescribing) definition. 'Truth' in that interpretation is future-oriented: it norms what "is not yet". Although it also contains an assessment of what already is.

Note: - It can be seen that the threefold interpretation of O. Willmann expresses this definition - but within the Greek tradition (Platonic) - much more clearly.

40. Jan Patoika's Metaphysics.

Like so many others – it has become a tiresome commonplace – Patoika criticizes the metaphysical systems since Plato.

Note: - Plato scholars state that Plato never thought of a system in some very elaborate form. He left it at dialogues and their aporias. The failure of finished, encyclopedically filled metaphysics is clear: they are bound to persons and periods and in that sense 'relative'. But in Patoika this leads to a resumption of what metaphysics should actually be, even though such a metaphysics, a metaphysics after all those transient metaphysical systems, will remain something provisional.

Clearly expressed in Plato 's terms: the idea 'metaphysics' is eternal; the concepts that people form of it - in system form or not - are 'time-bound' and sometimes caricatures of the idea.

“Negative Platonism”.

Patoika understands this as the belief in an eternal Truth that transcends the periods of cultural history and is therefore 'autonomous', which cannot simply be dismissed as 'relative', even though it can never be perfectly expressed in concepts. Between the high, eternal, pre-existing idea and its effects by people on this earth, there is an abyss in the ground. But that does not prevent a 'meta - physics'. On the contrary.

Thus, Czechs such as Patoika and Hejdanek undertake the struggle against relativism regarding ideas, ideals and values.

41. Mathematical physics as metaphysics.

To begin with, we define 'metaphysics' as, first of all, an ontology, that is, a theory about the totality of all that is as reality in any case, and within that framework a theory about God (theology), man (psychology, anthropology) and the world (cosmology).

Bible sample - Ugo Rankl, *Stephen Hawking (l' Homme qui veut mettre la création en équation)*, in: *Le point* (Paris), 19.20.2001, 86/90.

Note: - We know very well that in such a simple journalistic report of a visit to the world-famous mathematician-physicist a correct and especially complete representation of Hawking's theoretical work is impossible. What is possible is to correctly represent some of his assertions to see, as well as to hear the criticism of scholars, at least in summary form. Hawking teaches at The University of Cambridge as one of the many successors of Isaac Newton. The occasion of the article is *l' Univers dans une coquille de noix* , Paris, Odile Jacob.

The publication of “ *Une brève histoire du temps* ” was a huge success: twenty-five million copies were sold. The book was translated into numerous languages. Some literary critics in England have called it “the best-selling, least-read, least-understood book” ever published.

With "*The Universe in a Coquille of Black* ", Hawking thinks he has written a book for the man in the street. Of course, many people have serious doubts about this.

Gerardus Hooft

Hooft is a Nobel Prize winner in physics. He believes: "Unlike Einstein, none of Hawking's theories have ever been proven." Hooft believes that Hawking overestimates himself when he formulates a physical theory that says the last and generally valid word about time, space, forces and energy.

The theory in question

Called “M-theory” (M. stands for mystery), it aims to be a synthesis of the theory of general relativity (Alb. Einstein) and quantum physics (Max Planck).

Hawking's limits.

Elaine, Hawking's wife, claims: “His entire research work culminates in the frank admission that he is unable to answer the basic question: Why did the universe begin?”

42. Hawking and the Origin of the Universe.

Ugo Rankl : In 1981, the Vatican organizes a scientific conference.

John Paul II then advised Hawking against attempting to answer that basic question, “Why did the universe ever begin?” Hawking recalls that the pope allowed him to study the evolution of the universe after the Big Bang (*note*: the supposed initial impulse of matter) but advised him against investigating the Big Bang itself “because it was the moment of creation and therefore God's work”.

Note: - Whether the Pope, who is not an ignorant person on the subject, said so, can certainly be investigated. Meanwhile, Hawking equates himself with Galileo on the Vatican's lack of understanding, with a half-smile.

Gerardus Hooft.

Hooft summarizes Hawking's theories, which mathematicians find “incredibly tempting” but which remain unassailable thus far, as a kind of 'theology', a term he defines as “a history” of the universe and creation.

Hawking refutes.

In the mid-1970s, together with Roger Penrose, he proved on the basis of mathematical formulas that black holes, which were supposed to be so dense that they would absorb all matter and energy that approached them, were nevertheless capable of releasing some of the absorbed matter back into the atmosphere.

What Hawking refers to as a giant step on the way to M-theory. - Hawking in the sixties proved with unheard of complicated mathematical formulas that all the laws of physics - especially Einstein's theories - are of no use for anyone who wants to write the history of the big bang before time began to exist.

However, Hawking is waiting for someone to find better mathematical models than his, the limitations of which he acknowledges.

Metaphysical claim:

He wants to go down in history as the one who convinced a part of humanity “that it is physics that will inevitably provide the answer to our basic questions, namely about creation, about the eventual existence and purpose of a God:

“Everything can be imagined, felt and then calculated.”

Such are Hawking's metaphysical pretensions.

43. Hawking and the Universe: Afterthoughts.

Here is what can be noted.

1. If Hawking or anyone else in the pure spirit of modernity who would like to make mathematical physics the knowledge and science par excellence, wants to try to 'prove' things like creation (as the Bible understands it, for example) or God (however one ever fills in that term), then he is strongly advised to first provide the proof that the sufficient reasons or grounds that prove valid in mathematics and physics and their fusion are necessary or sufficient to prove life, the human person, deity.

