

MAN, TECHNOLOGY AND ENVIRONMENT

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Received Nov. 2, 1985

Summary

At present some problems of global dimension correlated with each other—such as overpopulation, scarcity of foods, rapid development of industry, imminent exhaustion of unreproducible natural sources of materials and the quickly increasing degree of environmental contamination due to these factors are greatly endangering the future of the human race. The late Professor Korach recognized already in 1948 the necessity of starting a periodical discussing the problems of environmental pollution, in order to restore the overturned biological equilibrium and to maintain an optimum ratio between regularity and irregularity, between constraint and liberty, emphasizing that the dangers of rapid technological development must be rationally compensated by a clever and farsighted concept.

The problems of global magnitude concerning mankind and the entire Earth, and correlated with each other—such as the overpopulation, the nutritional situation, the development of the industry, the depletion of unreproducible natural sources and the environmental contamination occurring as the complex result of all these factors represent an ever growing threat. This induced a number of scientists, of international organizations and of institutions to assess and analyze the present global situation and to find ways for solving the problems. A common feature of these activities is that the fundamental factors and their interrelations have been recognized rather late in respect to the emerging of the problems and at an insufficient accuracy, and thus they are hardly capable of indicating adequate ways for their solution.

In the complex recognition and evaluation of the above-mentioned range of problems, and in finding ways for their solution professor Korach was ahead of his time by nearly two decades. The plan of a series of publications entitled “Alarm and Planning” has been prepared during the period of his activity in Hungary. The first draft of this plan is mentioned in his letter to Maurice Goldsmith dated in 1963, reminding that he suggested even 15 years ago, in 1948, the edition of a journal entitled “L'amara verità” (The bitter truth). The

aim of the periodical entitled "Alarm and Planning" published in several languages would have been to call attention to the characteristic examples of the menacing spontaneity of the technical, psychological, social and political development, and at the same time to publish plans to divert these dangers. However, neither the L'amara verità plan of 1948, nor the Alarm and Planning plan of 1963 could be realized, because the necessity of environmental protection had not been recognized at this time.

The discussions and suggestions of professor Korach summarized in the followings—the essence of which is in fact the re-establishment of the equilibrium between man, technology and environment thrown out of its balance—are forming a well-rounded speech speaking for itself and are real proofs of the foresight of a humanistical engineer ahead of his time. The too quick transformation of the natural environment of man into an artificial environment has been raising the question whether man will be capable of adapting himself to this change. The living organisms can accommodate themselves in very various ways to alterations of their geological environment, since even in our days many plants and animals are living which have been genetically proved to originate from such geological ages after which the conditions of life on the Earth have been changed significantly.

The man of our age is the result of a period of accommodation which is relatively long in comparison to the geological and meteorological processes today considered as being quick or even as catastrophic. During the last centuries—i.e. within a period negligibly short in relation to the period of the existence of living creatures—the "natural nature" has been converted by the technology on the greatest part of the Earth into an "artificial nature". This means in other words that man deviated rapidly from the way of life followed during his evolution for millennia, and exchanged it for an artificial, technologized and mechanized form of living.

In the course of discussing the future of mankind the question frequently emerges whether "homo sapiens" is sufficiently "sapiens" (clever) not to praise uninhibitedly and not to depreciate without prejudices the achievements of the technology, but to take into account reasonably both the positive, life-improving and also the negative, life-destructing possibilities of the advance, and to plan the optimum way of development with a scientific foresight. According to the morals of the history of technology it is apparent that man has not been humiliated by the technology but rather the technology has been humiliated by man.

Namely, man recognized only some years ago—on observing the more and more visible damages—the potential dangers of technology, quite in contrast to a number of apparent advantages of the technological development. The method of foreseeing statements, the scientific methodology is still in its infancy. In this respect, the experience made by the Spaniards after the

discovery of America among the natives of South-America may serve as an adequate example. According to the reports preserved in the Vatican Library, the foresight of the natives extended hardly from morning to evening. E.g. in the morning they were ready to exchange their hammocks for any trifles but when the evening came and they were sleepy, they would not sell them for any price offered.

