FACTORS OF STRESS IN THE TECHNOLOGICAL AND INFORMATION SOCIETY

Mihai GOLU[1]

Abstract: *As a rule it is admitted that the progress of technology and of knowledge has a major benefit for man and for improvement of the quality of life. But an objective analysis shows us, that this generates also serious negative consequences. One of them, which appear, at the individual psychological level, is the growing of the stress of adaptation and re-adaptation. The changes produced till now hast lead already to the alarming rise of the cases of inadaptation and neurotic troubles.*
In the future it is expected, that simultaneously with the new technological and informatic progress will raise in complexity and difficulty the neuropshyic tasks, making more high the level of individuals who couldn't cope with them. As main factors, which will contribute to such phenomenon in this paper are considered the follow: 1) the rapidity of changes in the professional structures; 2) the rapidity of changes in the structure and volume of scientific information; 3) the acceleration of pace of performing mental and motor operations; 4) the rise of the instability of work places; 5) the deterioration of interpersonal relations; 6) the compromising of equality of chances; 7) the growth of distances and differences between socio-economical as structures, including the rise of frustration.
It is concluded, that for becoming really benefic the technological and scientific progress must integrate even in its logical structure an ethical dimension: „No science without conscience"

Despite the great discoveries and creations, despite the accumulation of a big amount of data about nature and man, at the end of first half of the XX-th century, the scientific knowledge was confronted with a serious inner crisis in its essence methodological. This crisis was caused by the limits of atomic descriptive and rigid partitioning paradigm on which the science has founded and developed its attempts.

Two main constations were made in the given context, namely:

1. The methodological fabliness and general negative consequence of hermetically closed of particular disciplines in they self and of fragmental isolation, which attained a such level, that as N. Wiener said, we couldn't more call „mathematician", „physicist" or „biologist" etc. without supplementary specifications; although occupied neighbouring offices, a specialist in algebra did not communicate with a specialist in geometry, they being not interested in what is doing each other; so between the disciplines such separated remained big of nobody territories;

[1] Ph.D. univ. prof., titulary member of the Academy of Romanian Scientists

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2. The non-universal character of the explanatory models imposed by the classic mechanics and physics and of the procedures of atomic analysis element by element based only on the univoque causal connexions, which had lead to the minimization or even to denial of the qualitative specificity of the whole in comparison with the parts and to the underestimation of the importance of the domains, like socio/humanistic, where cannot be applied the principle of univoque linear causality, but only a determinism based on the laws of probability.

The way out from this crisis was not possible remaining inside of the same paradigm, but, as N. Wiener stated, only by adopting a new paradigm those coordinates were created by the general cybernetics and the General System Theory (L. von Bertanlaffy, J. von Neumann, R. Ashby, W. McCulloch, I. Prigogine etc.), and which is known as a system – cybernetics paradigm. Claiming that each concrete entity and the Universe as such must be considered and approached as systems, respectively, as a number of elements given in logic connexions each other, the new paradigm has determinated a deep restructuration of the future development of scientific knowledge. This restructuration can be concretized in the follow sequences:

1) the remove of the barriers between the particular sciences and the establishment of the ways of communication and connexion between them and of the rapports of complementarity;

2) the recognition of the necessity to approach the border's territories and to develop the corresponding disciplines on the basis of the principle of interdisciplinarity;

3) the shifting of the center of attention during the process of analysis and interpretation from the elements considered separately to the connexions and interactions between them;

4) the abstention to make the unilateral and categorical generalizations and the acceptance of the idea, that the same object (system) may be approached from different directions (points of view), but no one of them cannot be considered as a final and absolute explanatory model;

5) the passing from the architectonic-anatomic description of the systems to the analysis of their functional and behavioural characteristics in relation with their environment, pointing out the mechanisms and regulatory processes mediated by information;

6) the agreement, that the information is a objective dimension of the Universe and an essential factor of organization;

7) the idea, that the analogies and reductions as a necessary steps in the knowledge process do not lead to the establishment of identities and to the ignoration of qualitative differences between real systems.

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The result of approving this paradigm consisted in a strong impulse given to the science and technology those development during the second half of XX-th century have (attained the rhythms and levels, which marked a revolutionary shift comparing with the prior period's, determining profound changes in the life of the society, which have made necessary to characterize it, now the beginning of the third millennium, as a *technological* and *information* society.

Concerning the scientific knowledge, it can be said, that it begun to develope under the principle of integration, interdisciplinarity and globalization, it being realized not segmentarelly, individually, but on a large scale, by the basis of strategic programmes at national and international levels.

As a distinct trait of such programmes may be mentioned that, besides the particular problems specific for one or other domain, they also include global problems which confront today mankind, like: the global hitting, the energy *resources*, the genetic illnesses, the food and water reserves, the terrorism etc.

Concerning technology, we can say, that its development is characterized from one hand, by the incorporation and simulation in a more and more large measure of mental-cognitive functions of human brain making arise the role of the artificial intelligence in the economic processes and in the social activities, and on the other hand, by the improvement and sophistication of tools destinated to the scientific research as such, amplified its capacity to approach and solve the more and more complex problems so in the field of physic Universe as in the field of life.

The computerization, the automatization, the robotization, the informatization represent the dominant coordinates of the society of XXI-st century.

