K. Pstružina: Information Society and its Consequences

I think we are living in the very special time, it is turning point in our history. Perhaps it is nothing new and perhaps people in long term of history always thought that they are living in critical time but the today's novelties differ. They are substantial and we do not know what the opinion we can take up to them. There are many novelties indeed. There are for example:

- Gigantic differences in the social development in the economic and political fields,

- A problems of global character such as an ecological crisis, devastation of the auto-regularity in nature, exhaustion of the raw-material etc.,

- Electronics with its applications,

- Genetic engineering with the possibilities of changing the quality of plants, animals and in the future perhaps man too,

- The immense growth of scientific results and difference between people who can use them and people who due to social, cultural or mental abilities can not,

- Differences in the growth of the population,

- Penetration into space,

- The findings concerning brain and thinking,

- The dissemination of culture and on the contrary keeping secrets in the field of scientific results,

- etc., etc.

It is not easy to enumerate these new phenomena in detail and it is not easy to tell which of these will have an influence in the future but all these new phenomena can determine the following development of society and man.

From the historical point of view we are experiencing dramatic moments. Nowadays mankind is coming into a new quality of being. We can be happy to be living in the period of the rise of new age. The events are coming quickly and chaotically. We could destroy ourselves. We could destroy all live on the Earth but we can establish the foundation for true emancipation and create condition for the freedom of man for an individual with the possibilities of all-round development. I think we are living at crucial years indeed. Such crucial stage has been not many in human history. During 100 years we have begun to fly, to call by phone, we light at home and we can read in evening, we drive a cars, watch a TV, we have for our disposal an antibiotics, we

learn to make a transplantation of an body's organs etc. Every from these things intervene in our everyday live. For example the anti-baby pills. It is only pill and how profoundly changes our historical approach to sexuality and family.

I think the most influential scientific findings are the findings about the brain and thinking; findings of genetics; and the information technology. The findings from these areas very probably affect both our physical and psychical form and social environment. In focus my paper will be information technology. It is because we spoke about today's time as a time of information society.

Today's epoch is labeled by differ way. Most often philosophers speak about the post-industrial epoch or about the age of information. If we will look at the today by the prism of information then we must clarify some phenomenon. If I am looking on today's time by the prism of information then I want to point out that the philosophical view is concerned not only on the description of information but it is focused on the questions what the information is and what are the consequences of that. In the question is the world confronted to the dubiousness and we must take up the point of view to them.

At the first I want to devote briefly to the question **what is the ontological status of information.**

It is question what the kind of being the information is. This question is more applicable because we can ask for the ontological status of mental phenomenon, for example what is the peace of knowledge as a being; what is the thought as a being or what the ontological status the dreams are, etc. The question that will be in focus of my attention is whether it is only some form of being or mental phenomena are independent being. It means there is the reason why we must differ among beings from the ontological point of view.

The ontology that is based on the Parmenid's approach presupposes unification in the rationality and that leads us to integral form of science, to integral truth and to universal method. The being and cognition are not only compatible but they condition themselves. Classical example of that is Hegel's ontological system, especially in his Phenomenology of Spirit. Hegel arises from the sense certainty and he grows up to consideration, it means to the constitution of the being that include everything, every form of being.

Sobotka wrote in this context:

.. *The knowledge has been grasped here as a kind of movement that is same as other cosmological movements.*

The trends to proliferation of hypotheses, the plurality of types of rationality or the variable criterion of truth are for my opinion incompatible to such type of ontology. The proliferation of hypotheses ought to be explains as methodological means by which we penetrate to the being but types of rationality point at the structural differences of worlds and their independence. It is impossible to conceive the being that includes itself and self-reflection of itself in the form of universal science or method when we are speaking about the types of rationality. Therefore the urgency of not-parmedian's ontology is great.

The not-parmedian ontology has its long-term tradition. The opinion on the philosophical systems that may be assign as a not-parmedian can be differ but more important is the essence such type of ontology. I think most pregnant not-parmedian ontology we can see in the Nicolai Hartmann's ontological system that is included in his work: Zur Grundlegung der Ontologie. Hartmann is speaking about necessity to distinguish among four levels – anorganic; organic; level of soul; and level of spirit. These levels arise from themselves but they are independent and autarkic. It is reason why we must investigated every from these levels by particular means by particular methods and we must use the particular category, too. Hartmann excludes the reductionism that strives for explanation the higher levels (soul and spirit) on the base any knowledge from under levels (especially from the anorganic level). It is also impossible to explain the under levels on the base our grasping of the higher levels. He very differ from the Hegel's opinion that we can arrive to the absolute by the way of phenomenology and that this type of knowledge can be used for all form of being.