The scientific level of a given age could be characterized by the length of the period which can be comprehended by its scientific foresight. It is a well-known fact that the demand of foresight emerged already since long, and this was the cause why the fortune-teller has been a sacred profession. However, the scientific prognosis became possible only when superstition has been replaced by science.

A well-known technological rule is that building materials, not adequately investigated prior to their use, must not be applied for the construction of buildings. Their use is licensed only after having passed the "weather-proofing" test lasting for some decades. A special phenomenon of our age is that this aspect did not play any role in other fields of technology. For example, motor traffic has been permitted even on streets of human settlements which have been built earlier for vehicles drawn by horses. Nobody took into account the consequences of the introduction of this novel means of transport on a network of roads planned for a traffic of another nature, of lower speed and carried out by a much smaller number of vehicles. It is almost incredible that at the beginning of the twentieth century nobody considered reasons which had been not only observed by Leonardo da Vinci in the fifteenth century but also tried to prevent by suggesting a reasonable plan (based on building separate streets at different levels for the pedestrians and for the vehicles). However, the problem of motor traffic is only one of the not-foreseen negative aspects of motor cars. Motor traffic e.g. has removed from the cities one of the most important factors or the wholesome life: the rest in the night.

Despite of its elasticity, the human organism has also some limits of its endurance, and the organism is destroyed when the loads exceed these limit values. Unconsidered activities and their consequences are occurring frequently not quite alone. At present the nervous system of man is burdened not only by the road traffic but also—on using the appropriate term of professor Selye—by other stresses. We are subjected incessantly to the detrimental effects of aeroplanes, films, radio broadcasts, television programs, light advertisements. The vast amounts of impressions received by the human nervous system are causing nervous complaints and mental disorders to an extent proportional to the progress of urbanization. "The cities are shapeless, conterminous masses full with buildings and interrupted here and there by green spots or stripes of asphalt. The cities are in a continuous unarranged growth, just as the cancerous tumours, the older tissues are continuously decaying and in the meantime

continuously new tissues are formed . . . and the reason of their formation is the irrational extension itself. Just this is the way how man created for himself, by his own hand and mind—on utilizing the bravest achievements of the technology, those hells which are called by us as a big city or metropolis.”

The limited nature of human foresight, the lack of regular preventive investigations establishing the limits of the still tolerable stress and the failure of endeavours to inhibit the transgression of these limits resulted in the fact that today also other technological achievements turned to be menacing dangers. The discussions of professor Korach concerning this theme are ending with the following text: “The alarm bells tinkling throughout the world are calling the attention of man to the fact that his biological equilibrium is in a critical state. Thus, first of all, it is necessary to investigate the present position of this equilibrium and to discover also in a pragmatic way the deeper correlations endangering the equilibrium. On investigating either the urbanization mentioned above as an example or other phenomena endangering mankind or even the blessings of the technology, we are finding in the background always social and psychological factors of production and consumption.”

According to professor Korach, biological equilibrium consists of the correlations of the individual and communal interests which confirm and do not weaken this equilibrium, furthermore also a structure of life conditions which do not induce physiological and mental stresses endangering the capability of adaptation of man. His opinion is that the most important prerequisite is an optimum ratio of regularity and irregularity, of constraint and freedom.

“A rigid constraint due either to tyranny or to overdimensioned social influences is just as destructive to life as the chaotic anarchism. The whole universe just as the rhythm of the life on the earth are indicating an equilibrium of random and regular processes, wherein the big explosions are quite exceptional. Constancy and uncertainty are always accompanying each other. The domain of biological equilibrium is including the evaluation, the prevention and the averting of all the symptoms endangering the equilibrium. This is in fact a dialectically interwoven complicated complex of external and internal, environmental and psychological factors. For the solving of these problems—if their solution is possible at all—no prescriptions of general validity can be given. Instead of that, rather all the cogitating, scientifically educated humanists, feeling themselves responsible for the entire mankind, are to be widely collected for the investigation of these problems.”

The recognition and investigation of the relations between man, technology and environment are actually decisive problems of the entire mankind. Their solution in an adequate time and in a proper way are not

coupled to the name of professor Korach at random. Only such a humanist professor is capable to carry out an activity of this type who foresees the future-shaping power of technology in its entirety.

References

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