Is no doubt, that the recorded until now achievements in the field of science and technology has a real positive effect in the life of individuals and of society: had significantly low the weight of the physic effort, very seriously reduced the durations of execution of the operations specific to different productive processes and socio-economical activities; were considerably reduced the times to cover the distances; were improved and perfected the medical technics and procedures; were diversified and enlarged the means and networks of communication, giving us the possibility to take part in real time in the events anywhere these happen in the world; has been diversified and refined the field of consumption products and services, rising accordingly the desires and temptations; has been created a new kind of culture – the T-culture; were produced positive changes in the classified list and structure of the professions (appeared new professions and disappeared others, has changed the structure of early still remained professions) etc. Despite all these benefits, the scientific and technological progress of second half of XX-th century was accompanied also with the negative effects, which will tend to be accentuated during the first half of XXI-st century.

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Such effects are manifest both at the global-social level and at the individual-psychological one.

The effect from the first category are concretized in the following forms:

1. The rise of chemical, acoustic and radioactive pollution;
2. The diminution of ozone-layer accompanied by the rise of global hitting;
3. The rise of frequency and of area of manifestation of the extreme natural phenomena (prolonged and repeated droughts, catastrophic inundations, tornados, etc.);
4. The diminution of the natural resources of energy and of food;
5. The growth of economic, technological and information distance (difference) between the reach developed and poor undeveloped countries.

It can be constated, that for the solving of these problems are not been yet elaborated the measures connected in a realistic and efficious programmes, the stay of things still remaining at the level of general statements.

Therefore – we can admit, that respective problems would be transferred to the technological and information society, acting as serious factor of stress at the global level both upon the governments and upon the population as a whole.

The effects from the second category are objectified in a paradoxical form: on the one hand, in the rise of span of life to an average of 75 years in the more developed countries, and on the other hand, in the weakening of the psychosomatic fiability, concomitant with the rise of the level of anxiety and of percentage of psychoneurotic disorders (the last being higher namely in the more developed countries-till 25% of population). It results, that the scientific and technological progress made till now permits us to live longer, but more tensioned, with more troubles and frustrations.

The question is: the technological and information society will free us from these, will it eliminate the sources of stress? Unfortunately the answer is not affirmative.

First off all, as we already mentioned, the *grave* global unsolved problems will continue to act as stressors with amplified negative effects.

Secondly, the changes and transformations which will be produced will generate new sources of stress at individual level.

We will mention only some of them, with more serious psychological implications.

1. The rapidity of changes in the professional structures. That gives to a rise for the individuals difficult tasks of perfection, adaptation and reconversion, which will caused the cares and tensions those magnitude is proportional with the age. As the studies and researches show, as such tasks appears at the more advanced age (after 40-45 years, for example), as the caused psychic stress becomes stronger, leading often to psychosomatic disorders and to crisis of adaptation.

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2. The rise of complexity of the machines, installations and aggregates in the field of production and utilities (services). This factor amplifies the participation of high cognitive functions of interpretation, evaluation and decision - reducing the possibility of access and handling them, and causing also the individual crises of professional adaptation and integration.

3. The accelerated rhythm of growth of the information volume and scientific discoveries.

By the time, that makes to over pas the capacity of more and more individuals to achieve them and to be in step with the new. We could expect, that the information stress will be amplified in the future, making imperious necessary both the reform of school curricula, and elaboration of coherent and adequate programmes of permanent education.

It becomes more and more obvious the fact, that in education the accent must be deplaced from the storing of the information as such to the development of mental capabilities and strategies to evaluate, to select and to use the know ledges accordingly with the specific of situations and professional and social tasks.

4. The technological improvement and refinement had and will lead in the future to the shortening of times and durations of execution of mental and motor operations and to the rise of level of vigilance (attention) of humans operators. That will act as a permanent stress at work, increasing the neuropsychic fatigue.

5. The expansion of automation, informatization, and of the robots in the productive field will drastically reduce the work places especially of those with a lower level of qualification and with physical executive character, That will lead to the extension of the sphere of existential stress to find the sources to survive.

6. The individuation and the isolation of the work places, associated with a hard competition will artifficilize the interpersonal relationships. That fact will generate and accentuate the feel of alienation and insecurity. The research data demonstrate even now, that the work in a isolated strictly determinated place affect the neurophysigical rhythms, diminish the mental efficiency and work motivation.

7. The compromising of the principle of equality of chances. As a consequence of the phenomenon of division into fragments and of polarization of economic – material base of society, will amplify the differences between the socio-economical statuses of individuals and groups, in the same time will arise the number of persons to whom are limited the possibility of self realization and self affirmation.

The globalization and integration only apparently enlarge the chances of professional and social fulfillment, because, in fact, these are restricted and maintained at a low level. To the citizens from the poor countries are offered, in the reach countries where they are emigrated, the less qualified jobs, physical in essence, which the own citizens refuse or accept with a low involvement.

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8. The economic and financial egoism, which characterizes not only the individuals as such, but also the groups and even the states amplifies the tendencies to use the technology and information to obtain as much as possible profit to others detriment, ignoring the negative effects which could appears sooner or later.

In the technological and information society arises in all its seriousness the problem of discrepancy between the progress of intellectual – cognitive capacity of man and the progress of his moral side, which is much behind. And namely this discrepancy makes possible that results of scientific knowledge to be utilized in case of the lack of control, against the man himself.

In the given context becomes very actual the Einstein's thought. He said: „There are two infinites: the infinite of the Universe and the infinite of stupidity.

If in what concern the first we may still doubt, in what concern the second we must be sure, because we constate how every day destroy our self."

Concluding, it must be said, that for really to be in the favor of man, the science and the technology must adopt and integrate an ethical dimension too. Not more science without conscience!

R E F E R E N C E S

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