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IMPLICATION OF THE INFORMATIC KNOWLEDGE

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Key words: informatisation, learning, paradigm.

ABSTRACT

The contemporary education process is necessary tied to information-technology and to Informatic. By using the Internet as source and as knowledge's transmission modality one modifies the learning parameters. From the quantitative point of view, the Informatic increases the education process efficiency. From the qualitative point of view, the Informatic imposes a change of the education paradigm. The Informatic determines status modifications for the purveyor and for the beneficiary of the knowledge. The Informatic modifies the psychosocial characteristics of the knowledge process too. Using the Internet supposes the assumption of at least two levels reality. A more than one level reality representation agrees with the quantum mechanics and with relativity theory. Such reality representation is pertinent as contemporary knowledge paradigm.

RESULTS

The modernity considers the knowledge as main production tool (6) due to the computer usage worldwide. By enforcing upon the operator to give up its passive recipient status and by imposing the double idealization of information in the process of data input and results' interpretation (1), the computer transforms all human intellectual activities. This paper tries to shape this process, in its characteristic features. The knowledge processes use, in an efficient manner, databases instead of the traditional libraries and Internet specialists instead of librarians. In this context, culture defines the one knowing the knowledge keeper. The classical roles of issuer and recipient are being modified during the Internet communication and the computer slowly replaces the other communication channels, by realizing a globalization of the operational environment. By using the computer, the teacher is driven out of the instruction process. The teacher is less efficient than the memory networks and less creative than an inter-disciplinary team. This new communication tool influences mainly the cognitive steps. Setting-up the Internet, starting from a military communication network, without a core and functional authority, under the conditions of a partial destruction and its rapid growth have enabled the researchers to use a tool that quickly became indispensable for knowledge development, taking into consideration the speed of exchanging information and the wide communication opportunities. In a time when the daily informational flow represents the defining cultural feature, by assimilating and using newly acquired information that is a must, the Internet cannot be considered a harmless tool. *Abraham A. Moles* (7) outlines the results for imposing a diverse culture through mass media: informational torture, random selection of information (since it cannot be possible to fully cover

the informational field and to block the access to the essential), take-over of superficiality. These results gather new meaning under the conditions of the worldwide enhancement of the Internet. *Vladimir Volkoff* (13) underlines the orientation facilities and selective guidance of informational network users, who are subject to the danger of creating an Internet dependency. It is a privileged way of misinforming for economic, political and, not at least, scientific purposes. The environment may be dominated by information. The term „information war" aims the offensive or defensive use of information for the sole purpose of serving the user. The Internet is the ideal space for an informational war. The accessed information should not be considered as being objective. Leading the searchers towards relatively easy solutions has significant economic and cultural implications. Technically, the misinformation through the Internet has no limits. The epistemological approach to the changes due to using the computer for knowledge is imposed because of the change of the status of communication. Knowledge is communication like, in contemporary physics, matter is energy. The access to information does not represent knowledge. Moreover, paradoxically speaking, the free access to information does not determine the rise of the people's cultural level. The children of the beginning of the 3rd millennium are not better trained than the people from the previous generations. On the contrary, according to some sociologists. This situation may have several causes. According to *Jürgen Habermas* (3), communication can take place in two ways: as communicative task or as discourse. The communicative task exchanges valid information. While making a statement, we have the implicit intention of realizing an agreement between the communication partners, subject to satisfying four validity intentions: understanding the expression, the truth of the contents, the accuracy of the interaction with the listeners and the verisimilitude of expression. No information is exchanged during a discourse, but there is an attempt to set-up or reject its validity intentions. Any discourse quietly presumes an ideal speech, to be realized through talking acts at the disposal of the speakers, according to their communicative competence. The pieces of information are correct or not correct. At this level, there is no question of truth, according to Habermas. The truth is a validity intention of communication, constituting itself as an object of discourse. Since knowledge has informational features, communication is done mainly as communicative task. The discourse side is being narrowed. The accessed information comes not with direct justifications of its validity. No master convinces the information seeker that he reached the searched contents. No prestigious illocutionary manifestation strengthens the opinion of the seeker. This one evolves on his own, trying at least to compensate for the missing master with accessing prestigious sources. Nevertheless, credible information does not necessarily require wisdom. In the absence of the guidance, the volume of information may overwhelm the seeker and he might get lost.