Physics usually starts from its axioms and laws. That a limited number of logically valid proofs can be derived from them is certain. But to which domain do they apply? Their content is physical, mathematical, mathematical-physical. But is it also biological, personalistic, theological?

2. When the Pope exhorts Hawking not to “advance beyond the big bang,” it is clear that he is referring to the limitations of the evidential power of physics and mathematics and their synthesis.

Not that Hawking may not try, but that Hawking must take into account the finiteness of the evidential value of his mathematical physics. The Pope knows that much science. This is evident from other texts of his.

3. We believe that the anti-Hawkings realize precisely this well. That one does not produce metaphysics with mere mathematical physics. The concept of reality is broader and more thorough than what mathematics and physics grasp of it.

But Hawking's ontology is flawed: he confuses mathematical physics with a theory of all that is reality - being -, whereas it only applies to what is accessible to mathematical formulation and physical theories and experiments.

4. All in all, Hawking's pretension and valid experience of the sacred lacks, for example to be able to speak of deity, with authority, one must have experienced it somewhere. That goes beyond mere physical observation and the above.

44. The experimental method.

Let us start with a quotation that we arrange ourselves.

L. Millet/Br. Magnin, Les sciences humaines aujourd'hui , Paris, 1972, 82, expresses a definition.

1. Science is 'objective', that is, directed at some object in and of itself, “independent of subjective interpretation”.

2. They call science 'positive' insofar as it presents publicly attainable experiences, "without ideological or philosophical claim". So much for object-orientedness.

3. Science is observational insofar as it attempts to grasp the object as directly as possible as it is. This could be called the empirical degree of scientificity.

4. Science is empirical – experimental – insofar as it formulates a hypothesis based on the object, deduces experiments from that hypothesis, and carries out these experiments (which is called induction.)

“Experimentation is the skill of provoking a phenomenon by its manifestation (...) and of analyzing it into its elements.” Thus Claude Bernard, *Introduction to the Study of Experimental Medicine* (1865).

Maw: taking an experiment is a matter of forcing the object (data, phenomenon) under study to reveal itself even more, to become even more of a 'phenomenon'.

Note: - In the exposition of phenomenology we established that the pure phenomenon - thanks to phenomenological reduction or purification - is the object stripped of, for example, everything subjective, everything theoretical, everything traditional (here, for example, the established opinions of the research community).

In this sense phenomenology was called “the beginning” of all other methods. This becomes apparent only after testing a hypothesis about the initial pure phenomenon, where in the experimental phase of getting to know the object or phenomenon, an experiment forces the phenomenon to show itself more clearly, i.e. to become a phenomenon. Whereby one again begins with a new but real beginning.

The evidence at the end of an experiment is a pure phenomenon but situated in a progressive phenomenology. That evidence is a new given, the basis of all 'objective' and 'positive' science.

45. The ingenuity in science.

We are inspired by *Ernst Dichter, Le marketing mis à nu*, Paris, 1970 (Original: 1964).

Dichter is a sales expert who is known for introducing psychological methods in selling. Oc, 301/304 (La créativité) - we will discuss this further.

1. The term 'creativity'

Poet laments that the term 'creativity', originally a form of science, has degenerated into all kinds of unscientific behavior. - For - as he says - inventiveness is the premise of every scientific method.

2. The established empiricism

This empiricism only labels everything that is immediately observable (*note*: phenomenon) as 'scientific'. That is a pocket street.

Poet draws inspiration from *Cohere/ Nagel, Logic and Epistemology* , which cites an example of exaggeration of the empirical degree of science. Herodotus of Halicarnassus (-484./-420), the father of the description of countries and peoples (W. Jaeger), established a phenomenon: the Nile overflows every month. He wanted to find the sufficient reason for this.

2.a. Empirical.

He measured the thickness of the mud layer that the Nile deposited on its banks every month, studied the flora and fauna of the Nile. Which gave no explanation. Exhausted, he went to sleep one day

2.b. Hypothetical method .

During the night he wakes up and looks at the moon. Then he has an unexpected idea: "Perhaps the moon has something to do with the monthly flooding of the Nile". Poet: "We do not know whether he immediately discovered gravity and electromagnetism".

But Herodotus transcends the phenomenon to something that is causally connected to it in the form of a hypothesis. Only now could he proceed to measurements that would confirm or disprove it.

Poet: "The discovery (*note*: of the possible role of the moon) is in itself an act of ingenuity, a fundamental scientific ability. It connects phenomena that appear to have no connection whatsoever."

Note: - Poet says: that discovery is no coincidence. By this he means that given the whole framework of thought Herodotus necessarily had to come up with a connection with the moon.

46. Falsificationism regarding scientific progress.

Karl Raimund Popper

Sir Karl Raimund Popper (1902/1994) made falsifiability the means of distinguishing between genuine science and "intellectual constructions" (such as Marxism and psychoanalysis).

The term does not mean 'falsifiability' but 'refutability'. The true scientist takes an intellectual construction as a given which he tests by paying special

attention not to its 'verifications', i.e. its experimental confirmations, but to its 'falsifications', i.e. the negative findings which reveal (phenomenonize) the finitude or limitation of an intellectual product.