Hartmann overcomes the parmedian ontology by this way. He offers new conception of being that includes serious epistemological consequences. The being is not seen as wholeness but as a plurality of levels. Such conception of being conditions the differentiation in the methodological approach in the investigation particular levels, too.

Hartmann is not only one philosopher who carries out such differentiation inside being. Descartes, Leibnitz or Popper appertain also to not-parmedian ontology. We can see the attempt on the differentiation of being in their philosophical systems. Descartes exposes the psycho-physical parallelism two substances (res extensa, res cogitas) that is caped by unlimited substance but res extensa and res cogitas allow the possibility for separate epistemological approach.

The same we can say about Leibnitz's monadic system. Every monad is the world for itself, every monad is the autarkic being that differs to other ones. Leibnitz's ontological pluralism is closely tied with consequences in the epistemological sphere because it enables differentiation complex concepts on the elementary units.

To the same tradition we can bind Popper's conception the three worlds. It is because we can presume what is connection among his theory of three worlds and hi theses about determinism. Popper speaks about at his metaphor clouds versus clocks. The problems of methodological reductionism appear most explicit here.

K.R. Popper differs among:

- World 1 (the world of physical objects) 0) Hydrogen and Helium

1. The Heavier Elements; Liguids and Crystals;
2. Living Organisms

- World 2 (the world of subjective experience)

1. Sentience (Animanl Consciousness)
2. Consciousness of Self and of Death

- World 3 (the products of the human mind)

1. Human Language. Theories of Self and of Death;
2. Works of Art and of Science (including Technology).

It is not obfuscation when I use the term world and not category being. E. Fink uses the category world, too. I think the category world comes near what is only one of the worlds and by that this category world determines more its inner structure and also the relations to other worlds. The world represents its inner order and the order creates the world as independent and autarkic. If I use the category world then it does not mean that there is some super-world that overlaps the worlds and that super-world creates supreme order but it is only differentiation of being. The worlds are independent and autarkic. Such conception enables different epistemical approach to individual worlds.

My ontological profiling consist in many worlds and I apply the plural epistemology to that. But it does not mean that it is relativistic approach or that the truth is vague or fuzzy or that the subjective unruly construction of knowledge is possible. The differentiation of beings enable only specify the truth. For example, if we strive for knowledge about cognitive processes then we must elaborate particular approaches, too.

The ontological approach challenge to differ epistemical approaches by which we can also cognize independent and autarkic worlds. Hartmann's requirement is carried out only when we apply that on the knowledge that is founded by different methods with particular categorian apparatus for the particular levels. It does not only stand for such worlds as the world of physical entity or mental world are but also for the world of dream for the world of virtual reality for the world of information and for other worlds perhaps. All these worlds must manifest themselves as independent and autarkic.

The mankind strives for algorithmisation of the cognitive processes from the Eukleid's time. It is because we endeavor for shift knowledge activities on them. But the algorithmisation in cognitive processes settles also schism. One part of our knowledge is represented by active and actual knowledge and second part is formalized and objectiveness and this part can be also independent on the subjective experiences that we are living through the cognition. This objective cognition is transfered into the world of artificial intelligence. The simulation of active and actual knowledge is implemented in the artificial intelligence and it has ambition to replace actual experiencing the world.

The differentiation among beings enables to reach new findings because it demands the detail analysis of worlds as a independent being and not only as a part of whole. The requirement for specification of category apparatus implicates a necessity variant explanatory approach. And it is also open field for new method of investigation.

Human knowledge is integral process in which many substructures are active and mutually tangled. It is difficult to say if these processes will reach to new findings or not. The differentiate analysis separate worlds that takes part in the knowledge processes can lead to transmission of the focus on the processes that are on the edge a by that it can assist to more effective cognition.

Now I make attempt to see information from this point of view.

Information as a category has been characterized by C. Shannon and N. Wiener. They thought the information is different from the substrate on which it consists. From this point it is only step to characterization information as a kind bodiless flow that is able to fluctuate among specific substrate either it loss the meaning or form.

Information is the sign and every sign predicates something about the thing that it represents. The sign predicates about other things by which it is in the relations, too. We must differ between the natural signs and artificial signs. The sign shows something but it indicates something, too. It means the sign points to something. Natural sign is tangled to things, cultural sign is bound to thinking. Cultural information enrich the world of natural signs not only by its illumination and transformation of reality but also by that that it is also reality or rival of reality.

I am very near to Popperian answer on this question that has in the center the conception of three worlds. I think the information from the ontological point of view appertains to the world 3. The information arises in the world 2 largely (even the source of information can be the world 1, too) but information lives its own independent life therefore I binds it to the world 3.

