1. Enormous literary remains, mostly in shorthand, preserved at Louvain and being classified and edited under H. L. Van Breda, OFM; there is some parallel institute at Cologne.

Die Krisis der europäischen Wissenschaften und die transzendentale Phänomenologie. Edited by W. Biemel. Published, Haag, M. Nijhoff, 1954.

Husserl's last work; about the first third published in his life-time; the rest put together from his remains; probably owes something to the stimulus of his most brilliant (and disowned) student Heidegger.

A general idea of this work provides a good introduction to Heidegger and offers the advantage of not involving us in the complexities of the development of Husserl's ideas on Phenomenology, Reduktion, Epoche.

2. It might seem paradoxical to speak of a crisis in modern science: its achievements are unmistakable; its labors in endless fields continue apace; and what unsolved problems there are will be solved either by the methods of the past or by the discovery of mew methods to complement and perfect those of the past.

Still the need of new methods can be discovered only by a critical survey; and if the need exists at present, then the survey will not only discover the existence of the need but also provide a signpost to point the way towards a solution.

Such a survey demands a criterion, and the criterion that can hardly be rejected is an act of recall in which we reenact within ourselves the original intentions of the scientific enterprise.

These intentions had two principal manifestations: fourth century Athens; and the Renaissance.

3. The formulation of the aim of science in 4th century Athens consisted in an Umdeutung (shift in meaning) of popular notions of sophia, aletheia, episteme; this shift took place through the Platonic contrast of episteme and doxa, of dialektike and eristike; it consisted in setting up an ideal of knowledge and truth that involved (1) a sustained effort (2) a methodical procedure (3) a rigor (4) an attainment of evidence (5) a solid immovable basis in certainty, that simply were not contained in the previous customary connotation of such terms as aletheia, episteme; finally it unfolded in the works of Aristotle, Euclid, Archimedes, the historians, and the medical doctors.

4. The Renaissance brought forth a far more grandiose proposal: it discovered in the ancients
(1) an ideal of knowledge and truth vs merely traditional opinion
(2) as a principle of transforming society vs merely traditional power.

In the measure that that ideal and that principle are valid, Western man is the exemplar of mankind, the realization of the meaning of what it is to be a man.

In the measure that that ideal and that principle are not valid, man is just another anthropological classification; he is of concern to us, not because of any intrinsic value or significance, but merely because he is the type or species to which we belong.

5. Hence, if we are to judge modern science by the criterion of its original intentions, we must ask what hope modern science offers
(1) of the attainment of knowledge and truth
(2) of a principle that frees man from merely traditional opinion and power and enables him rationally and responsibly to place human society on a basis of truth and reason, freedom and responsibility.

6. Judged by this criterion, modern science can be criticized

(a) for its tendency to splinter into specialties: any university catalogue; congresses; "Deus scientiarum Dominus."

(b) for the autonomy of the splinters: what counts effectively within each of the departments, sections, subsections, is what is recognized as "good" in that department, section, subsection.

discussions of knowledge, science, truth are just so many other specialties, and their relevance to other fields is a mere matter of opinion.

(c) for the drift to the criterion of technical competence

Upon a background of traditional norms that are not questioned (Selbstverstandlichkeiten), the effective principle of change is technique: what counts ultimately is "getting results," and what counts proximately is the approved technique, how one goes about it, all the wrinkles of observation, experimentation, all the apparatus of bibliography and footnotes.

(d) for the position of the human sciences

Scientific medicine is based on scientific anatomy, phusiology, pharmacy, chemistry, physics; folk medicine (recipes, cures) for the individual patient has disappeared; but for human society the only medicine remains folk medicine; endless nostrums are proposed and, scientifically, they are of no value. De facto, techniques are unified by totalitarian state and by mass democracy: unifications of power not reason.

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(e) for the impossibility of a reorientation on the present basis

A reorientation demands a general view, and no general view is possible; only a shifting set of best available opinions in more or less unrelated fields.

A general view is the work of a mind, and no mind can master all the techniques, and so no mind can present a scientifically respectable general view. Bodenlosigkeit!

7. If we have found that modern science does not fulfil its original inspiration, intention, aim, we can go further and ask if there has been some radical defect or oversight in its program.

H's diagnosis of the malady is that scientific clarity floats on popular obscurity, scientific evidence on popular Selbstverstandlichkeit (Marcel: tout naturel), in brief, the real basis of science has not been explored, examined, evaluated.

(a) For there exist two truths and two worlds.

There is popular truth in the sense of telling the truth in the home, in business, in law-courts, in newspapers and periodicals, in autobiography.

There also is scientific truth in the sense of a validated set of propositions: logic, maths, physics, chemistry, etc.

These two reflect the original duality and bifurcation of doxa and episteme, of setting up a scientific ideal within a context of popular notions (one might compare the Hebraic ideal of "man before God" within the unity of Hebraic tradition)

There is the popular world of poets and men of common sense, of everyday assumption, opinion, activity.

There is the quite different world of the scientist and philosopher: mass instead of weight, temperature instead of heat, dimensions instead of size, elements instead of bodies.

(b) There have occurred a series of Untercshiebungen.

The scientific or philosophic world is shoved under the popular world as the underlying reality, as what really is out there. Popular notions are considered mere ignorance or naivete.