An example.

In 1990, *The New England Journal Of Medicine* reports the news.

1. Hydergine.

Until August 1990, Hydergine was number 11 on the list of the most prescribed drugs in the world. It was on the market for twenty years. In the USA, it was even the only drug allowed for Alzheimer's patients, for whom it was supposed to counteract a number of symptoms (such as memory loss).

2. Assessment.

Number of subjects: 80. - Administration of a placebo (pseudo-medicine) and that hydergine. Neither doctors nor patients knew who had received what of both.

Result: Those who had been given hydergine deteriorated more quickly than those who had been given a placebo.

Surprising.

For the researchers at the University of Colorado Medical School, the result was a complete mystery. A surprise that is very understandable: for twenty years, doctors have been administering hydergine without apparently paying attention to the 'falsification' or rather the 'falsifications' (plural) in the belief that the medicine 'works'.

One does not understand how the company carried out the tests before launching Hydergine on the market. Not without propaganda among doctors, - propaganda that apparently only paid attention to the 'verifications' and neglected the 'falsifications'. An incident like that with Hydergine shows that Karl Popper's falsificationism is based on facts.

47. Popper's judgment on Freudian psychoanalysis.

Sophie Lannes/ Alain Boyer, Les chemins de la vérité (L' Express va plus loin avec Karl Popper), in: L' Express (Paris) No 1598 (26.02.82) 82/86, reproduces an interview which includes a passage on psychoanalysis.

Popper warns against theories that explain "too much".

"A theory should not explain everything that is conceivable, because in that case it is no longer testable. I take as an example the Freudian theory in which everything that someone can do is explained in Freudian terms.

Whether such a person enters a monastery or, on the contrary, turns out to be a great seducer, it will be either because of his failures in the sexual area or because he fears sexuality.

In this way, the absence of sexuality or its excess will always be explainable in Freudian terms. If that person risks his life to save a drowning child, he acts on the basis of sublimation (*note* : elevation to a higher human level) of his instincts; if he throws the child into the water to let it drown, this is explained by the repression of his instincts.

In this way, no human act can contradict Freudian theory. That is why it is not testable (ac, 87).

Popper's judgment on Marxism.

In Vienna in 1919, Karl Popper was a communist. In his autobiography, he says that he had accepted a dangerous conviction dogmatically, that is, without critical examination. In the course of unrest, young workers were killed in the name of the need to increase the class struggle . Popper was 17 at the time: that incident made him an anti-Marxist.

Here is what Popper says: “I did indeed become aware of the incredible intellectual arrogance of Marxism: it was a terrible thing. To arrogate to oneself a form of knowledge which proclaimed the sacrifice of other people's lives (...) a duty, - to sacrifice other people's lives in the name of a dogma accepted without critical examination or in the name of a dream that might prove impossible (...)” (Ac, 84).

48. Popper wants testability

Popper claimed in that interview that, like psychoanalysis, Marxism was untestable except at the beginning: “Marxism only became untestable after a certain evolution.

Marx says: revolutionary changes start from the base. First, the means of production change; then the social relations between workers and non-workers; then the organization of politics; finally, ideological convictions.

All this was refuted by the Russian Revolution: ideology came first and imposed political power. This ideology (...) then began to change social conditions and the means of production from above. (ac, 87).

One sees it: Popper wants testability. That for which there is no means to test it, knows no mercy in Popper because it is unscientific.

Comments.

One can, of course, criticize Popper's opinions on forms of thought such as psychoanalysis or Marxism, by pointing out that not everything in the psychoanalytic enterprise or in Marxist societies was untestable.

That is right: the achievements of psychiatrists who work psychoanalytically are there to show that there are favorable results. And, however barbaric applied Marxism may have been in sacrificing human lives to an ideology (the communist states killed some eighty-five million citizens in seventy years), there have also been good sides to it. Where there are results, there is service.

Maw: Popper condemns both forms of thought as a coherent block that is indeed partly open to criticism but not without more. Whereupon one can state that in the narrow framework of an interview the latest shades are not always discussed. That is correct.

But Popper, by taking the totality for the part, spoils his excellent idea, an axiom; namely, a statement, if it is to be scientific, must be susceptible to testing, i.e., from those statements it must be possible to derive hypotheses which make experiments (tests) possible.

Only after experimenting with psychoanalysis or Marxism does it become clear whether they are science and how they are science.

49. What is a good theory?

Let us begin with two statements. Joh. Wolfg. Goethe (1749/1832) once wrote: "Grau, mein Freund, ist alle Theorie, grün des Lebens goldner Baum". (Gray, my friend, is all theory and green of life Golden Tree).

This can be interpreted as the critique of the romantics who placed life at the centre, on the rationalists who placed theoretical reason at the centre. However, Carl Rogers (1902/1986) once agreed with Kurt Lewin's (1890/1947) axiom: "Nothing is as practical as a good theory". This opened the debate on what constitutes a good theory.

Definition.

Let's start with a set of reasoning types that will get you started.

1. All the flowers of this plant are white.

Well, these flowers come from this plant.

So these flowers are white.

Logicians call this reasoning 'deduction' (since Plato the Latin word for 'synthesis').

2.1. These flowers come from this plant.

Well these flowers are white.

So all the flowers of this plant are white.

