UDC (Universal Decimal Classification)
  004.072.2 Reading
  028.02 Reading psychology
  316.77 Sociology of communication
DDC (Dewey Decimal Classification)
  028 Reading & use of other information media
  428.4 Reading, psychology & pedagogy
LCC (Library of Congress Classification)
  LB1049.9-1050.75 Reading (General)
  P87-96 Communication. Mass media
  Z1003-1003.5 Choice of books. Books and reading
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HOW THE COMPUTER VINDICATES THE CULTURE OF READING

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ABSTRACT

The computer screen is an emanation of the evolution and on its spiral of the linear language of writing: first appears the level language of the art, afterwards the cinema image with a real sequence of movements on the closed space of the screen,

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after it the television, which brought at home "the page", but already animated, the video arises as a "live book", which is stacked at the library shelves, and at the end comes the display as a "computer page" and as an open, "alive", dialogical book. This is the basis for determining the contemporary "culture of the computer page" as a metamorphosis of the book culture, a result of the evolution of the book or more precisely of its text.

Keywords: new literacy studies, theories and models of reading, pyramid model, information literacy, reading literacy, media literacy, history of reading, history of writing, media evolution, mediamorfosis, evolution of reading

INTRODUCTION

Each new form of culture – from the first culture of the spontaneous, live communication, written culture and audiovisual culture to the current phenomenon of **virtual culture** – is a generator of some form of sign transformation – not only in the cultural layer of civilization, but also in the individual cultural skills and characteristics. Audiovisual culture, for example, legitimizes itself through **the technical novelties** for maintaining and transmitting images and sounds (television, video, and multimedia). It provides a new medium for fixing and translating of cultural information, not only additional information, but also an alternative to its superior - verbal-written communication; the visible result of this metamorphosis can be seen in two major aspects:

Firstly: we can talk of "duplication of the cultural medium" - that is all cultural products have an audio-visual expression, the written and audio-visual texts exist as mutually translatable, relative equivalents of the "prototext" and

Secondly: a pluralistic cultural medium appears and what we have in this medium is a "peaceful co-existence" of texts of different nature.

Audiovisual culture and the cultural practice have delineated the pluralistic tendencies of the cultural medium (feedback, eclectics, postmodernism) - which,

according to many humanitarians have not produced anything particularly new but have resulted in a **paralysis of the achievements** of the written "veteran-cultural" and making-up or simply collating of the already discovered technologies and manners, and a certain "quoting" of the classical means by new technical ones.

The technically determined metamorphosis called **computer culture**, however, cannot be explained in one aspect, neither can it be reduced to just "coping" or "multiplying" because, up to this point, it theoretically comprises two phases:

CULTURE OF THE COMPUTER PAGE AND VIRTUAL CULTURE

The second phase is a **precedent to the evolution** of civilizations. Computer culture, as a **qualitatively new type** of medium for communication through digital texts, interacts effectively with the traditional types of live or "interpersonal", "written" and "audiovisual" cultures and forms itself on the basis of a synthesis between computers and video technology, by using completely new means of connection and channels for transmitting information, which eventually form "the infrastructure of the global space" (Prohorov 1989).

Which was the new aspect, which was brought to our cultural background by the technologically determined computer culture?

Firstly, this is the **technological discipline**, which was introduced as a corrective of the discipline "on foot", which is characteristic of the cultures of the conveyer industry and the "immobile" cultures - one which is based on the concept of mobility (literal and mental).

Secondly - computer culture offers us a new type of communication, related to the opportunity for free gravitation in the information space (for example, an opportunity for reading an on-line newspaper from every point of the world and an open access for everyone) and for a fulfilling polilogue, providing multiple possibilities for feedback with the help of the screen.

Thirdly, computer culture enforced a **new type of education** and thinking:

Intertwining of the logical and the metaphorical, a synthesis of the conceptual and the visual, a visualization of the sense and materialization of feelings, a rehabilitation of the sense of the historical, an **archeological passion** for the opportunities for the "in-depth" and distance drilling by the computer "time-machine".

Maybe the most contradictory cultural metamorphosis of the end of the 20th century has been legitimized as "the culture of the computer page", as a type of **meta-screen** culture. It has appeared at the peak of the so called "cultural pyramid", which is built on the basis of the continuity between the live, written and audiovisual cultures.

