



The Challenges of Safety Culture:

No more risk!

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According to A. Maslow's [1] hierarchy of human needs the need for safety and security is a priority for mankind. The concept 'safety culture' appeared only in 1986, when the Chernobyl disaster made the whole world muse upon human relationship with technology [2]. This global catastrophe was a caution, but not for everyone. Potent academic systems and elaborated instruments of a huge economical value have been invoked in maintaining the satisfaction of biogenetic needs, whereas any manual on safety topic has not been issued yet.

Even such progressive communities as the European Union, elaborating long-term strategic decisions, do not find clear and reasonable principles that would encourage to choose safe technologies with respect to present and future generations. Giving way to the ostensible effectiveness of centralized technologies such as equipment, communication, energetic that are well-disposed to big business, the majority of politicians and even scientists are not able to estimate the risk that is programmed in the choice of dangerous and insecure technical decisions. It is not still realized that none of the technologies is worth a human life or safety.

The level of social maturity is a factor stipulating the merge of two concepts 'safety' and „a person“. At the time when industrial priorities were dominant the concept 'safety techniques' had been used putting stress on peculiarities of working with technical devices and on the ways manpower could be adjusted to them. Later the term 'Safety of labour' appeared. It drew attention to the labour process and its peculiarities. The assimilation of European culture has determined the introduction of the notion 'personnel safety and health' to labour relations. The postindustrial stage of humanity development brings the new understanding of major values. Individual is now identified as a personality as well as human life is understood as the major value. The natural and social environment becomes a means for fostering the human welfare. It is necessary not to talk about safety in general, having in mind wealth, nature, borders, etc., but rather to talk about the most important aspect – human safety. No doubt that all the things that are related to 'safety' are interconnected and have an influence on the safety of human beings.

So, what does 'human safety' mean? From the biological point of view, the proper regime, nutrition, hygiene, comfortable place of living, clothing serve for ensuring the better organism work. The proper 'exploitation' of the organism and the one's unity with nature and social environment - these are the means empowering to ensure the higher quality of life and duration of proper life. The unity with nature and social environment influence the quality of personality. And that is of a major importance to life duration. So, the proper life durability could be considered as an indicator of a human beings' safety according to biogenetic theory.

Human safety is closely related and even merges with the characteristics of 'freedom'. On the basis of virtual relation theory, freedom could be understood as a chance for passing the continuous spontaneous development cycle not interrupting it. So we can ground the concept 'safety' in this theory. Safety is freedom from any dependence that could worsen or even break the natural life cycle. Struggling for freedom means struggling for safety as well as for eliminating undesired impacts on life conditions. So, conceding freedom as an implicit objective, safety should be as well conceded as an equal and unarguable life criterion.

Safety can be determined as the ability to foresee future. This ability allows not just to foresee future (no matter successfully or not) but to do it in order to meet one's needs. Seeking for safety people tend to analyze the factors, related to different accidents, and, on their basis, elaborate the ways of prevention of traumatism and diseases. However, the financial support for such kind of researches is not sufficient. That is why it should be confessed, that human need for safety is not realized as a major demand nowadays. Risk remains the usual part of people's life, work and leisure. The facts about traffic accidents, wrecks are perceived as usual. It is not mused upon the possibility not only to foresee these accidents but upon a necessity to preserve each person's life.

All the factors that reduce the duration of human life could be treated as a threat for one's safety. Improper care about the organism, unhealthy habits, overwork, diseases, pollution, stresses; all these factors decrease life quality, duration and safety. These factors could be divided into two groups: internal factors, that depend on a person and external factors that are provoked by the environment.

Depending on the impacts to safety time, these factors could be long-term, momentary and extreme. Long-term factors are: climate, unsuitable place of life, poor nutrition, unsuitable social relations, etc. These factors have a continual impact on life duration, and, when achieve the critical mass, they violate some certain organism or/and personality systems. They provoke ailment, diseases and augur early death. Knowledge allows avoiding long-term factors. If one is aware of the negative impact of some factor, he tends to avoid them, unless the natural and social environment restricts one's actions. So, the formation of knowledge society as well as scientific researches should serve for everyone to be aware of negative natural, social, work and other factors and be able to avoid them.

Momentary factors usually occur in a very short period of time, so that one is not able to estimate and avoid them. In the case of momentary factors safety depends on a person's ability to react and move quickly. Good reaction could help to avoid the majority of momentary factors and their impacts. It is important, that nothing would interrupt the reaction and constrain movements. Such factors as sports and proper leisure help to keep fit and healthy.

The most dangerous factors for human life are extreme factors that could not be avoided by a person. These factors overcome people in reaction, force, stamina, etc. These are different traffic accidents, explosions, fires, earthquakes, tsunami, avalanche. In such a situation one is usually helpless. Neither movements, nor reaction could help a person. What is left – just to pray for the best.

The most reliable way to avoid extreme factors is related to choice of proper buildings, techniques, means, etc. depending on the peculiarities of a geographical locality. The majority of people have an opportunity to choose a safer (in the aspect of natural cataclysms) place of living. The increasing impact of human activity on nature calls out the more frequent and intensive cataclysms. It is noted, that in locations of lower seismic activity there appears a risk of much stronger earthquakes. Floods, hurricanes have become more frequent. That is why it is safer to live in low (1-2-floor) buildings, far from water reservoirs, avoid mountains, etc.

