Introduction. Despite its widespread usage, the concept of “modernization” is not clearly defined. Concretization of its meaning depends on the researcher’s worldview position.

Problem Statement. The introduction of neoliberal economic principles did not lead to the improvement of society and the growth of human well-being. It transformed Ukraine into a raw-material appendage of global capitalism and the poorest country in Europe.

Purpose. To analyze public opinion on the modernization of Ukrainian society and identify the prospects for science and innovative development in Ukraine.

Materials and Methods. Analysis of statistical information and scientific publications on the problems of modernization, data of the sociological monitoring of social changes in Ukrainian society and two expert surveys (scientists of the National Academy of Sciences of Ukraine and specialists on innovative development).

Results. The author has proved that the transformation of Ukrainian society is not, in essence, a modernization. It is a neoliberal experiment under the guise of modernism, which rejected Ukraine from the cohort of the most industrially and scientifically developed countries to the periphery of the modern world, led to impoverishment and total despair of the majority of citizens. The author substantiates that it is impossible to modernize Ukraine and turn to innovative development within the existing neoliberal model and the oligarchic power rooting. As a result of financial genocide and the lack of state support, science in Ukraine is deprived of the opportunity to effectively perform its public functions, in particular, to be one of the decisive agents of modernization of society in the interests of all citizens.

Conclusions. The specific political and ideological interests of a global capital stand behind the theory of modernization as an ideological and theoretical construct of modernity. The theory and practice of neoliberal modernization imposed on Ukraine as the main mean of reaching the path of successful socio-economic development have not lived up to the expectations and led to a chronic crisis state of the society. It requires finding another alternative model of development.

Keywords: modernization of society, neoliberal modernization, Ukrainian society, innovative development, science in Ukraine, public opinion, polls (sociological surveys).

The issue of the Ukrainian society modernization has become relevant since the first years of radical economic reforms, which have become drivers of root-and-branch transformations not only in the socio-economic system, but also in the entire socio-cultural system.
and institutional matrix. The concept of modernization has always been in the limelight of social researchers, in particular sociologists. However, today, “modernization” terminology has got features of a necessary, fashionable context that shall, sometimes formally, be present in the titles of scholarly research. However, despite a long history and widespread use of this fundamental concept, it still remains among many ambiguous and unclear terms. Although the modernization of society requires a comprehensive understanding of the essence of the desired social change and public consensus on the choice of modernization model, it is necessary to develop a scientifically based program of gradual implementation of a system of appropriate measures, to provide a continuous feedback between the reformers and the society, monitoring of social transformations for early adjustment of the program, should the need arise.

Since science, by definition of its social functions, shall be one of the decisive agents of modernization of society, it is important to collect the ideas of leading Ukrainian researchers, who are experts in the field of the status and problems of domestic science, concerning the essence of society modernization and the role of science in this process. The purpose of this research is to analyze the theoretical ideas of the intellectual elite of the country about the modernization of Ukrainian society and the role of domestic science in it, to generalize the perception of modernization changes by Ukrainian citizens, and to clarify the prospects of domestic science and innovative development of Ukraine.

DEFINITIONS

Review of the accumulated theoretical and methodological approaches, as well as detailed theoretical analysis of the modernization concept is beyond the scope of this research. The objective is to disclose how the scientific intellect of modern Ukraine understands the idea of Ukrainian society modernization, to analyze the public opinion on the national practice of modernization transformations, and to draw attention of the interested (scholarly research) public to further development of these crucial issues for ensuring effective socio-economic development. In this context, it is enough to define the basic conceptual framework that discloses the history of the issue and the essence of the concept of modernization.

According to the authors of the international encyclopedia of economic sociology, the term "modernization" refers to historical processes that include secularization and demystification, individualization and democratization, bureaucratization and rationalization of the means and ends of technological relations and values [1, 451]. That is, it is a term that defines various processes and belongs, in fact, to the category of “umbrella terms” that provide for multicomponent content and has specificity depending on the focus of analysis and worldview of researcher / social subject. Thus, a fruitful scholarly research discourse requires a clear definition and unambiguous understanding of both the essence of the concept and the social phenomenon of modernization in terms of the concept.