Is there a regularity, which could account for this cultural continuity?

It was Sergei Eisenstein in his research called "Perspectives" who discovered the **spiral return** to a new step for world viewing.

He was referring to the **invention** of the civilization called "cinema", which rehabilitates the perspective and the images in movement.

Later on - another civilization creation - the **television** posed such a big threat to the balance of the cultural medium that a great number of media-ecological movements and trends were formed.

At that time the Director of the Congress library in Washington DC, Daniel Boorstin, said from the viewpoint of his eco-civilizational position: The antidote to the image imposed on us is in the **books**, in **an escape from the stream of the trivial**. Books are a stable fortress of survival, they sift the experience and the experiences not in the short-term actuality of the happening but in the longevity and the correlation. If today we protect books, we will protect the future of civilization and keep it from the vicissitudes of fortune, and we guarantee the survival of the ideas of the great people. And it was these ideas which stimulated people in their progress (Boorstin 1992).

The discovery of Eisenstein is reinforced even today: "the civilization of image" is at a turning, after which begins the **spiral "return" of the "civilization of books"**, of course at a new step.

And this new step is namely the **computer culture**, which is also placed on the peak of the "cultural pyramid". By looking at the layers of the spiral of evolution on the cultural pyramid we can trace the mechanism, leading to the rehabilitation of practices of the written culture with their metamorphoses - "computer page", "digital text" and "screen reading" (*see* Fig. 1).

The discussion of the problem of rehabilitation of the practices of written cultures or the defense of books as, like Daniel Boorstin said – a stable fortress for survival and an antidote to the imposed on us image from the screen, necessitates firstly an operationalization and actualization of our concept of "consuming" the book or the concept "the culture of reading".
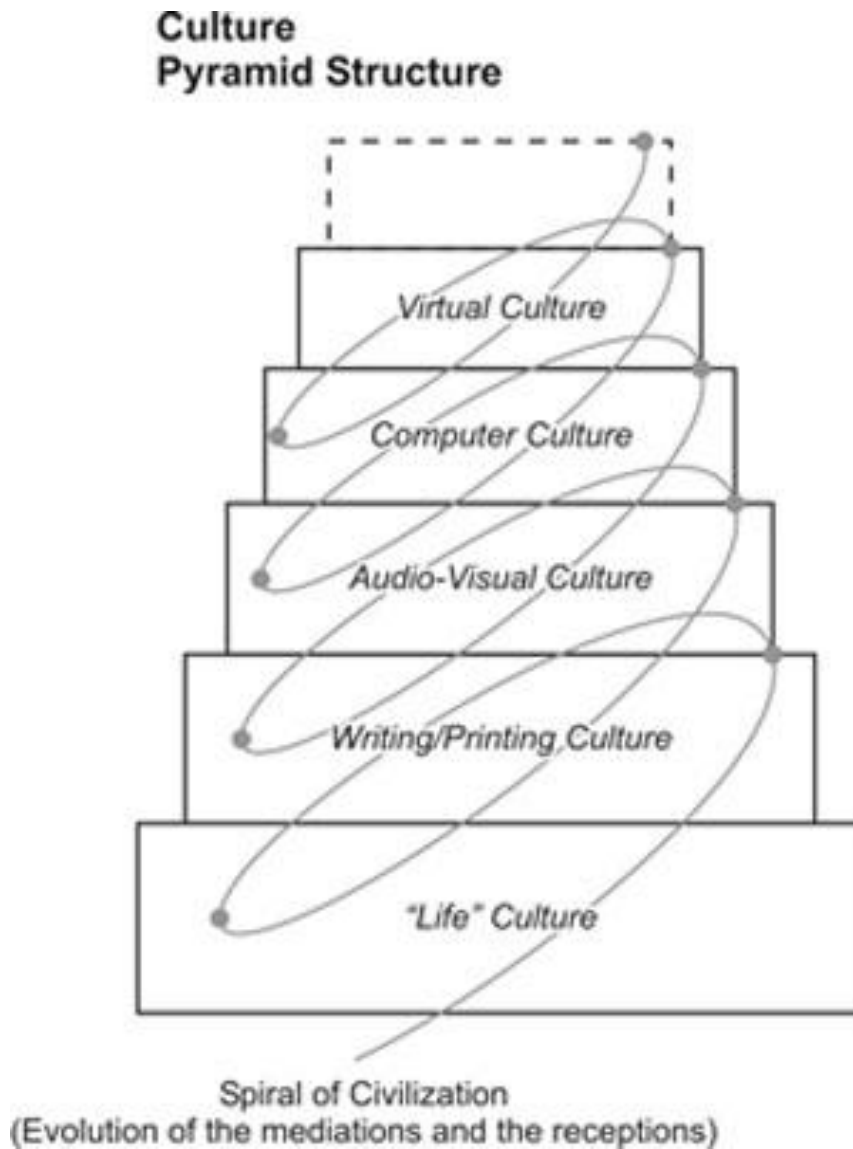
**Culture
Pyramid Structure**