Secondly, the wide access to information uncovers the seeking of the cover. Until the age of informatics, the cognitive process has developed heroically and the value of acquired information was bound to the effort of finding it. *To access* does not mean *to find*. *Peter Sellars* (12) states that, in our days, information is no longer accompanied by the searching experience. Without the initial acquiring travel, the information

looses value. When everything is at hand, the value is hard to pick-up. Further, the acquired information is inevitably partial. The seeker is directed towards the information in the first accessed site. This way, he will access a part of the available information. The available information is the published, listed information. Without being able to reach the level of search, the seeker does not recognize what he cannot access. Missing the support of the discourse, non-heroic and inevitably partial, the way to knowledge combined with Informatic communication is not very efficient, despite its technical support. This lack of efficiency is one of the aspects of Informatic communication. The mobile, modern phones and faxes and the laptops put a limitation to the freedom of their users. Doe to the new technology, according to *William Safire* (11), the individual can be found anywhere and is permanently connected to his professional tasks. Instead of increasing his freedom, the new communication tools delete the human secrets and his opportunities to think by himself. A man without his secrets is a man without depth, a mask over the whole. Definitely, these features are not the ones that humanity recognized as being representative during the history of philosophy. The solution to this uncomfortable situation does not come from the area of Informatic communication. The ability of using the computer is slowly becoming a passport for accessing the real job offers. A large number of the active population works in the field of „Informatic" information. The industrial cities are cities of Internet specialists, sometimes even built for them. Under these circumstances, the limitation of computer use and of other modern communication tools constitutes no subject.

On the other hand, generalizing the access to the computer and Internet does not seem to take out the education from its recognized crisis. The Romanian Government goes through the process of introducing computers in all schools, starting with those from the country. The educational crisis is due to the encounter of postmodern pupils and modern teachers, in the opinion of *Stefan Popenici* (9). The encounter presents obstructions. He efficiency of this encounter does not presume an evolution towards postmodernism of the teachers. It presumes the release of children from this orientation, which is transitory. Children need models related to the timely environment rather than computers. Education has to re-gain and recognize its meaning. Without a meaning, schools become detention, not attention, centers, according to *Neil Postman* (10). Giving a meaning to the educational process can increase the efficiency of knowledge. By rediscovering the heroic aspects, the energy of the archetypes could be used again. And the leaders may be, as throughout human history, the teachers. As Plato states, teachers are the only ones able to evaluate and use correctly the tools of the new technology. The Informatic side of communication and the wide use of Internet build up a new level of reality. The users of the new communication tools operate naturally with and within virtual reality. Its borders are mobile, following the borders of physical reality. The physics of the 20th century has also confronted itself with the multiple levels of reality.

Classic physics operates with the principles of local causality and simple determinism. Within this paradigm, truth is necessarily associated with the objectivity of the seeker. Classical physics is based on the principle of continuity. The reality it describes has one level. A real-

ity level is being defined as a conglomerate of systems, which are not affected by general laws (8). At the time of quantum mechanics, physics is also invaded by discontinuity. Energy has a discrete structure. Local causality is being replaced by the global one. This new type of causality admits the inseparability of quantum particles, widening the area of reality. Determinism is replaced within the quantum paradigm with a fundamental indeterminism. The results of investigations at microphysical level do not depend on the viewer or his/her investigation tools, *Werner Heisenberg* mentions (4). Classical physics is the physycs of continuity. Discontinuity penetrates physics by means of quantum mechanics. The classical physics determinism is replaced in quantum paradigm by a fundamental and constitutive indeterminism. The investigation results at the microphysical level are not independent from the observer and his investigation tools. The post-modernism is naturally associated with the new physics paradigm. One of the characteristics of post-modernism is the contest of legislative claims of the logical empiricism in scientific knowledge. The certainties and the foundations are considered as fictions in post-modernism, and the rationality criteria are socially outlined. The post-modern epistemology values the relativity. For this reason the post-modern epistemology opens to the unorthodox manifestations of the human. The borders of the rational approaches widen, allowing the access at the seeming irrational behaviors and social phenomena.