In general, the modernization of society means a set of transformations that are adequate to the actual challenges and aim at its improvement according to the best existing models. They cover industrialization, transition from traditionalism to rationalism, and other social processes that affect all social institutions, from family to politics. Today, an integral part of the society modernization is the processes of informatization and digitalization, which not only give people fundamentally new technical and technological opportunities for their everyday life and the life of society as a whole, but also have led to its qualitative transformation into an information society and to a new form of social reality, the virtual reality that was unknown in the 20th century. It is clear that modernization is a long-term process of social transformations, which covers all spheres of society. Certain types of modernization (technological, economic, socio-cultural, political, and so on) can be distinguished only theoretically. In reality, these things, as interconnected and inseparable, either reinforce each other or restrain potential development. Thus, the modernization of economic subsystem as basis of society ensuring...
its development and reproduction is impossible unless there is an appropriate upgrade of technology, policy approaches to strategic programs of society, as well as social culture that determines the quality of sociability and, consequently, all its manifestations.

The very idea of modernization comes from the concepts of socio-economic development of modern societies. The theories of society modernization were created in the middle of the 20th century, during the collapse of the colonial system of capitalism and the emergence of "third world" countries that, according to architects of the world economy, were to develop according to the universal scenario of the most advanced Western countries. In contrast to the theories of nonlinear development (theories of civilizations, sociocultural identity, etc.), which deny the only universal path of social progress, the theories of modernization belong to the linear theories of socio-economic development, which consider the historical development of society as an evolution from primitive economic and socio-cultural forms to increasingly complicated, on the basis of universal laws, as typified by famous researcher of economic life sociocultural dynamics N. Zarubina [2, 132]. However, the theories of modernization fundamentally differ from other linear theories of progress, in particular from the Marxist theory of socio-economic formations, by their paradigm of thinking exclusively within the capitalist system of management.

As the authors of the encyclopedic article on "modernity" emphasize, in the analysis of modern society, the social sciences highlight primarily the general understanding of capitalism rather than the understanding of the society itself, which is a broader concept and phenomenon than the dominant method of production [1, 451]. The following features change: accents and key characteristics of the modernization process (organic/primary and inorganic/secondary modernization [3, 122]; the ratio of modernization as a process and modernity as a cultural program/characteristics of the modern Western society [2, 137; 1, 452]); paradigms and names of theoretical definitions (from extreme Westernization to "anti-modernization" and concepts of original development [3, 143], from the classical theories of modernization to the concepts of neomodernization and neoliberal modernization [4, 54–58]); the previously widely used models of modernization, in particular the model of catching-up development [7];) is growingly criticized, while the essence of modern theories and practices of modernization remains invariably apologetic in terms of the perception of the capitalist system as the highest model of social progress. The theory and practice of modernization are forced on public opinion as the only way to economic growth and development, in order to involve all countries in the system of global capitalism for the sake of OECD member states [7, 5].

The imposition of the neoliberal model of development under the guise of modernization on the former socialist and colonial countries is hindered neither by theoretical ambiguity and uncertainty of the "modernization" concept 2 nor by obvious fails of neoliberal formulas, nor by fair criticism of the modernization idea by famous

1 The main stages of development of modernization theories (the first stage: from the 1950s to the early 1960s; the second one: from the mid-1960s to the late 1980s; the third one: from the 1990s to the present) have been well studied by domestic and foreign researchers [4, 54–58; 5, 105–106; 6].

2 Conceptual uncertainty and changes in the conceptual approaches have led to a revision of the terminological apparatus and a wider use of the term “identity” instead of the previously common term “traditionalism”. Some researchers in the context of the ideas of “modernization bypassing modernity” have suggested replacing the concept of “modernization” with “industrialization” [3, 129, 132]. V. Yadov, well-known Russian researcher, Ex-Director of the Institute of Sociology of the Russian Academy of Sciences and former head of the Center for the Study of Social Transformations, prefers to use a more adequate concept of transformation. Together with another well-known Russian sociologist, T. Zaslavskaya, founder of the Novosibirsk School of Economics and Sociology, Ex-Co-President of the Interdisciplinary Center for Social and Economic Sciences and Ex-Chairman of the Levada Center, he interprets modernization as “increasing the capacity for social change” to raise competitiveness [8, 90].
school of the world system analysis of Immanuel Wallerstein [7, 8—10], which has proved its contribution to the division of the world into "center", "semi-periphery," and "periphery", nor by the role of "catching up" in the aggravation of "underdevelopment" in the "third world" as convincingly shown by famous Latin American economist Raul Prebisch. In contrast to the modern Western theories of modernization, the theorists of the Prebisch "school of dependence" have proved that the poverty of the "periphery" and the wealth of the "center" are a natural implication of inequitable relations between them rather than a result of differences in culture or traditions [9, 133—135].