The question of avoiding techno factors' impact is of a major importance. These factors are: weaponry, transport means, energy equipment, mechanisms and devices. These factors by themselves are the definite source of disaster. People are not able to avoid their impacts: different crashes, accidents, fires. The tendency „to use a device till it breaks down or till an accident' augurs disasters. The hope to foresee the possible accident usually lets down. That is too difficult a task even for computer programs.

The solution should be found in developing exploitation culture, that empowers to avoid malfunction or wearing out of technical devices or their parts. Program equipment should be elaborated in order to ensure the supervision of exploitation of technical devices, their service and utilization as well as to protect from injuries. The aspect of utilization should be solved by the organization that projects or produces the equipment or devices. It should not become the responsibility of community members.

The time will soon come, when people totally change their point of view on technical equipment safety. We believe that an accident would not occur. However, it is not worth to take risk. Moreover, it is necessary to realize the principle „no more risk“. That means totally avoid the technical equipment, any devices, chemical elements' repositories, etc. those are unsafe for us. It is said 'God helps the one who cares about safety'. Of course, it is difficult to avoid risky factors even trying to escape them. That means that intentional risk increases the general risk.

It is important, that technical progress stimulates people (despite they do not realize this fact) to use safer techniques. For instance, energy is decentralized and this allows avoiding accumulation of a huge amount of thermal or nuclear energy in one place. Such a huge amount of energy (no matter which: thermal, nuclear), high voltage facilities, chemical elements' repositories increase the risk of accidents; moreover it is difficult to ensure their safety. One of the decentralization solutions is to reject any kinds of burning. For instance, wind power plants that are established on the safe distance from consumers do not evoke any risk. The solar energy batteries will be even safer. They will be attached to windows and provide the necessary amount of energy to houses.

The charging of various devices with the help of batteries, accumulators is being improved as well. The clearance and the power of energy used is reduced. There appear such devices that already use the energy of human organism. So, the decentralization of technical equipment provides a possibility to avoid accumulation of huge amounts of energy in one particular place and, as a circumstance, escape a risk to human safety.

The 'no more risk' principle is important in arranging and taking decisions on selection of energy technologies. In Lithuania, for example, increasing prices on oil and gas as well as complicated accessibility induces to choose the only alternative – to build one more nuclear power-plant. Such progressive countries as Denmark, Sweden and Germany have resigned the dangerous technologies, putting priority on renewable sources of energy. The dominant European strategy of sustainable development requires drawing attention on economical, ecological, social priorities, stressing the accountability to present and future generations.

Another way to encourage solving one of the objectives of human safety is the usage of modern technical equipment that could compensate the limited human reaction or mobility. Those are various positional, location, orientation, navigational systems that assume the function of safety insurance. Humanity development will bring new safety requirements for technical equipment and technology. Every work place, every service or facility must be certified in the aspect of safety. Settlements will be isolated from dangerous energy-plants. Any burning or dissemination of harmful odor must be forbidden.

After declaring human life to be the fundamental value, the activity of governmental and self-governmental institutions will be assessed on the basis of this criterion. The factors that stimulate proper life duration will be considered as positive and progressive. We will be able to assess the activity of political parties or/and politicians according to their input to improving human life quality. Then, politicians themselves will search for negative factors and eliminate them. At this particular stage the systemic scientific researches will be of a major importance. These researches will render assistance in distinguishing these factors and elaborating the ways of their elimination.

The relevance of safety need will radically change the relation between governance and self-governance, between employers and employees and their responsibilities for personnel safety and health. In the governance conception that is employer who is responsible for employees safety and health. It is considered that an employer should ensure complying of safety rules. Though it is proved that nobody is able to ensure safety unless an employee him/herself is interested in it. Self-control is much more effective in case of labour safety motivated by self-preservation and self-governance.

In contrast, the dominant governance conception presupposes employer's responsibility for employees' safety.

That is why the implementation of self-governance and self-management methods is the main way of encouraging employees' self-safety thus reducing the number of accidents at work. Firstly it is important to consider everyone's independent personality whose life is a value. Every work place should meet the safety requirements, moreover every specialist should have a certificate, proving one's ability to work safely.

Group work should be organized on the basis of self-governance principle. A group should have a right to elect a leader and solve the safety questions all together. In this case employees are responsible for their safety themselves.

The most important principle in work conditions should be 'no more risk'. Any act in disregard of safety laws and rules should not be justified. Only the totally independent personality may oppose the incitement of a leader or an employee not to pay attention on safety requirements.

Apparently, the dimensions of safety culture look forward to the attention and efforts of scientists from various spheres, who could help to realize the meaning of human safety and create the means for its insurance. The demand for the best intellectual potential that would focus on urgent methodological, anthropological, sociologically, technological issues of safety insurance has matured. This is clearly seen through our needs.

References

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Dr. Julija Melnikova is a senior researcher at Klaipeda University. She is responsible for project management and implementation of research projects. J. Melnikova coordinates the work of staff in the projects and is responsible for dissemination activities. She has experience in international relations since 2010, in particular in projects under Erasmus+ (K2 Capacity building in the field of Higher education, K2 Strategic partnership in higher education), Horizon 2020, NordPlus, Interreg etc. J. Melnikova is a member of international associations (European Teacher Training Association, Black and Baltic Sea Consortium, Institute for Sustainable Development). She carries out external expert's activities in National Agency for Academic Programme Evaluation, Centre of Education Development (Lithuania). She is an external expert for Klaipeda region in «EPALE» (European Platform for Adult Learning) project. The field of her research is Education management. She has many academic articles and has presented the results of her research at more than 20 international scientific conferences.