

VILÉM FLUSSER Introduction to "Ça existe, la Nature?".

For Abraham Moles.

The problem of distinguishing between "natural" and "artificial" phenomena is not, at present, so much a question of ontological speculation, as it is a question of method of research. Our tradition has developed a more or less clear separation between the sciences of "nature" and those of "man", (or of "the society", or of "the spirit", or of "culture"). Two things strike the observer immediately: one is that the separation is being justified by the success of specific methods on the side of the sciences of "nature", and the relative unsuccess of the same methods on the other side. The other thing that strikes the observer is that the separation does not result in two types of sciences, but in the "science of nature" on one side, and in a more or less muddled mixture of disciplines on the other. It is a thesis of this essay that this traditional separation is responsible for many aspects of our present crisis of knowledge and learning, to which, among other things, the University as a place of research and learning may fall a victim. In fact, the present structure of most universities illustrates best the thesis of this paper.

If we consider the structure of a typical university, we find more or less the following situation: There is a school for the "sciences of nature" in a strict sense of the term, namely a school where the motion of matter is being studied, (physics, astronomy, chemistry, geology and so forth). There is a school for the application of the results of such studies to the manipulation of matter, (usually called "polytechnics"). There is a school for the study of a specific sort of matter in motion, namely proteins and nucleic acids, (usually called "school of biology"). There is a school for the application of the results of such studies to the manipulation of the human body, (usually called "school of medicine"). And then there is a chaotic branching out of various types of schools which study phenomena of quite different sorts, like the school of psychology, of sociology, of economics, of letters, of the arts, of history and so forth. The competence of these schools tends to cross, and give rise to the most fantastic hybrids in the form of "institutes" and departments. Finally there are three types of schools which do not seem to fit in at all because they have normative aspects, but which nonetheless interfere with many of the other schools, namely the "school of philosophy", the "school of theology" and the "law school". Small wonder that such a chaotic structure seems to have no chance for survival.

Obviously this situation is the result of a historical process. But now and again attempts were made to supply it with some structural justi-

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fication. An interesting one was the positivistic approach by Comte, which attempted to stratify the realm of reality more or less on the lines of traditional university structures. An even more interesting one was the attempt made by Nicolai Hartmann, which tried to stratify reality according to traditional university structure and then establish feed-back links between the various levels. But such attempts must fail, all of them, for the following reason:

It is true that we may try to rationalize the university structure on the basis of the phenomena that are studied in universities, for instance as follows: First level: the study of matter in motion. Second level: the study of proteins and nucleic acids in motion. Third level: the study of proteins and nucleic acids in the form of human bodies in motion. Fourth level: the study of great numbers of human bodies in motion. Fifth level: the study of the results of the motion of individual human bodies and of great numbers of human bodies on the surroundings. Sixth level: the study of the models within which the surroundings are changed by such motions. And so forth. The first level might be called "physical", the second "biological", the third "psychological and anthropological", the fourth "sociological and economical", the fifth "cultural and historical", the sixth "normative, for instance ethical, political, esthetic etc." and so forth. And we may establish rather easily feed-back links between the various levels, (like for instance Piaget is doing). But there always will be disciplines which will not fit such an attempt at rationalisation, because they do not study phenomena, but structures.

An ancient example of such a discipline are the mathematics. They obviously do not fit such a scheme, but cross it on many places. An almost as ancient example is logics. But what is characteristic of the present situation is the fact that such sort of disciplines seem to be multiplying. To give some examples: theory of information, theory of decision, theory of games, cybernetics. Now it is quite misleading to say that this sort of discipline studies phenomena in the same sense in which for instance chemistry does so. It is more to the point to say that each of this sort of disciplines studies all the phenomena available under one single specific aspect. And one cannot see, so far, how all these disciplines now in existence, (let alone the many that doubtlessly will come about in the future), may be ordered and reduced to each other. Russel's failure to reduce mathematics to logics is a strong warning in that direction. Therefore all attempts to rationalize university structures are doomed to failure, and so are the universities themselves, if we do not assume a new attitude toward them.