Since the greatest attention was always paid to economic modernization, as noted by Russian social researcher O. Petrov, recommendations for its implementation were formulated under the influence of economic concepts prevailing in advanced Western economies in the respective period (Keynesianism, in 1940—50s, and neoliberalism, in the 1970s and 1980s) [4, 56]. O. Petrov is a recognized expert on these issues and the author of neoliberal modernization definition that removes the veil of "sociological fog" in terminology and clearly discloses the essence of this modern phenomenon. It is "a controlled process of transformation of the economy and the society, government supervision over which implementation is based on the postulates of the liberal-monetarist paradigm formulated by F. von Hayek, M. Friedman, and the Chicago school of neoclassical economic theory [10, 118]. The experience of post-socialist transformation of the former Soviet republics, including Ukraine, according to neoliberal recipes reasonably leads to doubts, as formulated by V. Yadov, whether the forced creation of capitalist production in unprepared environment may be defined as modernization, especially in the absence of adequate democratization and properly developed structures of civil society [8, 89].

Thus, the concept of modernization has three semantic charges:

1) adapting a subject / process to modern styles, views, ideas, tastes, needs (in this case, as rightly noted in the encyclopedic dictionary of economics and information, mainly machinery, equipment, technological processes are modernized [11, 161]);

2) the social process in which former agrarian, historical or modern societies become advanced;

3) a specific model of social development proposed by American sociology functionalists in the 1950s and 1960s. In Western sociology, the term "modernization" in the second meaning includes, in addition to industrialization, a wide range of social processes. In classical sociological theory, modernization was conceptualized by E. Durkheim as a social differentiation, by M. Weber as a process of rationalization, and by K. Marx as a process of commodification. In contrast to this "open-ended concept", the interpretation of modernization in terms of a specific model of social development was widely criticized for the West-centered approach that imposed the Western model and rejected the possibility of other forms of society emerging in the "third" world, as well as for the influence of colonialism and neocolonialism, etc. [12, 421]. As noted in the Collins Dictionary of Sociology, the theory of modernization was backed by both political and ideological interests. Many great theorists from the United States worked as government advisors and explicitly contributed to the collapse of socialism or communism in the "third world" [12, 422]. Today, according to W. Cockerham, Professor at the University of Alabama in Birmingham, the theory of modernization remains controversial because it gives privileged positions to advanced economies that are considered as models in the world economy and ignores the exploitation of poor countries by rich ones. And what about interpretation of the Ukrainian society modernization by the representatives of the scholarly research and academic elite of our country?

**UKRAINIAN RESEARCHERS ABOUT THE MODERNIZATION**

Within the research The Role of Science in the Modernization of Ukrainian Society implemented at the Institute of Sociology of the NAS of Uk-
Ukraine in accordance with the Plan for the Implementation of Tasks and Measures of the Concept for the Development of the NAS of Ukraine for 2014–2023, a survey of the status of the R&D sphere in the modern Ukraine was carried out with the most competent domestic experts involved, in 2016. Thirty-eight Ukrainian researchers were selected as experts for the survey, given not only their awareness of the state of affairs in the R&D sphere of Ukraine, but also their personal civic position in defending the interests of domestic science (the experts who participated in the survey, as well as their accomplishments have been listed in the research "The Status of Science in Ukraine (according to domestic and foreign experts)" [14]).

Sharing the opinion of the eminent French social researcher P. Bourdieu on scientific truth as knowledge that has been tested in the course of discourse and is a generalization of different points of view, this study was aiming at collecting and summarizing the opinions of academic circles rather than at imposing somebody’s vision of society modernization. Therefore, experts were asked to express their understanding of the modernization of society and to determine the role of science in it; 36 out of 38 experts answered the open question about the essence of society modernization, and 33 experts answered the question about the role of science. One of the experts noted that he did not understand what meant “modernization” of society, probably considering this term as something like a "social fog" or theoretical eclecticism. Given the "blurring" of this term and a huge gap between the stated goals of modernization and the real results of "modernization" transformations, his view does not seem unjustified.

In general, the experts understand modernization of society as the process of its renewal, upgrade, improvement, transformation of major social institutions, technological base, system of values, etc. in order to improve the quality of life and to ensure more efficient operation and harmonious development of society. On the one hand, this corresponds to the common among scholars understanding of modernization as "a process of positive transformation of state and society based on economic, political, and cultural innovations, which ultimately leads to a change in the type of its economic structure and political organization, wealth creation, development of science and technology, and nature conservation" [5, 365]. On the other hand, the analysis of specific answers has shown a variety of opinions, sometimes even opposite, which reflects both the complexity of the current situation in science and in the Ukrainian society as a whole and the diversity of socio-cultural values.