In natural logic this is called 'reduction': one concludes from part of the specimens of a collection to all. This is called 'generalization'. The basis is similarity: all flowers resemble each other in color.

2.2. These flowers are white.

Well, all the flowers of this plant are white.

So these flowers come from this plant.

Logically this is also a 'reduction': one concludes from part of the flowers that together form the system that is the plant, to the whole that is the plant. That is called 'verhalgeheling'. The basis or reason is coherence: all flowers all flowers are connected to the plant to which they are a subsystem. (Since Plato this reasoning was called 'analysis').

With that we have prepared the definition of 'theoria':

a. an object (e.g. these white flowers of this plant) or given

b. is made comprehensible, i.e. one gives the (sufficient) reasons or grounds that apply on the basis of similarity or coherence.

In other words, one explains the given or phenomenon on the basis of what resembles it or is related to it.

Note: - Expressed in the language of model theory: a phenomenon requires a model, i.e. information (reasons or grounds), which may be a similarity model (metaphorical model) or a coherence model (metonymical model) or preferably both together; to the extent that the similarity and the coherence are real, there is 'good', i.e. realistic, information in a theory.

50. A coherent system of statements

A strict theory is then the fact that as an explanation of data (phenomenon) a coherent system of statements (judgments, propositions) is formulated that make the data understandable on the basis of similarity and coherence.

In a less strict sense, for example, the Hegelian or Marxist dialectic can be called a 'theory':

phenomenon - e.g. a socio-economic and political situation

b. is made understandable on the basis of concepts (basic concepts) such as system (totality), change (evolution, involution), conflict (contradiction), filled in with the correct data that the said situation (the given) provides, so that, if one assumes those filled in basic concepts, one can logically deduce the situation (the phenomenon) from them.

That is in any case the Hegelian dialectic which **a.** of given (that is established) **b.** expresses one or more reasons for existence. Logicians and partly natural logic will not reject the dialectical comprehension as strictly

logically demonstrable or as strictly logically justifiable but it is a fact that that dialectical way of thinking is certainly an approach that is strictly logically or even logistically expressed.

Tested and untested part.

Sometimes the tested part of the explanatory theory is contrasted with the untested or perhaps even the untestable (think of Karl Popper).

For example, *Charles Lahr, Logique* , Paris, 1933 - 27.5 598-1.

Also, *A. Chalmers, What is science called ? (On the nature and status of science and its methods)* , Meppel Amsterdam, 1981.

This work discusses the four great epistemologists - Karl Popper (1902/1994), Imre Lakatos (1923/1974), Thomas Kuhn (1922/1996), Paul Feyerabend (1924/1994) -: Central is the formation of the theory, not the finished one (i.e. its emergence and ongoing developments).

Incidentally: according to Chalmers, theories are constructions (products of the mind) next to reality. They only represent the data insofar as these are revealed in the course of the practice of research work and so they actually represent only a part of reality.

Maw: the testing shows the gaps, the unreality, of a part of these constructions, in the course of the researches of the researchers. Or in other words: if such constructions are put forward, then one only explains a part of the total reality. Which compels further research.

51. Deductive and reductive theories.

Theories can be classified on the basis of the types of reasoning mentioned above.

1. Deductive theories.

Briefly outlined, these come down to this. They occur mainly in logistics and mathematics.

Given are logically coherent axioms (primitive, i.e. predetermined from the outset) basic concepts and basic judgments).

The question is: to deduce or derive propositions (i.e. derived judgments) from it according to logical laws. - This is also called “the axiomatic-deductive theory”.

Note: - The dialectics of Hegel and Marx are somewhat similar: basic concepts are incorporated into judgments that represent axiomatics, but the object to which these are applied is either total reality (which is a kind of

ontology or metaphysics) or primarily cultural-historical phenomena (which then gives, for example, a cultural theory or a social theory).

The pre-given nature of “totality/change (movement)/conflict reconciliation” means that this set of concepts constitutes an axiomatic from which one can 'deduce' that data, i.e. make it understandable, by filling it in with data (especially from cultural history, for example).

2. Reductive theories.

Given here is one or more phenomena or facts. The request is to make this data understandable (explain) from yet to be found presuppositions (hypotheses that form a provisional axiomatics) so that the facts can be deduced from those hypotheses.

As stated, similarities and connections are sought that make the data understandable ('logical').

An example of reductive theory.

We quote *Dominique Minten*, “*The fear of death disappears*”, in: *het nieuwsblad* (Brussels) 03.10 .01, 11, which contains an interview with *Anja OpdeBeeck*, *Near Death (Living with near-death experiences)*, Tielt, 2001.

It is certain that everyone (at least in principle) in a medically critical situation can go through an experience that includes aspects such as a tunnel experience, an extraterrestrial light, encounters with beings (family members) from the afterlife, an experience of bliss, the film of life, etc.

Gender, age, worldview and intelligence play at most a subordinate role.

This is the fact or phenomenon that has been investigated as methodically as possible several times in recent decades.

52. Similarity and/or coherence

Declaration.

We can look for this in what resembles or is related to that experience.

Similarity.

The information that comes through about the near-death experience is given to us in the form of stories.

It is clear that the problem of describing what has been experienced arises here: as outsiders we only have testimonies. People experience a severe physical trauma, are approached and treated medically (pharmacological, neurophysiological, also psychologically), fall into a coma, but overcome this as reborn people who tell an experience (if they dare). In most cases, the credibility of the period of the near-dead will not be a problem, especially for those who know them well.

