Патриотизм в глобальной перспективе: Каждый тип патриотизма отражает особенности национальных культур и ценностей.

Например, в Беларуси патриотизм часто акцентируется на сильном государстве как символе единства и стабильности. В то время как американский патриотизм делает акцент на индивидуальной свободе, правах и возможностях каждого гражданина, французский фокусируется на гражданских правах и революционных традициях. В Скандинавских странах патриотизм часто выражается через гордость за социальные достижения, такие как система здравоохранения и высокий уровень жизни.

Влияние патриотизма проявляется в различных аспектах жизни – от образовательных программ до политики и экономики. В школах внедряются уроки патриотического воспитания, которые способствуют осознанию своих корней, уважению к традициям и формированию ответственности за своё будущее. В культурной сфере проводятся мероприятия, направленные на популяризацию национального искусства, традиций и исторических достижений.

Таким образом, патриотизм и историческая память являются важнейшими компонентами, формирующими национальное самосознание, укрепляющими социальное единство и способствующими устойчивому развитию общества. Их гармоничное взаимодействие помогает не только сохранить национальные ценности, но и адаптироваться к вызовам глобализации, сохраняя свою уникальность и культурное многообразие.

The Role of Law and Ethics in the Functioning of Engineering Biology: Lessons from the Second World War

Loiko A.I.

May 9, 2025 marks 80 years since the signing of the act of surrender by representatives of the German command. This event meant the victorious completion of the Great Patriotic War of 1941-1945 by the Soviet Union. On June 22, 1941, German troops treacherously invaded the territory of the Soviet Union

(USSR). These troops had combat experience, since they were the ones who started the Second World War on September 1, 1939.

The German command hoped for a quick victory. It did not allow the thought of defeat and did not take into account the legal consequences of inhumane activities in the occupied territories. The inhumane activities of the fascists were manifested in the burning of villages, mass shootings of civilians, the creation of concentration camps for Soviet prisoners of war and civilians, including children.

The cruelty of the German occupiers and their accomplices was so obvious on the territory of the Belarusian Soviet Socialist Republic, which was part of the USSR, that it gave grounds to claim genocide of the Belarusian people.

The Prosecutor General's Office of the Republic of Belarus came to this conclusion based on the discovered mass graves of civilians shot by the German occupation forces.

As a result, the already known list of burned villages and military burials was supplemented by a significant number of burials dating back to 1941-1944 thanks to search activities. Credit should be given to the state policy of the USSR in the field of historical memory of the events of the Great Patriotic War. The memorialization of the events of the Great Patriotic War became an applied implementation of historical memory. Architects created unique projects dedicated to the heroism of Soviet soldiers.

The Brest Fortress stands out in this infrastructure of historical memory. Here the Soviet military garrison accepted the first battle with German troops. This battle continued in complete encirclement in the deep rear. The Soviet people learned about the feat of the heroes of the Brest Fortress thanks to S.S. Smirnov [1]. Konstantin Simonov wrote about the feat of Soviet soldiers on the Buinichi field near Mogilev in his novel “The Living and the Dead” [2]. A memorial was created on the field.

The center of Minsk is formed by the Victory Square memorial. This memorial reflects the feat of Soviet soldiers, underground fighters and partisans. The continuation of the memorial within the city limits of Minsk is the Museum of the

Great Patriotic War, memorial plaques on buildings, monuments to Soviet soldiers, a memorial site about the tragic fate of prisoners of the Jewish ghetto. Outside the city limits of Minsk there is the historical complex “Stalin Line”, a memorial in Trostenets, a memorial in Khatyn, the Mound of Glory. Historical memory of the events of the Great Patriotic War in the individual and public consciousness of Soviet people was reproduced by documentaries and feature films, songs, annual military parades held in Moscow on May 9.

Fiction played a major role. Schools practiced schoolchildren's trips to the locations of partisan detachments, as well as to memorial sites of burned villages and their inhabitants. Such a practice integrated schoolchildren into the structures of the collective memory of the Soviet people from childhood. An important role was played by the legal assessment of the activities of the bearers of Nazi ideology and doctors who used engineering biology technologies on prisoners of concentration camps [3]. A legal assessment was made at the International Military Tribunal in Nuremberg regarding twenty doctors.

The hearings took place from November 20, 1945 to August 20, 1947. Seven doctors were sentenced to death and executed by hanging on June 2, 1948. The rest received varying terms of imprisonment. The verdicts were based on the facts about the research conducted by Nazi doctors, during which inhumane methods were used and the principles of medical ethics were violated.

From December 25 to 30, 1949, the Khabarovsk trial was held in the case of Japanese army servicemen accused of preparing and using bacteriological weapons [4]. The actions of special detachment 731 were distinguished by particular cruelty towards prisoners and civilians [5]. Japanese military doctors had permission from the Japanese authorities to conduct inhumane research [6]. Prisoners of war and civilians were used for these purposes [7]. Gross violations of medical ethics took place [8]. After the facts of inhumane use of engineering biology against people were discovered, the issue of banning biological weapons was updated [9].

As a result, the Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological, Biological and Toxin Weapons was developed

[10]. The Convention entered into force on March 26, 1975. However, not all states, including the United States, adopted the protocol providing for mechanisms for mutual control. At the beginning of the 21st century, regulation of engineering biology technologies is not limited to the framework of genetic engineering, biotechnology and biodiversity.

The rapid development of synthetic biology and the active integration of digital technologies contribute to the aggravation of issues related to ensuring the security of biological data [11]. The growing number of users with access to biological data complicates the possibilities of control [12]. This exacerbates the problem of producing dual-use technologies and biological weapons using synthetic biology and genetic engineering technologies [13].