Almost half of experts perceive the modernization of society as renewal, modernization, and improvement. At the same time, six of them directly or indirectly noted the need to follow the Western models ("harmonization of basic social institutions and public consciousness with the standards of economically and politically developed Western societies", "creation of modern (new European) social institutions", achievement of the targets and standards of socio-economic development of the world advanced economies, the introduction of Western values). According to the experts, the key terms in the definition of modernization as renewal/update of society were public/social institutions, values, as well as the main spheres of social life. They emphasized the focus of modernization on the development and prosperity of society and the improvement of the welfare and living standards. Only one expert explicitly stated that modernization was "the achievement of a society institutionally based on rational capitalism, democracy, public sphere, and national state." Of particular note was the definition of an expert who rightly emphasized the specifics and difficulties of the society modernization, "Modernization is an objectively conditioned process, but the modernization of society, in contrast to the technical modernization, regardless of financial resources, requires a significantly longer period, given the fact that people, regardless of their beliefs, cannot be destroyed as obsolete equipment. Modernization of society is to change the..."
One third of experts defined modernization as transformation of "strategic model of development of society, economy, citizen", change of "economic and social, political system of society on the basis of modern scientific knowledge, technologies, and social principles that would expand human rights and freedoms", or change of worldview. Others understand modernization as transition of society to a new level of development based solely on science, new knowledge, industrialization, and a new attitude to human being, or transition from a traditional society to a society of modern innovation type or to knowledge society. Those experts who perceive modernization as a process of transformation emphasize its promising and conscious nature.

Many experts, in fact, identify the modernization of society with its harmonious development and improvement, increase in the efficiency of society ("harmonious development of vital areas (health, education, science, culture)", "raising the overall efficiency of society", "comprehensive green initiative, humanization, and harmonization of all spheres of life for all members of society"). Some experts deliberately narrow modernization to solving the most pressing problems of the modern Ukrainian society (overriding of corruption; priority support of education, science, and innovation-oriented business; transmission of respect to the law; systematic efforts to consolidate society by mitigating its contradictions, overriding of nationalistic ideas in the society; genuine separation of different branches of government; genuine separation of power and business).

While assessing the role of science, experts stressed that the modernization of today’s society is impossible without its development, because it is science and education that shape society and ensure its positive transformations. Science that produces and disseminates scientific knowledge gives society new technologies, new sources of energy, new opportunities to improve living standards, and transition to a qualitatively new stage of existence. However, because of catastrophic underfunding of science in Ukraine, it is incapable of effectively performing its functions and influencing the development of society.

As for the specific areas of influence of domestic science on the Ukrainian society, according to experts, today, it contributes the production of new knowledge (2.1 of 3 points, where "1" means small, "2" means moderate and "3" means strong effect), the technological support of the national defense (1.9 points), the spread of information and communication technologies, and the growth of educational and cultural level of citizens (1.7 points each). At the lower limit of moderate effect, there is the influence of Ukrainian science on the formation of scientific worldview, scientific support of national security, solution of environmental and food problems (1.6, 1.6, 1.5 and 1.5 points, respectively). Other aspects of public life, such as consolidation of society, development of socio-political system, improvement of living standards, development of healthcare, promotion of innovative economic development, R&D and expert support of government socio-economic, cultural and foreign policy, etc. are little influenced by the domestic science as the score ranges from 0.9 to 1.4.
proper tools by political leaders inevitably results in chaos and degradation of the society.

Domestic social researchers have published many studies about how the Ukrainian society has been transformed recently. The changes that took place in our society have been unbiasedly analyzed by well-known Ukrainian sociologists and representatives of other social sciences: A. Arseenko, Ye. Suimenko, V. Tarasenko, K. Tkachenko, M. Shulga, etc. [15—21]. Their ideas and conclusions largely coincide, as they are based on an objective scientific analysis of real life in the Ukrainian society, empirical knowledge of which is provided by means of the sociological monitoring of social transformations in the Ukrainian society conducted annually by the Institute of Sociology of the NAS of Ukraine, since 1992. The scientific analysis of sociological and statistical data not only has given specific meaning and certainty to the abstract concept of transformation/modernization of the Ukrainian society, but also proven that as a result of neoliberal reforms based on the Washington Consensus, Ukraine became a peripheral country of the world capitalist system, with the transformations being destructive and leading to social involution. As Ukrainian social researcher V. Tarasenko put it in the early 2000s, in the most successful period of Ukrainian society (the last quarter of the 20th century), there was implemented an imitative modernist experiment [18, 135, 147].