(c) But the fundamental truth and the really basic world is not the scientific or philosophic but the popular.

One has only to take any scientific procedure or conclusion and with a little probing it will come to light that the ultimate evidence lies in the popular world, the Lebenswelt with its Selbstverstandlichkeiten.

Science claims to rest on experience, but what is experienced is not the scientist's "real world" but the "popular world"

Science rests on the testimony of observers, experimenters, etc., and they are operating (1) in the Lebenswelt and (2) after the fashion of the Lebenswelt. E.g., there is no investigation of the psycho-physical parallelism (or whatever you please) that has to be postulated to proceed from the results observed by Michelson and Morley to the conclusions announced by Michelson and Morley. Indeed, scientists may find this objection a mere oddity, but it is an oddity, not from any scientifically established viewpoint, but merely from the viewpoint of the Selbstverständlichkeiten of common sense.

8. If a malady and a diagnosis, then also a remedy, cure.

(1) The priority of the subject: the subject is the source of both truths and both worlds. There is a natürliche Einstellung that yields the popular truth and the popular world. There is a cultivated (Athens, Renaissance, Aufklärung) Einstellung that yields the conceptual worlds of scientists and philosophers.

(b) What the subject is the source of is intentional, namely, what he means, symbolizes, represents, intends,...
Cf. Cassirer, Essay on Man, Man is the symbolic animal
Cf. Köhler's apes, incapable of free images; man's capacity for free images is also man's capacity for envisaging a world, in fact, many incompatible worlds.

(3) What is needed is a return to Descartes' Cogito.
Let the subject realize that all he thinks, believes, is certain of, whether on popular, scientific, philosophic grounds, is just intentional.
Let him ask how much he can primarily, irreducibly, immutably hold: e.g., "I doubt," "I think thoughts,"...
Let him refuse to leap from Cartesian acceptance of Cogito to Galileo's mathematized world of real bodies
Similarly let him refuse to leap from the intending "I" to Descartes metaphysical substance, the soul.
For both of these leaps are erroneous: they postulate an objective reality that is more than and other than the range of the intentional products of the constructing subject.
And both of these transitions are disastrous: for while everything comes from the subject, still science has a "real world" of protons, electrons, etc., and an utter incapacity for Geisteswissenschaft, and scientific psychology is an absurd attempt to study the subjects (from which everything proceeds) in terms of the outer observable objects

(4) The solution is the identity of Transzendentale Phänomenologie, T. Psychologie, T. Philosophie.

Epoche: the immediately evident is the intentional (withdraw from interest in, concern with, commitment to the "really real," the way a man forgets his business to live in the intimacy of his family, or vice versa)

Transcendental Reduction: not the mechanist or behaviorist reduction of the intentional to the "real" but of all intended terms to the intending subject.

Secure science and philosophy an immovable ground: not some flimsy ideal construction within an obscure context of Selbstverständlichkeiten; not the dubious products of some historical cultural process; but seek in the Lebenswelt what is primarily given, really primitive.

Critique of Husserl's "Krisis"

(a) There is a real problem set by science and especially human science; and its only solution lies in a philosophy.

Natural science can get along somehow (with a bias towards practical and neglect of basic research) by relying on pragmatic criterion of success; but human science, since the scientist is one of its objects, is involved in philosophic indeed theological issues (Cf problem of synthesis today and in MA

(b) Husserl pursued philosophy "als strenge Wissenschaft", as grounded in necessity and yielding absolute certitude.

This ideal with its Greek and Cartesian antecedents is in need of distinctions

All human judgements rest on virtually unconditioned; they are true as a matter of fact; the pursuit of absolute necessity and absolute certitude is doomed to failure because it seeks more than there is to be had.

(c) The correlations of Abschattung-Horizont and Einstellung-Welt are valuable contributions to cognitional analysis

Still the alleged two worlds are but one set of beings considered from two standpoints: as relevant to human living; as constituted by inner relations of things to one another; "being" is the unifying notion

Again the alleged two truths are simply the result of applying the different criteria relevant and appropriate to the different standpoi ts.

(d) Science does not rest de facto on evidence and procedures of Lebenswelt.

There has been a failure to attempt the phenomenology of the scientist and phenomenologist: Thales, Archimedes, Newton, Einstein are just odd and strange from common-sense vieepoint

This failure has been buttressed by subsequent exclusive concern with engaged as opposed to contemplative consciousness

One must not expect scientist to be able to detail what he really does. Einstein's advice to epistemologists: don't listen to what scientists say; watch what they do.

(e) Greek, Renaissance, subsequent normative accounts of truth, science, method

are not just artificial ideals floating on popular obscurity, though their non-philosophic or indequate philosophic statement may be such

they are expressions and clarifications and objectifications of the immanent normativeness of hukan intellect itself, which is participatio creata lucis increatae

this fact coming to light in Heidegger's Erschlossenheit.

(f) There is a real priority of the subject in knowledge

Human sensitive psyche is not animal: free images; development of imagination

Participatio creata ground of questions, intellectual activity

But this priority is not to be interpreted in Greek and Cartesian fashion with exaggeration of absolute necessity and absolute certitude. Moreover, epoche is involved in confusion of "animal faith" and "rational judgment"; and transcendental reduction proprely is to "being" and not to "intending" which also is.