Existing regulations in the field of protection of genetic information do not cover all aspects of the security of hardware infrastructure and cloud software. The importance of biological data in biosecurity issues is also not fully taken into account within the framework of the Dual Use Research of Concern (DURC) policy. The scope of regulation of this policy is limited to individual agents, which does not entail regulation of new organisms created using synthetic biology.

Discoveries in the fields of biotechnology and synthetic biology contribute to the growing attention to ethical issues related to the need to control interventions in the genome, secret genetic information, as well as to the issues of taking into account the legal and social implications of such research (Ethical, Legal and Social Implications, ELSI). Public interest in biological ethics has grown significantly. Biological ethics focuses on preventing the use of engineering technologies for the purpose of creating biological weapons [14].

Biological ethics studies the value and normative issues raised by synthetic biology. Ethical issues regulate research and production in the field of synthetic biology in order to prevent harm, reduce risks and control conflicts of interest.

With the help of synthetic biology, scientists can program living organisms, as well as control their development. Algorithms have been developed that can

predict how changes in the DNA of a cell will affect its behavior. Algorithms can also provide recommendations for future developments by bioengineers.

The active development of bioengineering technologies and work with the genome of living beings raise concerns among scientists and consumers. The former say that it is important to keep technology under control. And society suspects that synthetic biologists are trying to modify nature.

The use of genome editing tools can lead to significant risks that are difficult to predict at the current level of science. This is associated with the active development of bioethics, as a set of principles and procedures that can be used as a guide when developing legislative norms related to working with the genome and medical interventions. The fundamental document is the Universal Declaration on Bioethics and Human Rights, adopted by the UN in 2005.

In molecular biology, there are already standards for some types of data used, for example, generally accepted standards for storing and exchanging gene expression data, DNA sequences, and biological models. Standardization allows saving time during research and increasing the accuracy of research results. But there are no standards for most classes of biological functions, experimental measurements, or operating conditions for bacterial strains.

Synthetic biology aims to create clear rules that biologists can use to increase the reliability of synthetic systems and experiments on their creation. Synthetic biology uses dual-use technologies. This means that it is used to create new types of biological agents and biological warfare techniques.

The tools and techniques of synthetic biology include the synthesis and sequencing of large fragments of DNA. An important role is given to the development of a host system that carries a genetic toolkit for expressing the desired genes of an engineered biological pathway, delivered by suitable vectors. Transcription systems that do not deplete cellular resources are developed (synthetic promoters and transcription factors). Genome modification tools are used (CRISPR/Cas9 nuclease, zinc finger nucleases, TALE nucleases and mega nucleases) with the involvement of computer technologies involved in basic

structural design and synthesis; in network design; in predicting behavior, function and response.

Synthetic biology has already demonstrated capabilities in recreating pathogenic viruses and pathogenic bacteria. It has increased the danger of existing pathogenic bacteria and viruses to humans by increasing their virulence and ability to overcome immunity. It has shown itself in the creation of pathogens that did not exist in nature. It has developed the production of toxic chemicals or bio chemicals using natural and artificial metabolic pathways.

Synthetic biology has demonstrated its potential in the production of toxic substances through in situ synthesis, alteration of the human micro biome, and modification of the human immune system. It modifies the human genome by adding, deleting, or modifying genes, or through epigenetic changes that alter gene expression and can be passed from parent to child during reproduction, spreading genetic changes throughout the population.

Modern technologies of synthetic biology and mathematical modeling of epidemics make it possible to construct a variant that, when exposed to a probable immune response of the human body, will evolve towards greater contagiousness and the ability to overcome immunity formed as a result of an already suffered disease or vaccination. It is necessary not only to constantly monitor new dual-use biotechnologies, but also to improve traditional and scientific methods for monitoring their use, since the concept of a biological threat is being transformed.

It has become complex and includes elements from other areas unrelated to biotechnology and the traditional understanding of engineering biology. Such technologies include additive manufacturing based on 3D printing technologies; Big Data analysis and artificial intelligence technologies; nanotechnology and materials science, as well as automation of biological research and robotics.

Dual-use technologies have become the focus of close attention from the scientific community and international experts, but this does not always contribute to an accurate and balanced understanding of their potential in the context of ethical issues. The convergence of new and emerging disciplines creates new areas of

scientific knowledge that address the problem of non-proliferation of inhumane biological technologies. This requires a balanced assessment in terms of both the possibility of their dual use and the risk of excessive prohibition and negative impact on further scientific and technological progress.

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Футурология и философия

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Футурология и философия представляют собой две дисциплины, каждая из которых вносит уникальный вклад в наше понимание будущего и нашего места в нем. Футурология занимается предсказанием и анализом возможных сценариев развития общества, технологий и окружающей среды, основываясь на эмпирических данных, аналитических моделях и трендах. В то время как философия исследует базовые вопросы существования, смысла и этики, направляя взгляды на то, как мы воспринимаем и осмысляем будущее.

В условиях быстро меняющегося мира, где научно-технический прогресс и социальные трансформации происходят с беспрецедентной скоростью, взаимодействие футурологии и философии становится особенно актуальным.

Футурологи, стремясь предсказать грядущие изменения, сталкиваются с этическими и экзистенциальными вопросами, которые требуют философского осмысления.

Каковы нравственные границы технологий? Каковы последствия для общества в случае реализации тех или иных футуристических сценариев? Можем ли мы стремиться к желаемому будущему, не игнорируя уроки истории?

Футурология – это научная и междисциплинарная область исследования, посвященная изучению будущих событий, тенденций и возможных сценариев развития общества, технологий, экономики и окружающей среды. Она включает в себя анализ текущих трендов, прогнозирование долгосрочных изменений и разработку стратегий для адаптации к ним. Футурология опирается на данные из различных областей знаний, включая социологию, экономику, экологии, технику и другие, а также использует различные методы, такие как