New signs of a transformed society in our country are deindustrialized and primitive economy, degraded employment and mass impoverishment, collapsed social sphere and social protection system, liberalization of political life and alienation of people from power, rooting of the oligarchy and pervasive corruption, social and cultural disintegration. monetization of public consciousness and the emergence of an "immoral majority", depopulation of the country, etc. A radical divergence of the officially declared goals of the national development (building of a strong, democratic state with the rule of law, strong, socially oriented economy capable of providing a decent life for its citizens) and the almost opposite reality of the degraded life of a large part of the population has become a usual phenomenon. Instead of the socially oriented market economy, in Ukraine, there has been established the bureaucratic-oligarchic capitalism in which the decisive role is played by monopolistically corrupted entities that pursue their private interests at the expense of the national ones. While analyzing the social identification of the transformed Ukrainian society, V. Tarasenko objectively defined it as a poor, sharply polarized and atomized, chronically crisis society where social freedom, democracy, guarantee of equal constitutional rights of citizens are illusory, with the Ukrainian people remaining incredibly humiliated, robbed, and deceived [18, 174—176, 183, 190, 543].

This list of results of the modern Ukrainian society transformation can be extended with others, both negative and positive changes. Unfortunately, the latter is outnumbered by the former, so the state where we live is perceived by citizens as antisocial, illegal, and undemocratic, as evidenced by the results of monitoring polls by the Institute of Sociology. In 2017, during a mass survey (N = 1800), respondents were asked for the first time to assess the transformation of the main spheres of Ukrainian society and determine their attitude to other aspects of modernization (again, these questions were asked in 2019). Significantly, to the question "Which of the following components of Ukrainian society is the most modernized?", A fifth of respondents (19%) could not answer, almost half (45%) said that "none of the areas is modernized" (in 2019 it was noted by 24% and 38% respectively).

To these results of the transformation of modern Ukrainian society can be added others, both negative and positive. Unfortunately, there are significantly fewer positives and that is why the state in which we live is perceived by citizens as antisocial and undemocratic, without rule of law, as evidenced by the results of monitoring polls by the Institute of Sociology. In 2017, during the mass survey (N = 1800), the respondents were asked for the first time to assess the transformations of the main spheres of life of the Ukrainian society and to determine their attitude to other
aspects of modernization (the same questions were asked repeatedly in 2019)\(^3\). It should be noted that, a fifth of the respondents (19%) could not answer the question "Which sphere of the Ukrainian society has been the mostly modernized?"; almost half (45%) said that none of the spheres had been modernized. In 2019, the share of answers was 24% and 38%, respectively.

In 2017, the respondents considered civil society institutions, including volunteers (18%), the most modernized ones; in 2019, this share decreased to 13%. About one of ten respondents (respectively, 13, 12 and 9%, in 2017, and 13, 12, and 11%, in 2019) mentioned modernization of the economy, values, regulations, and politics. According to the citizens, the main factors that impeded the modernization were "the lack of leaders capable of leading this process", "unwillingness of the ruling / political elites to radically change the Ukrainian society," and "unwillingness of the government to bear the costs (material, time, etc.)." In 2017, these factors were mentioned by approximately the same in size, quite significant shares of respondents (respectively, 27, 26, and 25%); in 2019, after new political forces came to power, the shares changed slightly (22, 21 and 29%). Significantly fewer respondents (8%, in 2017, and 11%, in 2019) believed that weak activity of the civil society was a barrier to modernization. In both surveys, 22% of the respondents could not answer which social institutions and structures had contributed to the modernization of our society. At the same time, a significant share of citizens believed that no one had contributed to modernization (36%, in 2017, and 26%, in 2019).

A high level of trust in President V. Zelensky and his team also affected the perception of the role of government structures in the modernization of Ukrainian society. In 2017, according to citizens, the main contributors to modernization were domestic and international NGOs (respectively, 19 and 18%); business environment (12%); employers’ associations (9%); the President of Ukraine (9%). Only 6 and 5% of the respondents mentioned the Verkhovna Rada and the Cabinet of Ministers as agents of modernization. After the presidential and parliamentary elections, at the top of the hierarchy were the President of Ukraine (26%), international NGOs (19%), Verkhovna Rada, the Cabinet of Ministers, domestic NGOs and business environment (15, 14, 14, and 12%, respectively). Only 7–8% of respondents considered the National Academy of Sciences of Ukraine as agent of modernization, and 4–6% mentioned political parties and blocs.

The respondents’ answers have indicated that negative attitude to the transformations in the society (poor progress of society modernization ("none of the spheres has been modernized") and inaction of potential agents of modernization ("no one has contributed to modernization") dominate in the mass consciousness. Also there is a significant share of those who cannot decide on these issues, most likely because of the fact that they do not feel any change for the better. This coincides with other monitoring data, in particular mostly negative assessment of changes in various aspects of people’s lives, nonsatisfaction with the development of democracy, nonsupport of "market" reforms, mass distrust of government institutions, and mostly negative perceptions of the general economic and political situation in the country\(^4\). The institution of volunteers, which has developed rapidly in the most difficult for our society times of military confrontation in the east and reached the highest level of trust from citizens (58%, in 2017, and 55%, in 2019) is perceived very positively by the Ukrainian society today.

