

REVIEWS



Biosphere transformation in the conditions of technogenic development of society

Professor Eduard S. Demidenko authored more than 230 works (including 10 of his own and 18 multiple-author monographs and books). The major works of the prolific scholar are dedicated to the urbanisation theory, technogenic development of society, and biosphere transformation. The recently published monograph* is a welcome addition to the traditional for the author line of research. Employing the socio-natural approach, the book reveals sometimes unpleasant aspects of the modern liberal-market development of economies of many societies accompanied by biosphere degradation. The authors rightly assert that the industrial (the 18th-19th centuries), technological, and the following information and other revolutions bring about fundamental changes in nature and society. Technogenic factors (technological advance) create increasingly favourable conditions for development, but at the expense of the global destruction of ecosystems (from the Earth's ozone layer to oceanic depths).

Globalisation means material welfare for a few; however, it is accompanied by the destruction of our planet — desertification, deforestation, dehydration. It does not only undermine the normal course of human life, but also inevitably leads to the reduction in biodiversity of terrestrial organisms.

Technogenesis and ensuing "technogenic society" are capable, according to the authors of the monograph, of eliminating the "biosphere nature of human beings" (p. 219) and even creating a new "space creature", which will develop within human society before claiming outer space. Here, Omar Khayyam's lines come to mind: "We come and go, but for the gain, where is it?" Before a "human cyborg" embarks on space expedition, it is only reasonable to reconsider the pros and cons of post-biosphere humanity.

The process of transformation of the human being as a biosocial creature is linked by many researchers to the development of industrial production, urbanisation, and technological advance. Humanity, as E. S. Demidenko stresses in one of his works, is concerned about environmental pollution but pays no attention to the parallel processes of bioconcentration of radionuclides, heavy metals and other toxic substances by organism. We are witnessing, the authors claim, a transformation of the human being (from the replacement of human organs and tissues to artificial impregnation, surro-

* Демиденко Э.С., Дергачева Е.А. Техногенное развитие общества и трансформация биосферы. М.: КРАСАНД, 2010. 288 с. (Demidenko, Je.S., Dergacheva, E.A. 2010. Tehnogennoe razvitie obwestva i transformacija biosfery. Moscow: KRASAND, 288 p.)



gate motherhood, cloning), their nutrition (through the genetic modification of plants and animals, the use of preservatives, etc), medicine and so on.

But distrust of achievements of modern civilisation is not a sufficient reason to call it technogenic, since, as in the ancient times, the overwhelming majority of civilised (to a degree) and even supercivilised (with nanochips implanted in their brains) human beings come to the world with the help of well-known "technologies" of conception, child bearing, and labour. Of course, one can imagine, following sci-fi authors, heads existing independently of their bodies, but the whole humanity will hardly get rid of their "biosphere nature" in the near future. The society has been a biosocial phenomenon, within which the biological and the social supplement rather than eliminate each other.

The recent advances in medical genetics, immunology and other sciences end to the spread of earlier incurable diseases, while the development of general and physical culture of humanity contributes to a lower cardiovascular disease rate and, hence, a greater life expectancy. Even AIDS infection rate is decreasing thanks to healthy lifestyle promotion among youth in many countries of the world. Today, it is hardly appropriate to apply Malthus or even Darwin's ideas on natural selection and struggle for existence to human beings, although these processes are often interpreted as a greater good, claiming that, over thousands of years, natural selection has exterminated "non-viable and weak" organisms, thus allegedly contributing to a healthy nation.

The modern technosphere exerts increasing influence on biosphere processes — this statement of the authors can hardly be disputed. The immense effect of technogenic activity can not only upset the balance of global biogeochemical relations, but also reverse them. Having become a "geological force" — an expression coined by academician Vernadsky — the human being is now close to self-destruction as a result of unprecedented concentration of military radioactive waste, atmospheric and hydrospheric chemical pollution, deforestation and damage to other geosystems.

All in all, the new monograph co-authored by Prof. E. S. Demedenko deserves the attention of not only scholars — philosophers, sociologists, and political scientists, but also politicians, decision makers of the highest levels, who affect the future of all of us.

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