Virtual Culture

Computer Culture

Audio-Visual Culture

Writing/Printing Culture

"Life" Culture

Spiral of Civilization
(Evolution of the mediations and the receptions)

Fig. 1. *A regularity, according to which computers rehabilitate "books" and "reading"*

On an individual level the culture of reading reflects the perceptive capacity and the **mental predisposition**, which helps the typographic symbols, perceived by the retina, to create a spiritual sense.

And from an informational-cognitive viewpoint reading is a peculiar conceptual activity for **forming the informational culture** of people, conceived as a degree of perfection in the discovery, reception, storage, processing and organization of information, creation of new knowledge and its practical application. The appearance

and constant actualization of the **criteria** for perfecting the culture of reading are socially and mentally determined by the following circumstances in the framework of written culture.

An exponentially developing exchange of social and scientific information, a necessity for overcoming space and time, a necessity of technology for reproducing the historical memory, opportunities for building indirect (mediated and generalized) past experience, as well as by the specifics of the intellectual efforts in the work with the book and most of all the **psycho-physiological difficulties** in perceiving the written text as a virtual image of reality.

The rehabilitation of the practices of written culture involves mostly **rehabilitation of reading** as an adequately disseminated cultural activity.

From an evolutional point of view the first question is **which the catalyst is** for the rise, and respectively the sunset of a given cultural practice.

The retrospective look back to the history of the media, the technical means and forms of communication shows that this is the conflict, the clash between **old and new media**. The situation of rehabilitation arises after the critical fight in the relationship "suppression-survival", in relation to two cultures (live and written, written and visual) and as a reflection of the tense coexistence of two different sign systems (verbal speech and alphabet, alphabet and audiovision).

In spite of this, there has always existed a time zone of co-existence, mutual reconciliation of the conflicting cultural antipodes.

The first such precedent was seen in the Ancient Greece in the 5th century BC when the transition from live (ante-written) to written culture took place. What could be made was a certain analogy with the present cultural state in relation to the common to the two epochs conflict, but also a form of tolerance between opposite intellectual skills and biologically determined differences in the communication means: on the one side we have writing and on the other side – image, movement and sound.

The communicative practice both then and now involves **observance and reading**, reception and perception in its compiled version called hyperception.

A certain form of convergence can be noticed in the **rise of the visual** mass commuincativeness in the first decades of the XX century, when the European literary vanguard was formed - as a combination or union between the verbal and the visual.

In a similar way today, on the threshold of the **global hypertextual communicativeness**, the conflict between writing and the audiovision was resolved in the dimensions of the post-modernity.

However, do we have the basis to talk of regularity in the evolution of cultural practices?

If we go back to the rise of human civilization, we will find out that there is no **extinct form of communication**. The reason for the immortality of the informational phenomena is the unique natural and social homeostasis of the human brain and the informational medium, created by the humankind, which are mutually formed and transformed.

And because culture forms in a **complex spiral of evolution**, there are phases at one time of "falling asleep" and at other times ones of "waking-up" of the already used technical means and forms of informational exchange.

This is the essence of the so-called **Law for protection of informational means and technologies** (Subotin 1994). The mechanism of this law is something like the **nostalgia for the "Golden century":** throughout the whole history of the verbal, written, printed and even audiovisual culture the humankind has strived towards the abandoned forms of communication, the lost synthesis of the "sensory" technologies.

The strive towards resurrecting the completeness of the perceptions was registered back in the **ancient mitograms** (a non-linear form of writing, an ancestor of the hypertext according to the researchers of the primitive culture and mostly in the opinion of Liorua-Guron), through the manuscripts with miniatures to the

contemporary illustrated books, from books and magazines with enclosed gramophone records or optical discs to the contemporary multimedia on-line editions, which use the most-successful rehabilitation of the ante-written means – image, movement and sound, provided by the television.