\(^3\) The sample represents the adult population of Ukraine (over 18 years of age). By type of construction, the sample is three-stage, stratified, random, with quota screening at the last stage. The survey was conducted by the method of self-administered questionnaires. The field stage was conducted by the Intellectual Perspective Charitable Foundation from June 3 to July 23, 2017. The quality of work was monitored by the Institute of Sociology of the National Academy of Sciences of Ukraine. In 2019, a mass survey of Ukrainian citizens (\(N = 1802\)) was conducted in August.

\(^4\) To see the data of the national annual monitoring surveys of 1992–2018 and the relevant analytical publications of the experts of the Institute of Sociology of the NAS of Ukraine, visit the library and the Institute’s website (i-soc@i-soc.org.ua).
It seems to be the only real, effective center of the civil society that now is at the stage of formation in Ukraine.

**EXPERT ESTIMATE OF THE SOCIAL POTENTIAL OF INNOVATIVE DEVELOPMENT OF UKRAINE’S ECONOMY**

It is clear that the main goal of the current modernization of the Ukrainian society should be to overcome its permanent crisis and to ensure the global competitiveness of Ukraine. The latter is impossible unless the repeatedly declared course for innovative economic development with widespread introduction of new inventions and technologies is implemented. Is this possible in the existing format of our society? According to both sociologists and researchers, no, it does not. As V. Tarasenko puts it, the very idea of an innovative type of social development in the conditions of involutional social progress in Ukraine is an illusion. Firstly, because we do not have a genuine subject of this type of development, the middle class, and, secondly, the ruling elite that has dependent, imitative state of mind does not possess the necessary creative potential to implement the officially declared goal of innovation development. Moreover, this group is too exaggeratedly guided by the interests of their own enrichment [18, 575].

The neoliberal philosophy of management borrowed/adopted by the Ukrainian authorities makes innovative development impossible. The authors of the Strategy for Innovative Development of Ukraine for 2010—2020 in the Context of Globalization Challenges and experts of the Dobrov Institute for Studies of Scientific and Technical Potential and History of Science of the NAS of Ukraine, which has been researching the problems of innovative development of the domestic economy for over 20 years, have urged to refuse it. The Institute Director, well-known Ukrainian researcher B. Malytskyi, for the first time in the domestic scholarly research literature has analyzed the impact of neoliberal market relations on innovative economic development and shown how they oust the innovative factors from the main drivers of economic growth, which inevitably leads to crisis of innovative development of economy [22].

The course for the development of innovative economy officially declared in the Ukrainian society as a logical reflection of the objective need for it for raising the competitiveness of the national economy contradicts the real business practices that has led to an innovative default. The default has been thoroughly analyzed by O. Shnyuko [23]. Understanding the importance of innovation for scientific support of the modern society and the need to go beyond the technological and economic approaches in the format of interdisciplinary research with a broad social context has given rise to the idea of studying the social potential of innovative economic development (IED) of Ukraine. Moreover, given the lack of financial resources and time, it is very important to use non-economic factors of innovative development, in particular social potential as combined potential of social actors, social relations, and social institutions, which provide the necessary prerequisites and environment for such development. According to the expert survey conducted by the Department for Economic Sociology of the Institute of Sociology, the integrated index of the existing social potential of the IED of Ukraine is only 2.3 out 5 points. Among the six selected structural components of this potential, the socio-political, institutional, and socio-economic potentials are rated the lowest (1.7, 2.0, and 2.1 points, respectively), while the socio-cultural, R&D, and educational components are close to middle (2.7, 2.9, and 2.9 points, respectively) 5.