A testimony now is not proof; it is an indication of a phenomenon that was consciously experienced.

Where can we find a model of this? In people who have also experienced this. But with that we remain within those for whom the phenomenon is directly given. The phenomenon for those who have not experienced something like this is only the testimony in the form of a story.

Where is there such a similarity to be sought? In the fact that all over the planet such stories show very remarkable similarities with each other, - even though there are differences between North American testimonies and, for example, North Indian ones.

This pretty much wraps up the explanation of the similarity, except for one point: there are also near-death experiences that are strongly reminiscent of religious stories about hell and its misfortunes. But that's it.

Coherence.

The information about the near-death experience also takes the form of coherence models. - The most obvious information comes from what is connected with the near-death in a striking way, namely the often profound change in the worldview and lifeview that it is the result of.

The person concerned often comes out medically recovered, medically verifiable. The person concerned is at home in the afterlife and usually no longer fears death. Even more: metaphysical questions arise: life gets a meaning that reaches much much further than this earthly life that is strongly relativized.

Maw: a true conversion takes place, usually with a strong religious slant, - a conversion which, except in some cases in speech and action, - in the general morale of the one who has experienced near-death, also becomes apparent to those immediately around him.

53. The similarity through the context.

The image of that experience remains with the person involved as a kind of illumination of the whole further life. That image does evolve somewhat because the processing influences the memory, but it remains the same: through the conversion as a process the memory arises and continues to work.

Coherence.

Causal thinking sees, besides a coherence afterwards, a coherence before. Here the so-called explanations, causal explanations then, occur.

Psychologically oriented people see for example in near-death and its aftermath a “memory of birth”. Which is refuted by those who were born by caesarean section, unless one equates the baby’s exit with the exit from the womb which is interpreted as a tunnel.

It should be noted that this biological tunnel differs fundamentally from the tunnel through which the consciousness of the near-dead approaches the other world, so fundamentally that there can hardly be any similarity. - Pharmacological mentality 'explained' by anesthesia which causes hallucination (false perceptions). But there are also near-deaths among non-anaesthetized people, a phenomenon which refutes this pharmacological explanation.

Neurophysiological explanations point to, for example, a temporary lack of oxygen in the brain.

In both of the last explanations it should be noted that one constructs a resemblance from a coherence. People who do not like to accept the true essence of an experience because it requires a revision of their own axioms, very often neglect the resemblance model, reduce it to something that is not, and linger in the coherence model that very indirectly concerns the resemblance - 'indirectly' in the sense that no connection, however close, is ever a resemblance.

The side of a triangle opposite one of the angles is very closely related to those angles that are geometrically determined, but does not resemble them. So it is with those who try to reduce near-death to 'causes' such as chemical products, for example.

54. The testability of a near-death experience.

After the above, the question arises as to the testability of the near-death experience. The test is done on a very limited scale on the basis of the strict similarity with those who have also experienced it: they have a pure image, the pure phenomenon.

In terms of coherence, conversion is apparently a testable aspect in the wake of that experience, but very indirectly: conversion is indeed connected - as a result of the causes - with the strict experience, but does not resemble it, except insofar as a memory image continues to function in the converted post-history.

Decision. Claiming that, for example, an after-death state is completely untestable is therefore untenable.

Hard and soft science.

Two trends advocate hard, iron-clad science with radically testable theory.

Bridgman 's operationalism (also: operationism) in his, *The Logic of Modern Physics* , New York, 1927,-1, 1960-2.

To formulate judgments is to define them in terms of 'operations', preferably of a purely material nature - according to Bridgeman, twofold determined in a physical operation.

(1) A substructure (infrastructure) is needed in the form of measuring instruments and observation equipment.

(2) Every action in physics is ultimately measurement. Thus the physical concept of 'length' is defined exclusively by the actions, equipped with infrastructure and accompanying calculations, measuring a singularly concrete 'length'. For example thinking, but then in the domain of the mental activities of man (believing, wishing, willing, verbalizing etc.), the materialistic cognitivists who express mental acts in physical and biological (e.g. neurological) terms.

Every 'subjective' (as both movements call it) aspect of the human sciences must be radically banished: introspection, Husserlian phenomenology of consciousness, - vitalistic and animistic concepts (such as life forces or soul), - finalistic concepts (goal-directedness but subjectively interpreted as goal consciousness) are out of the question.

Operationists and cognitivists hold as an axiom that "all that is subjective" distorts objective reality. Hence the iron-clad elimination of it.

55. The phenomenological method in the Austrian school.

We mean first of all the phenomenological method as it emerged in the Austrian school.

Phenomenology.

The term 'phenomenology' dates from J.H.Lambert (1728/1777).

G. Fr. W. Hegel (1770/1831) published his *Phänomenologie des Geistes* , a metaphysical philosophy of culture, in 1808.

Father P. Teilhard de Chardin (1881/1955) developed an evolutionary phenomenology. In other words: the same word, but a plural of 'fillings', understand: interpretations.

Bibliographic sample.

Dossier (Husserl's Archive in Leuven), in: *Academic news* (13/14) Amumni Leuven (22 (1988)): 13/14 (22.04.1988), which briefly outlines how

the legacy of Edmund Husserl (1859/1938), the greatest elaborations of the prevailing phenomenology of the Austrian school, ended up in Leuven.