This whole evolution is an evolution of looking for that informational technology, which will bring humans to their **primary hypertext medium**.

The spiral approach to the development of the cultural practices and the forms of exchange of information showed that the engine or the motivating **drive for the development are the innovations** in the technical means for communication, in the sphere of the informational technologies.

Each new cultural practice is a rehabilitation of an older one, which realizes itself at a higher technological level.

Apart from this, each new means, **each new mediaform is a continuation of the previous one**: the cinema appeared as a "synthetic sound-perceivable reading" (N. Milev), screening - as a continuation of the novel, the videofilm - as a continuation of the movie, as a result of the inner individualization of the means for mass communication with the strive to "reiterate the personal contact with the book" (Vl. Mihailov), the video cassette and the CD – as a mobile form of communication, continuing the static (theatre, cinema, television), just like the book appeared as a mobile form of texts on walls and obelisks.

The very presence of the computer became a motive for global transformations in the "cultural pyramid". Its popularization and acceleration as a self-transforming system led to the "mediamorphoses" in the net community.

What appeared as a result of the Web, which in practice reproduces itself, was a **tribal community** of its kind of citizens of the world, another type of a shared space, with its rules and laws, with its own culture. And this is namely the "computer culture" which is based on a new material medium - not writing but "screening", not on linear writing but on a system of level images, not on written speech, but on **screen speech**

in the sense of a **time stream of screen images**, which has synchronized behaviors, sentences, animation, collages and vitrages.

The "computer culture" which showed also the spiral of cultural development is only the predecessor of another, much different one, which nowadays we conditionally mark as **"virtual culture".** Whatever the changes in the sphere of the new informational technologies might be, it is a matter of fact that each of them has triggered and will continue to trigger metamorphoses of the texts and their perception.

The computer screen is an emanation of the evolution and the metamorphoses on its spiral of the linear language of writing: first appears the level language of the art, afterwards the cinema image with a real sequence of movements on the closed space of the screen, after it the television, which brought at home "the page", but already animated, the video arises as a "live book", which is stacked at the library shelves, and at the end comes the computer display as a "computer page" and the PC as an open and "alive", dialogical book.

This is the basis for determining the contemporary "culture of the computer page" as a **metamorphosis of the book culture**, a result of the evolution of the book or more precisely of its text.

The computer text has kept many of the specifics of the traditional written text: it contains written, fixed information, but before that it starts from the idea on a "manuscript", it can be destroyed, it can become personal property, moves from one version (hard) to another one (soft) and backwards (the written text is screened, and the screening can result in written text), needs identification, that is bibliographic data – address, localization and so on.

However, the main similarity between the written text and the e-text remains their common digital nature, which makes possible both the continuity and the metamorphosis.

The human language is digital by origin (and the structure of the brain is also digital), it transmits meanings, complex and abstract concepts. The consents of

the communication is transmitted digitally, by digits, which don't have a semantic potential and are organized in an almost arbitrary system, for example, alphabet.

The alphabet letters are in reality signs of nothing: b-o-o-k is a combination of four letters, which are only a semantic agreement, an analogical way (as opposite to the digital) "means" one and the same object both to the writer and the reader.

However, the digital existence of the e-text does not make a reference to its object analogue. It is because the digital technologies in the computer communications **pulled out the written text** from the materiality and infiltrated it in the **air of duality**.

As Nicholas Negroponte insisted - the metamorphosis in the communication with the new media should begin from the **difference between the atom and the "way of life".** Although both forms of the text contain information, in the book version this information is disseminated in a material way and in the e-text - in a non-material, signal and digital.

While the traditional book gets to the reader on a long and fraught with hurdles physical road, the digital book is always here, never gets printed, does not come in circulation and does not run out of copies.

Hence the **new characteristics** of the digital text:

- it is stored in an electronic database and is accessible in an on-line regime

- it multiplies itself not only in copies but as identical to the original and is distributed in the form of CDs or floppies; it turned into a compulsory preliminary version of every written document

- it released the existence of parallel editions, providing one and the same information. (in a written and digital format).