5The expert survey (N = 26, 2013) was conducted within the research project Social Potential of Innovative Development of Ukraine’s Economy. Not only highly qualified researchers and civil servants were interviewed, but also those specialists of academic institutes, universities, and government agencies who were directly involved in the theory and organization of innovative economic development, i.e. had the highest level of knowledge on this issue. For more detailed information on the analysis of the survey of the components of the social potential of IED of Ukraine, innovative opportunities for different social groups, prospects for IED of Ukraine and its restraining factors, as well as statistical indicators of innovation of Ukraine’s economy, see [24].
According to the experts, our country has all the necessary natural and R&D resources for innovative development. Ukraine possesses natural and human resources for the implementation of effective socio-economic development, however, is scarce of material and technical resources. There is also a lack of financial resources, although as some experts have noted, they can be raised if desired. The weakest link is the provision with technological and social resources. As L. Fedulova, a well-known expert in the field of innovation policy, emphasizes, the consequences of the worst-case scenario for the development of Ukraine's industry have manifested themselves, and the entire transformation cycle has turned out to be non-innovative. According to the authors of Ukraine-2015 national development strategy, the destruction of country's technological potential is going on, and the technological lag behind advanced economies in recent years has reached a critical point, beyond which there is a loss of ability to create competitive knowledge-intensive products [24, 71]. The analysis of the survey results has also shown a significant discrepancy in the assessment of human and social resources: 60% of the experts believe that Ukraine is sufficiently provided with human resources, while only 9% (several experts) consider that it has sufficient social resources as well, which emphasizes the importance of analysis of social potential for innovative development.

In order to get the most complete picture of the real status of the total social potential of IED, the most important components have been identified within each above sub-potentials. In particular, the following parameters of the socio-political potential have been analyzed: the government’s interest in real innovation development, its ability to develop and implement IED programs, consolidation of society for economic and social development, and advocacy of Ukraine’s national interests. Although all the identified socio-political factors have been assessed by the experts as important and very important, they are at a low and very low level in the Ukrainian society. The consolidation of our society is rated the lowest (1.5 points). At the same time, the vast majority of experts are convinced that without the consolidation of society, as well as without trust, IED is absolutely impossible (81% and 85%, respectively). The low score of the components of socio-political potential correlates with the same low score of government support of innovation activity (this component of the institutional sub-potential of IED has got 1.6 points). The extremely low score of the current role of the state in the IED of Ukraine mentioned by experts contradicts the understanding of both experts and researchers that the state should play extremely significant and largely decisive role in ensuring the innovative development.

Among the socio-cultural factors, the existing innovation culture in society is the lowest rated (1.7 points), although its formation has been recognized as one of the priorities of Ukrainian innovation policy since 2003. It is important to emphasize that innovation culture has a decisive impact on society only if the government possesses a certain level of culture, including innovation one. Government can play the role of a conductor of advanced culture only if it is political/economic elite not only in terms of its social status, but also, most importantly, in terms of its intellectual and cultural background and devotion to the Ukrainian people.

The R&D and educational potentials are rated the highest, above the average level, which has been confirmed by the relevant ratings of Ukraine in international comparisons. According to the experts from the Dobrov Institute for Studies of Scientific and Technical Potential and History of Science, the total intellectual potential of Ukrainian society, the capitalization of which can become a huge resource for development, which other countries need decades to accumulate, is at least half of the country’s national wealth and is estimated at USD 2.5—3.0 trillion [25, 74]. The expert survey also has established a significant gap between the ability of research teams to generate new ideas and the ability to turn them into inno-
vations. The former scores 3.2 points, whereas the latter gets 2.3 points. This means, the realization of the existing research potential in the Ukrainian economy remains an urgent problem to solve which the policy of “financial bleeding” of domestic science shall be replaced by comprehensive financial support of its development.

In general, according to experts, in today’s conditions, neither IED nor innovation breakthrough in Ukraine is possible despite their vital need for Ukrainian society and economy. Only three of the 26 experts believe the innovation progress is the most probable among the possible scenarios for the development of Ukraine’s economy in the upcoming 10—15 years, eight experts think the progress will be inertial, 10 experts expect the combined progress. Ensuring the innovative development of our country is impossible unless the government actively support this course and "rigid" social barriers such as neoliberal ideology, family-clan oligarchic capitalism, shadow economy, pervasive corruption, high socio-economic inequality, and creditability gap have been overcome. It is necessary to translate the declared strategic course for innovative development of the country into the plane of specific relevant actions, the understanding of which is well known not only from other advanced economies, but also developed in Ukraine, and to introduce a mechanism of responsibility for IED at all levels. In addition to overcoming these barriers to the innovation development, it is also important to fully convert the existing positive social potential, especially the accumulated intellectual potential of the Ukrainian society.

**SCIENCE ROLE IN THE UKRAINIAN SOCIETY MODERNIZATION: MISSION (IM)POSSIBLE**

The state of science in society is known to reflect the general level of its intellect and culture, and to determine the real possibilities and prospects. Without the development of science and knowledge-intensive industries, it is impossible to carry out both economic and technological modernization of the country. Moreover, as F. Joliot-Curie stated, a country that does not develop science inevitably becomes a colony. During the Soviet era, domestic science successfully competed with the most advanced economies of the world. After the collapse of the Union, against the background of legal arbitrariness and monetization of consciousness, Ukraine found itself in the grip of neoliberal ideology of management, clan-oligarchic capitalism, and pervasive corruption. Unfortunately, the research community, among the achievements of which there are many unique achievements, failed to properly assess and to resist degrading the domestic economy and society, deteriorating welfare and weakening social security, preventing the destruction of education and science. During the years of independence, the Ukrainian science has undergone catastrophic changes: its funding has dropped to a meager amount, the prestige of research activity has decreased unprecedentedly, and the number of researchers has fallen fivefold.