By the way: it comprises some 40,000 pages.

W. Biemel, Hrsg. E. Husserl, *Die Idee der Phänomenologie (Fünf Vorlesungen)*, The Hague, M. Nijhoff, 1950.

The Austrian school.

Bibl. sample: H. Avron, *La philosophie allemande*, Paris, 1970, 133ss. (*l'école autricienne*).

The distant predecessor is B. Bolzano (1781/1848), who was interested in psychic acts such as concepts, judgments, reasonings, but considered these “in themselves”, that is, not as psychic data but as referring to contents of knowledge and thought “in themselves”. Bolzano rejected psychologism concerning logical concepts.

Franz Brentano

(1838/1917) founded an intentional psychology. Known for his *Psychology of Empirical Standpoint* (1874). We explain very briefly.

1. Physical (one also says 'physical') objects.

According to Brentano, mere physical data are distinguishable from the rest of reality in that they have no psychic (meaning: intentional, i.e. directed towards an object) life. Only man is a psychic being.

Physical phenomena - such as colours, people as physical beings, landscapes - can be objects of psychic acts such as seeing (colours), observing a fellow human being, admiring a landscape.

2.1. Psychology.

The point of view of Brentano's empirical psychology was to describe, that is, to represent as accurately as possible what is directly or immediately psychic or psychologically given. Expressed in the familiar mathematical terms:

the data are the soul experiences such as perceiving, judging, remembering, reproducing oneself as accurately as possible, etc.;

the request is to accurately and realistically represent the soul's experiences.

Jokingly said: in such a representation the given is the requested but then the given is to be represented as correct. So that psychology becomes: the description of psychological phenomena (data, phenomena).

Phenomenological psychology.

The correct formulation is: the representation of psychic phenomena as phenomena, i.e. insofar as they show themselves from the outset as given; as

directly given. Phenomenology is, after all, the bringing into discussion (-logy) of phenomena, i.e. directly given realities as psychic acts (phenomeno-).

Whether an admiring landscape, a fellow human being observed, and a seen colour exist in themselves, i.e. independently of the acts (admiring, observing, seeing), the phenomenological method excludes from its objects. It puts that own, independent existence "in brackets" (in German: 'Einklammerung'). Does the mere act suffice as an experience of a human soul life.

56. Intentional Psychology

2.2. Intentional psychology.

The medieval thinkers (800/1450) characterized the human soul life as 'intentio', i.e.: attention-directedness. Brentano actualized that 'intentio' as 'intentionality', i.e. consciousness as directed at something (inside people or outside). Thus he saw every psychic act as intentional, i.e. directed at an object.

Mistake to avoid.

Every psychic phenomenon is intentional.

Thus there is cognitive intentionality: the understanding I have of your presence is an orientation toward your presence. Thus there is volitive intentionality - this is called in everyday language 'intention' (understood as the intention of our will).

Alexander Pfänder (1870/1941) in his *Phänomenologie des Wollens* (1909) adopted the term 'phenomenology' into his vocabulary at the same time as Husserl.

One should not confuse 'intentionality' with 'intention'.

57. Psychology as a science of immanent phenomena.

'Immanent' means "that which is situated within (something)". Sometimes it is contrasted with 'transcendent' as "that which is situated outside (often above) (something)". The terms 'internal' (internal) and 'external' (external) can also be used.

Husserlian phenomenology is first and foremost the science of "cogitata qua cogita". 'Cogitatum' (plural: cogitata) means 'content of consciousness' or rather "the thought", where 'thinking' means "consciously living through". Thus: the science of consciously lived through data (cogitata) as consciously lived through.

In this, consciousness is conceived as inner life, inwardness, as if it were an inner world separated from an outer world. - Such a thing is radically untenable.

a. It is true that there is an inside to our human consciousness: for example, I can lie to someone (inside myself I know otherwise; outwardly I reveal what does not correspond to my inside, my conscience).

b. But the consciousness of the liar is indeed intentional in the sense that it opens out onto the so-called outside world: he sees - outside himself - the lied to fellow human being. Even more: that fellow human being penetrates, if necessary, to the interior, the innermost, of those who lie to him. In other words, even if there is a closure, it is never total.

Immediatism/ mediatism.

Charles Lahr, Psychology , Paris, 1913-27, 113/125 (*Diverse relative theories of perception*), addresses a fundamental psychological point.

a. The immediatist holds that we perceive everything we perceive, to one degree or another, 'immediately', 'immédiatement', directly, without any intermediate term. We are thus 'with the things themselves'.

b. The mediatist states that everything we perceive, we perceive indirectly, 'médiatementé', 'medially'. I see you coming, but without the correct functioning of the eyes as the ability to see light phenomena, colours, forms, I see nothing except at most a distorted phenomenon. Through through, therefore, those senses, we see and in that sense they are an intermediary between the seen object and the seeing subject.

Yet we know of that intermediate term only and only because we see directly at the same time, that is, without an intermediate term. Consciousness is therefore also direct, immediate.

58. Immediatism/ mediatism explained further.

If we had only an indirect (mediate) perception of something, how would we ever come to know that there is a reality behind our perceived impressions?