The Digital text increased in a mechanism not seen so far in the text evolution its informational capacities: digitalization provided **compression** of volume, **acceleration** of creation, **optimization** of distribution and searching.

The digital text offered in the form of the computer page new opportunities to its user: an opportunity for **dialogue with the screen text**, and in this case "dialogue" does not involve the "interaction" traditional for the natural sciences, but "interactivity", a **spiral growth of the dialogue**, which is now called **polilogue** (an expanded exchange of meanings and senses, in which every new author and new text enter), and its object is the "intertext", which raised to a qualitatively new stage on the spiral the "polyphony" of Mikhail Bakhtin.

Whereas contemporary civilization develops in parallel with technology, whatever the metamorphosis of the new media be, the computer will continue to exist as a main source of the "screen culture", as a main object - "a herald of future" (Abraham Moles) on the contemporary cultural terrain.

It came as an "extension" to the human functional power, together with all its preceding inventions but whereas in the past they were an instrument for increasing by ten times the intellectual power, now computers are the ones which surpass men.

It is because computers are not only "a technical means" but a phenomenon in the culture of sign systems: it introduced a new concept of **the mediated function of the sign**; the sign is no longer "signifying" of real objects but **programming of the immaterial object**.

The computer is not a mediator in the communication with traditional written or audiovisual text and creates principally a **new synthetic text**, which in addition to this is self-transforming, due to the programmed in it interactivity, with which it rehabilitates the dialogue with man, mediated by texts for deciphering.

After the rise of the new media (computerized, on-line media), the concept of **"new" literacy** came out. However, as it has been already mentioned, computer culture is not a new culture, but a new type of "synthetic culture" formed and co-

existing with the traditional ones - live culture of communication, written and audio-visual cultures. It is based on the synthesis between computers and video technology, between written and audio-visual communication and being such it is not unattached, autonomous, but is sitting on the shoulders of the "veteran cultures", existing, together with them as the peak of the cultural pyramid.

We could take a similar look at the "new" type of literacy - the computer one. In the sphere of conventional ideas **the phenomenon "computer" is often compared with the phenomenon "literacy",** followed by book publishing, in which the intellectual efforts for receiving the common "computer literacy" leave the idea of comparability solely with receiving the "first type" of literacy in the written culture civilization.

The definition of computer literacy as "secondary" and the insistence on a new interpretation of literacy, free from old terms such as "reading", "writing, "arithmetic" are to a certain extent nonfunctional and historically unjustified.

WHAT IS CONTAINED WITHIN THE CONCEPT "LITERACY"?

This is the ability of people to acquire, process and use information, necessary for their fulfilling practical activity in society or "literacy" coincides with the level of "fundamental informational culture" in its pragmatic projection.

Literacy is not an antiquated term but a functional determinate of that which was called by the United Nations Secretary-General, Kofi Annan, "success in life": functional literacy, which is not only missing in the "informationally poor" countries (a term which not rightly covers countries lacking in education and countries with partial computerization), but also in the informationally developed communities, in which millions of adults are functionally and marginally illiterate.

And why do we say that each new interpretation of literacy is historically analogical and unjustified?

It is because literacy and the development of technical means follow the history of human development. In the primitive society, for example, the definition for "literacy" should cover the skill to "read" animal traces by imperceptible signs, knowledge and orientation in blood relationships, the degree of knowing, memorizing and a skill for telling the legends of the tribe.

Nowadays the term "literacy" does not coincide in the least with reading and writing, which were enforced in the ancient times but involves **evolved abilities**, knowledge and skills acquired if not in university education, then at least in high school education. Of course if we are to follow this logic a computer engineer from the 21st century would have looked functionally and practically illiterate if he had been dropped in the primitive age in all aspects, except for one - he will be able to tell **myths and legends of the future**.

Contemporary functional literacy cannot be divided from its historical determination: even nowadays people tell stories, read, write and watch materials, but on a much higher "technological" level. In other words, we cannot talk of a new type - autonomous, artificial literacy (even the artificial intellect will follow the functional connections of the "natural" human mind): the literacy, which is topical for the beginning of the 21st century is a dialectical unity between language, written, audio-visual and computer literacy and consequently is neither "secondary" nor "new", but a new segment, a new determinate of literacy.