The base of this answer is in connection with the determination, it means what is determination virtues to other worlds. I think the information may determine the world 2 as well as the world 1, the information can restructure these worlds. We must regard on the information as independent being. But we must put the question what kind of being we are speaking when we consider about information. My answer is, it is formative form of being. It means it is being that forming, changing and determining the being. It is very similar to thinking that differs being by speaking this is that and this is not that. They are operation of negativity and identity by which the thinking makes differentiation inside the being. By the same way the information is forming and concretizing the being. Information gives the shape of being. Therefore the information is formative kind of being.

Very important question is **how the information technology and its using determined or influenced the thought's operation**.

It is indubitable our living condition creates or modifies processes of perception even the thought's processes. In our brains do not arise new center always when we are in connection with novelties, The brain is very redundant organ and it is able to handle with many new processes, but at the same time is indubitable that the thought's operations are changed.

As a starting point could be comparison the perception in the historical development with perception that is under influences the information technology. As examples can be used:

- preparedness of the antique onlooker the dramas;
- remembering of the texts;
- imagination of the visual pictures on the base of hearing words;
- a concentration on the hearing words.
- A transformation of the hearing and listening how Ancyferova point out that;
- Supposition about fragmentation of the text and domination of the seeing when the hearing is only attendance.

By analysis of the antique dramas we can see that then onlookers has been prepared for understanding of them by many regards. Onlooker had to remember word for word all what has been told because to understanding of drama has been able only on the base of hints that had been included in texts. It is also very probable that hearing has been closely tied with visual imaginations. Therefore the recitation has chained up them to following performance.

J. Jaynes supposes that we disposed by the bicameral brains in our past. It has been necessity that bicameral brains had arisen, probably. When we has been living in the kin we had to communicate, we had needed the social control. If individual has heard some concrete command the leader of kin then he has fulfilled that. But after the death of him the need of the social control did not vanish. The voice of leader has been changed to hallucination. But it has been our inner voice that has been able to think and solve the situations. Jaynes supposes that these processes existed in ancient Greek and he reconstructed model that represent a structure of brain on the base analysis of Homer's epos. This brain was bicameral, divaricate. The right hemisphere had cumulated experiences into form of ideal type or divinity and it has insinuated to left hemisphere what is needed to do. Information has floated from one part of brain to other part and it had had the form of acoustic hallucinations. Gods has spoken to as in our head and we could not only hear them but also to see them because acoustic hallucinations had been accompanying by ocular hallucinations, too. I think the way by which Jaynes explains bicameral mind is also the way why the prophecy had so great influence on the decision making about social and private matter at that time.

Picture 1

Bicameral mind has brought about the distinct perception from way how we perceive the world nowadays. We can see the very similar processes in ontogenetic development. It is because the corpus callosum is maturing as long as puberty.

The same type transfiguration is presented in historical and ontogenetic development of reading.

L. Ancyferova writes:

People have been able to read only aloud for long time. It had been inconvenient and therefore the reading for themselves going to form in the time of Renaissance. But inner spout is still actual. We are living in the time when we get rid that because it inhibit the reading.

L. Amcyferova's researches show our habits are changed when we read texts in the historical development. We proceed from the loud reading through reading for ourselves to grasping texts in larger whole. Texts are fragmentated and the seeing dominates above hearing. A hearing is only illustrative tail and in the focus of our perception is imagination. An understanding to text is founded on pervade through it. Details and a text's nuances are leave out of consideration. Only content's is more and more important. The left brain's hemisphere is more dominant and the right hemisphere comes down to somnambulism.

In the future will be as a dominant the multimedial mediation of information and its elaboration. The question is how the structure of our mind correlates to the organization of information in computers.

K. Pribram writes:

… a great part what we indicate as a storage has a reconstructive nature. …The example can be reconstruction the memory traces from the minimal stimuli. All students know it when they prepare on exam and write a crib. The crib must be written by such way that it is minimize but it must include the keywords. The keywords include so important information in short form that they enable reconstruct all knowledge that they are needed for successful exam.

We are able to reconstruct the memory trace from any stimuli, very probably. Our wandering on the memory traces is very similar to computer addresses or organization of hypertexts. I can call it as matrjozka structure. In matrojzka structure symbols or concept includes many other thought's contents. T. Bogen characterizes it by the mean of map of thought's contents.

Figure 2.

The computer addresses arise on such base very probably. On the other side if man uses the computer then such type of structure might be fortified ant it can exclude other arrange of thought's contents in our minds.

My supposition consists in fortifying matrojzka's structure of the thought's contents of mind and I think that it will be accompanying by their fragmentarization, by their mosaic or tiles. The thought's contents will be encapsulated and in spite of that they will be non-linearly coheres with other thought's contents. This supposition pertains not only to arrangement of our thought's contents but also their course. The question is does include the formal logic or conception generators and inhibitors these modifications inside in same way or not?