It is possible that having penetrated a large forest I 'see' a coiled creeper as a coiled snake. So there may be an intermediate term between the creeper and my mind as a faculty of seeing which 'explains' the mistake. But in fact upon closer inspection I realise that I have too quickly 'seen' a snake where the creeper was.

In other words, we are with our perception in principle, that is to say, to begin with, directly at things, yet far-reaching perception may be necessary

to bring about that proximity, that immediate perception. Such errors teach every person with common sense that we perceive both mediately and immediatly.

The Phenomenologist

This attaches great importance to this duality because he describes (-logy) observed data, phenomena (phenomeno-), insofar as they are observed. The unobserved is also put, at least provisionally, between brackets.

But that does not exclude that there is an evolving observation and therefore an evolving phenomenology of the observed: the first phenomenon was, in the above-mentioned case, a coiled snake; the second phenomenon - on closer inspection, i.e. in the context of an evolving observation (and phenomenology) - was a coiled creeper. Both data are direct, but one after the other.

By the way: the concept of “evolving phenomenon description” is therefore a practical necessity.

What is intermediate and immediate consciousness?

Alexander Pfänder, Introduction to Psychology, Leipzig, 1904, notes four main meanings of the term consciousness. - We are inspired by them.

1. All that is truly psychic life is conscious life. That is the basis of the psychology of consciousness.

2. Whatever consciousness is, is awareness of something, an object. Which indicates the intentional character of consciousness.

3. All that is consciousness is invariably self-consciousness: what we consciously experience, we experience as beings who are conscious of ourselves in any case. (go to 66)

4. Whatever is consciousness is at the same time, as self-consciousness, a characteristic of an I as subject, whatever that may entail.

59. A fourfoldness in the immediate or the mediate consciousness.

In the light of this fourfoldness, we shall now consider the immediate or mediate consciousness of something, by means of an example.

Fr. Joignet/ P. van Eersel, Visions (Le chaos par Prigogine), in: *Actuel* (Paris) 1990: oct., 91/93.

The text begins as follows:

“On a frosty morning in the winter of 1961, Edward Lorenz (*note* : to be distinguished from Hendrik Antoon (1853/1928) and from Konrad (1903/1989)), a very gifted mathematician, goes to his laboratory at MIT, the very famous Massachusetts Institute of Technology in Boston.

But he does not yet realize that chaos is about to ensue. Because since the Second World War (1940/1945) he has been digging into mathematics. That day he becomes fascinated by a sequence of a numerical simulation (*note*: a technical representation) of the development of a climate. In the silence of his laboratory he retypes on his coordinator - an old Royal Mac Bec - the data concerning the climate to be studied (...).

Lorenz can't believe his eyes: the course of the new curves - far from dutifully repeating the old model - moves away from it! First a few millimeters. Later the coordinator draws the craziest figures. The new climate, shown in the simulation, has nothing to do with the predictions”.

Note: Lorenz discovers the butterfly effect: a tiny change in weather at one location causes a maximum change in weather, so that from a given tiny change in weather the maximum is unpredictable (which means 'disorderly' course or rayons.)

Phenomenological analysis.

1. What does Lorenz immediately perceive as a phenomenon, sensory speaking? The curves, the numerical description (simulation) of a climate in evolution.

2. What does Lorenz immediately perceive as a phenomenon, logically speaking as a thinking being? Through the sensory perceived representation he 'sees' with his mind the evolution of the weather, a chaotic evolution in this case. How should we now interpret this phenomenologically? First of all there is a concept of 'perceiving'.

Maw: there are two phenomena, that is, directly given realities: that which he sees sensually (with the eyes) on the screen, and that which his mind grasps through that sensory perceived, the evolution of the climate. There is also a perceiving with the mind.

60. Consciousness-psychological analysis.

Let us imagine a twofold scenario.

a.1. Lorenz has fallen asleep at his coordinator's. Physically he is at the screen but sensuously he sees nothing and with his mind he does not grasp: the two phenomena are zero.

Note: - One could suggest that while asleep the mind or even the senses still grasp something, but that would not mean much scientifically.

a.2. A child comes walking up, looking from the sleeping Lorenz to the working screen. It perceives movements on the screen, but sees them not as meaningful curves but as screen movements: its consciousness in the latter case is as a phenomenon, the only phenomenon it perceives.

b. Lorenz The child wakes up, looks and resumes his perception of what the screen shows: he is now not only physically but also with his consciousness, sensory perceiving and at the same time intellectually perceiving, at the screen and through the screen at the evolving climate. The child's consciousness is at the screen. Lorenz's consciousness is also at the screen. But what a profound difference!

Directly and indirectly.

The child is immediately at the screen and its movements. Lorenz is immediately, like the child, at the screen and its movements, but is also, through the movements seen on the screen, at the evolving weather: for him he is immediately there.

(1) Even though a behavioral psychologist, for example, will state that he has only an indirect perception of the weather. The behavioral psychologist limits the phenomenon to the physically observable on the screen. The rest is interpretation.

(2) But in terms of consciousness psychology, this interpretation is a form of direct perception. Lorenz is with the weather, not with the curves, unless he explains the theory about the meaning of these curves to someone. Then he only thinks of the mediation of these curves between him (perceiving) and the weather, in other words, of the standpoint of the behavioral psychologist.

Conclusion. When we describe consciousness processes faithfully, we establish what follows.