If we go back to the spiral of the cultural evolution, we will need to confess that **"computer culture" rehabilitates at a higher technological level reading skills**, which also involve the concept of "computer literacy". And the very concept of "literacy" has always been a "remarkable skill". In the ancient times if one had the skill to read they were definitely part of the circle of the "remarkable people".

Saint Augustin, the intellectual of the 5th century, mentions the uniqueness of his mentor Saint Ambrose, who apart from being the bishop of Milan, was the only one who could read non-verbally, without even moving his lips and because of this nonhuman skill earned himself the nickname "the smartest person in the world".

In the 19th century literacy is gained by everybody who reads to be enlightened, to achieve the highest status in society for the reasons, which bulgarian writer Luiben Karavelov concisely and poetically generalizes: "Rich are the Clever Ones".

It seems to us as if nothing has changed in the requirements for literacy, prestige and remark- ability, when we have a closer look at the so topical for the beginning of 21st century concepts of society of **knowledge and economics of knowledge** of Alvin Toffler, Lester Thurow, Daniel Bell, John Galbraith, Zygmunt Bauman, Jacques Delores, etc.

Generalizing and emblematic for all such theories is the argument provided by Lester Thurow in his research "Building of Welfare": The richest person in the world Bill Gates does not possess anything perceptible – neither land, nor gold, nor oil, nor factories, nor industrial processes nor armies. **For the first time in the history the richest person in the world owns only knowledge** (Thurow 1999).

A regularity of the 20th century has been given in the following maxim: **Reading is a method of acquiring knowledge and a cultural spending of the free time, used by people for the invention of the TV.**

Actually all knowledge arises from books: the book is the „alpha and omega" (Stephen Zweig) of every social sphere, beginning of all knowledge and prime source of every science. And every technical system needs an intellectual engine, which to determine from the inside its external expansion.

Not every sort of knowledge today can be acquired by using alternative methods. If a person does not read there is no other way for him/her to receive the most recent and super specialized information, because such information cannot be achieved via television: **television can expand and visualize cultural and scientific horizons, but cannot create them.**

If no interest had been shown in the written information people would have lagged ten years behind and would have had only 30% of the newly acquired

knowledge of the world and in 15 years would have run the risk of completely disqualifying themselves.

If a person decides to use the whole wealth of computers and the Internet, he/she needs to read first a sufficient number of specialized and "navigational books". It is because, without applying the results of the current researches on the computer generation it is clear that only a person equipped with the culture of reading, only the **qualified reader** can become a qualified and competent on-line user. The reading level determines to the highest extent the level of the informational development of people and influences the culture of acquiring the technical means for informational exchange.

The necessity for boosting and **developing the culture of reading** is neither a subjective concept nor an aim in itself. The contemporary "computer culture" as shown by the spiral of development of cultural practices is the foundation of the two traditional "live" and written cultures and can be developed only in their unbroken context. Breaking away from it means a threat of deformity to its own evolution. What we have is namely a "cultural pyramid", a whole massif, in which computer technologies are not only a superstructure but a new dimension in this massif - both to the foot and the peak.

The boosting of culture of reading needs to acquire a new dimension, a new sense: needs to be thought of as a care for the future, as literacy which is at the foundation of the culture of the new informational technologies. On the same grounds on which it was laid down in the foundations of the audio-visual culture: it was proved that the message of the written text is much more rich in meaning than the direct transmission of image and sound, that the **images cannot replace the cognitive culture**, the skills of the conceptual, discursive and abstract thinking and, on the contrary - the culture of images presupposes these skills. "A shot taken from an airplane would not mean anything to those who don't have at least some idea of archeology – argues Régis Debray from UNESCO. If we don't teach children to read, we won't teach them to see. If we value the conveying of messages more than the

formation of the human mind, we will have the same effect as of "harnessing the horse at back of the cart" (Debray 1999).

CONCLUSIONS

The strategy of knowledge can be only one – there are no trends or retro-styles. It has always been a successful one when it has involved traditional and new means for acquiring knowledge, when it has developed parallel spiritual-technical capacities. Even today the cognitive culture triggers interest and access to the different sign realities – everyday, artistic, scientific, social realities, whereas the computer reality has its own place and time and should not be replacing any of them. In the world of knowledge of the 21st century there is a place for both the virtual computer reality and the book, which will be existing as a source of different realities, as a polygraph product and an ergonomic interlocutor, as a source of fundamental knowledge and as grounds for written culture.

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