By recognizing the macro physical structure different from the quantum, microphysical structure of organisms, physics admits the existence of at least two reality levels. The appearance and development of highly specialized scientific disciplines favors the creation of subtle and efficient disciplinary correlations aiming at the investigation of the real. The correlative approaches can be plural-disciplinary, inter-disciplinary or trans-disciplinary. According to *Basarab Nicolescu* (8), the trans-disciplinary represents the proper reporting way to the complex reality described by quantum physics and the relativity theory. The trans-disciplinary has three supporting principles: the existence of a multi-level reality, the logic of the included third part, as alternative to the classical Aristotle logic and the complexity of the world phenomena. The quantum world is in a permanent transformation. At this level, everything is vibration and potentiality. Any energy delivery represents the actualization of powers.

A multi-level reality requires a new logic as investigation tool. This tool may be the non-contradictory logic issued by St. Lupasco. This triad it is based on is different from Hegel's triad of thesis-antithesis-synthesis. Hegel's triad exploits the succession of its composing elements. St. Lupasco's triad is simultaneously built on two distinct reality levels. The contradictory elements at a first level are being united at the level close to reality. This logic of the included third party through the existence of distinct levels of reality does not exclude, but limits the application of the logic of the excluded third party to simple cases. According to *Kurt Gödel*, a rich system of axioms either produces unreliable results or contradictory ones. The logic of the included third sustains the impossibility to build a complete theory of reality levels and to navigate from one level to another. The ontological consequence of this impossibility is the admittance of the area of the non-experimental and the non-represent able beyond the extreme levels of reality. This area represents *the sacred* and has the status of the third

party included in the triad of reality-sacred-perception levels of reality. The sacred ensures the harmony between the object and the subject of knowledge. The sacred shapes three sides of the same reality. The epistemological consequence of the world investigation through the logic of the included third party is the trans-disciplinary, as a research of the whole manifested in, between and beyond any scientific discipline. The theoretic construction of *B. Nicolescu* accords with *David Bohm*'s (8) representation of the world. The latter sees the world as a continuous and not dividable whole, logic and ontological prior to its parts. The world represents wholeness in permanent transformation. Bohm's holistic discourse is centered on the concept of *implicate order*. The substance of the world is developed explicitly and in an implicate order. The understanding of the implicate order allows the correct reporting to space and time and describes the interdependencies of the reality levels. This way, the theory of the implicate wholeness of the world may function as a support of the quantum mechanics and the relativity theory. In quantum mechanics, according to *B. Nicolescu*, objectivity manifests itself subtle, depending on the researched reality level. There is no border between real and imaginary. The real is seen as a facets of the imaginary and the imaginary as a facets of the real. The trans-disciplinary allows and supports such a relationship. The trans-disciplinary also allows the second level of reality to be the virtual. Informatic knowledge, with no guidance, with no heroic but partial character, can increase its efficiency by pulling out education from the postmodernist area. Informatic knowledge shapes a new level of the real. The trans-disciplinary, as paradigm, permits its existence by manifesting its productive character.

REFERENCES

(1) Bârliba, M.C.: Introducere în epistemologia informațională, Ed. Ştiinţifică, Bucureşti, 1990 – (2) Bohm, D.: Plenitudinea lumii şi ordinea ei, Bucureşti, Editura Humanitas, 1995 – (3) Habermas, J.: Cunoaştere şi comunicare, Ed. Politică, Bucureşti, 1983 – (4) Heisenberg, W.: Paşi peste granițe, Ed. Politică, Bucureşti, 1977 – (5) Lupasco, St.: Logica dinamică a contradictoriului, Ed. Politică, Bucureşti, 1982 – (6) Lyotard, J.F.: Condiția postmodernă, Ed. Antet, Bucureşti, 1992 – (7) Moles, A.A.: Sociodinamica culturii,Ed. Ştiinţifică, Bucureşti, 1974 – (8) Nicolescu, B.: Transdisciplinaritatea, Iaşi, Editura Polirom, 1999 – (9) Popenici, Şt.: Pedagogia alternativă. Imaginarul educațional, Ed. Polirom, Iaşi, 2001 – (10) Postman, N.: Transcendent Narratives, Cambridge University Press, New York, 2000 – (11) Safire, W.: Total intouchedness. The lelefigitives, MacMillan Heinemann, London, 2000 – (12) Sellars, P.: Digital Expression, MIT, Cambridge, 2000 – (12) Volkoff, V.: Tratat de dezinformare, Ed. All, Bucureşti, 1998