1. *The consciousness of something*

- e.g. the evolving weather - is susceptible to evolution: a child shivering from the cold rain is aware of "the weather". And this both sensory (wet epidermis, eyes that give off the raindrops, the ear that catches the rustling, etc.) and intellectual (understanding "cold rain" as a phenomenon with many facets that mainly concern the individual senses). But a meteorologist who walks the child by the hand in exactly the same - objectively speaking) rain, is nevertheless aware of that rain in a different way.

In other words, previous experiences (as memory data) and scientific education also determine in their own way consciousness, which thus appears to be a flexible, evolutionary data.

2. *The immediacy of what consciousness perceives as a phenomenon,*

di directly or immediatly given, perceives, evolves along. We saw that very clearly in Lorenz's grasp (sensory, yes, but through the senses intellectual) of what weather is and in particular the susceptibility of weather to turns.

For the child who was not trained as a meteorologist, this was a dark spot, an x or something so unknown that the curves on the screen told him nothing about weather evolution.

For the unformed child, these images and their movements were not simulations (descriptions) of the weather evolution and so these images were an intermediate term in full, whereby the mediate or intermediate became abundantly clear.

Simulation

Of course, it is assumed here that simulation is indeed a translation of, for example, the weather, but not a distorting translation: the curves actually simulate (although this will never be completely) the weather.

So that for the meteorologists they are transparent as to the accuracy of the representation, and they make the weather itself present.

But that belongs to the theory about the nature of simulations as descriptions of data, where their usefulness stands or falls with the degree of immediacy of the mediate means.

Understand: the degree of correct representation inherent in the means of description as an informative translation of a given.

61. The Phenomenological Method in General.

According to the axiom “what is, is” a descriptive method is developed which we call 'phenomenology'.

To begin with: the term consists of two parts. The first indicates a giving, i.e. everything that is a phenomenon (phenomenon, which shows itself immediately or directly) (phenomeno-), and the requested is namely the bringing up (-logy), i.e. the correct representation or description of the phenomenon:

In a sense, what is requested, the correct representation, coincides with the data, which immediately shows itself, in the sense that what is requested is to represent the data as correctly as possible.

By way of introduction.

The traditional mathematics of problem solving was initially strictly phenomenological. For example, it forced schoolchildren to first grasp the given. That is why the exposition was always started with the given.

For example, “Johnny gave away a fifth of his marbles and had twenty left.” The second part of the explanation followed in a very strict and methodical manner: “How many did he have before he gave them away?”

The given is pure phenomenon. The requested exceeds the pure given and is fundamentally logical, because it asks for something that does not show itself (= phenomenon) but must be demonstrated by reasoning. But reasoning is no longer describing but proceeding logically.

Another more abstract mathematical application of the two-part statement:

Given the expression $a < a$.

Wanted: Proof that something like this is contradictory.

A kind of definition.

I.M. Bochenski, Philosophical Methods of Thinking in Modern Science, Utrecht/Antwerp, 1961, says:

a. and a given (or phenomenon) that shows itself

b.1. to perceive so directly ('to see', to grasp intuitively)

b.2. that a representation (description, story, graph, etc.) of what is being considered is produced.

Gerhardus van der Leeuw, Phänomenologie der Religion, Tübingen, 1956-2, 768, says: "The phenomenon is something that shows itself precisely because it shows itself". Phenomenology concerns itself exclusively with what shows itself from the outset and is therefore given.

63. 'Encounter' (Begegnung, rencontre, encounter).

Note: - In our country, for example, Fr. Buytendijk (1887/1974) is known as a thinker in the field of encounter, as is evident from *F. Buytendijk, Ontmoeting*, in: *Tijdschr. v. filosofie* (Leuven) 51 (1989): 1 (March): 107/113.

Intentionality can be interpreted as the capacity for encounter in the sense that 'encounter' in that language means "personal conscious acquaintance" (with something or someone). In this way we all meet as conscious beings both the world around us and ourselves.

Schools.

Following in Brentano's footsteps are *Alexius Meinong* (1853/1927), known for his *Gegenstandstheorie* (another name for phenomenon description) or *Carl Stumpf* (1848/1936).

The most famous of course remains *Edmund Husserl* (1859/1938), the founder of a phenomenology that was ultimately very philosophically oriented and that flourished immediately after World War II (1940/1945) and that resulted in existential phenomenology, of which *Martin Heidegger* (1889/1976) is the best-known representative.

Phenomenology becomes 'existential' as soon as the existence that distinguishes man from the rest of reality (e.g. animals) is described as a phenomenon.

Later, intentionality as a name for human psychic (mental) life became a theme outside the circle of early phenomenologists.

A sample:

John R. Searle (1932), philosopher of language in Berkeley (Calif.), indicated the acts of language as a kind of intentional acts (cf. the French translation of one of his works: *l' intentionnalité* (*Essais de philosophie des états mentaux*), Paris), Ed. de Minuit, 1986. Of course, the framework of thought is no longer that of the Austrian school.

Note: - Alph. de Waelhens (1911/1958), *Existence et signification* , Louvain/ Paris, 1953, processes phenomenological thinking in an even broader framework, such as in oc 233/261 (*Sciences humaines, horizon ontologique et rencontre*).

He notes that a kind of empirical phenomenology can be found in some 'psychological' novels in which the writer describes the mental life of his heroes.