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Now the structure of universities, (although it is a serious problem in itself), was taken in this paper only as an illustration for a wider problem. Let it be repeated: Tradition divided the sciences into "natural" and "unnatural" ones, partly based on the criterium of method, and partly on the criterium of the phenomena studied. Those two criteria do not coincide, but overlap all over. To put it shortly: the first criterium says that a science is "natural", if mathematics may be applied satisfactorily to it, and to the extent to which they cannot it is not a "natural" science. The second criterium says that a science is "natural" if it studies phenomena not projected by man, and to the extent to which phenomena are projected thus the science that studies them is not a "natural science". These two criteria overlap, because some man-projected phenomena may be studied well through mathematics, and some unprojected cannot. And they are also bad criteria if taken each singularly. The criterium "mathematical applicability" is bad, because it is empirical and subject to the growing refinement of mathematics. The criterium of "human projection" is bad, because it cannot be applied satisfactorily to the phenomena which surround us. And the whole concept of dividing science thus is bad, because it does not take into account the new types of disciplines like theory of information and cybernetics. As a result the whole body of science and knowledge is now in a structural crisis, and the univeristy crisis is just an epiphenomenal symptom of that more profound confusion.

It seems to be obvious that the crisis can be overcome if it is attacked from two sides. One is the side of the criterium "mathematical method", the other the side of the criterium "human projection". It must be shown in detail, that both criteria are false, and that a new organisation of knowledge must follow other criteria, if it is to be fruitful. The attack from the methodological side is in the making. Moles' work is a good example in that direction. He takes the new type of discipline as a point of departure, and tries to incorporate all the disciplines, (traditional or not), into his method. This is why for him "theory of communication" is the basic discipline, under which all others must find their place, if they are to be integrated. (See my paper on Moles in "Communication et Langage"). All attacks on his endeavor starting from traditional criteria like "undue use of mathematics" are therefore the result of a misunderstanding. And this explains also his battle cry: "There is no longer any nature!". The disciplined progress of his work can be seen as an effort to give the whole body of knowledge a new and more satisfactory structure.

But it is also necessary to attack the crisis from its other side.

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It must be shown carefully and systematically that the criterium "man-made project" must be radically reformulated. It is a thesis of this paper that this is a very painful endeavor, and that it can be done only if specific phenomena are analyzed as to their "project" with a phenomenological vision. Mainly that type of phenomena which is taken, by traditional science, to be phenomena of "nature". It does not suffice to put the criterium theoretically under question. The criterium must be applied to a great number of phenomena, in order to show where it is working and where it is not working. This is a labor of love and patience. But it cannot be avoided.

The following essays are meant to be initial steps in such a direction. They want to be read in such a spirit. They want to show that the middle between "Geisteswissenschaften", "humanities", "cultural sciences", "normative sciences" and so forth is a result of the defects of the criterium "man-made project". And that the whole concept of "natural sciences" is, for the same reason, a bad one. In this sense the following essays are meant to be a counter-part to Moles' efforts. A dialogical relationship may later be established between the two attacks on the present crisis. It may contribute to its overcoming.

The human body and its parts occupy a preferential place in such sort of endeavors. Because they are at the same time "natural" and "human" in the traditional sense of these terms. Therefore they may serve, if phenomenologically viewed, to explode traditional concepts. But all other types ~~maxims~~ of phenomena must be analyzed and brought into the context of the human bodily "being-in-the-world". There is no limit to the field of study. This is the reason why it is so adventurous, and so full of pit falls. The following essays want to be read, but also criticized, in this spirit. They do not want to form a discourse, but the initial stage of a dialogue with a view to reformulating the structure of knowledge. In this sense they belong, already now, to the new structure of knowledge.