In 1991, the total expenditure on research and development amounted to 2.4% of GDP (which corresponded to the level of the most innovative economies in the world!); in 1992, it dropped to 1.5% of GDP; in 2007, it decreased to 0.9% of GDP; and in 2015, it fell down to 0.6% of GDP [26]. For comparison: according to the UNESCO Institute for Statistics, the R&D expenditure makes up 2.8% of GDP, in USA; 2.9%, in Germany and 4.3%, Israel [27].

Budget funding of science in Ukraine has dropped to 0.18% of GDP in recent years, which is a negligible share of the level established by Ukrainian legislation (from 1.7% of GDP). Absolute indicators of budget funding of fundamental research in our country and in advanced economies, given the size of their GDP, are not comparable at all. In 2015, the budget funding of science in Ukraine amounted to about 5 billion UAH, or less

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6 Although the leaders have known that a significant contribution of science to economy can be expected only with funding at the rate of, at least, 1.7% of GDP (with lower funding, science is able to perform only a socio-cultural function) [28]. If science funding is less than 0.7% of GDP, it degrades.
than EUR 200 million, which was approximately equal to the budget of one reputable Western university [29]. Scholars who in fact constitute the intellectual potential of the nation have been deprived of a decent salary and doomed to an extremely poor existence. In general, government expenditure per Ukrainian researcher is three times lower than in Russia, 18 times lower than in Brazil, 34 times lower than in South Korea, and 70 times lower than in the United States. As a result, for three years (from 2012 to 2015, more than 7,000 researchers under the age of 35 left science [31]; in 2015, about two thousand young researchers left the academic sector [29]. In general, in Ukraine the number of researchers per capita has become three times lower than the EU average [28]. For comparison: today, the number of researchers per 1 million people is 4231, in the United States, 4363, in Germany, 8255, in Israel, as compared with 1026, in Ukraine (which is lower than in Morocco (1032), where R&D expenditure accounts for 0.7% of GDP) [27].

Foresighted politicians, even in adverse crisis conditions, seek to increase the science expenditure, realizing that it is a major driver of economic growth in today’s competitive environment and a critical institution capable of meeting the global challenges of the 21st century. European countries that cannot imagine their future without strong science, seek to increase research funding up to 3% of GDP. Unlike, our leaders support the importance of the development of domestic science only verbally, while in fact continue the practice of its financial bleeding and concealment of existing problems.

The expert survey on the role of science in the modernization of Ukrainian society has revealed the following. As the most competent representatives of the scholarly research sphere, the experts emphasized “critically insufficient”, “unacceptably, catastrophically low”, “miserable” level funding of the R&D sector. Along with the financial factor that accounts for 55% of all socio-economic reasons stated by the experts, they mention such socio-economic barriers hindering the development of domestic science as “no economy that needs R&D”, “weak demand for R&D from industry”, “low salaries of researchers,” etc. According to some experts, the development of domestic science is primarily constrained by the oligarchic system of government and the peripheral nature of “capitalism for its own” established in Ukraine. Among those who point to socio-political barriers to the development of science, half stresses the government’s lack of understanding of its crucial role in the development of modern society and, as a consequence, the negative attitude of government towards science and cultivation of this attitude in the society.

The development of science in modern Ukraine is constrained not only by the socio-economic and political factors. It is also hindered by many institutional, socio-cultural and other factors. Among the institutional obstacles there are shortcomings in the organization and management of science, unwillingness of R&D institutions to work in market conditions, lack of adequate criteria for evaluating R&D activity and efforts of researchers to change the situation for the better. The main socio-cultural barriers, according to experts, are the underdevelopment of modern R&D culture; scarcity of qualified personnel; devaluation of the social capital of science; insufficient knowledge of foreign languages and cutting-edge information technologies.

Among other things that hinder the development of science in Ukraine there are mentioned difficulties in attracting talented youth (because of the lack of necessary conditions), aging of R&D staff, weak integration of Ukrainian science into the world one, Ukraine’s role of R&D potential donor imposed from outside, as well as the spread of opportunism, “grant-eating,” and cases of pseudo-scientific activity.

The experts assessed the government’s attitude to domestic science as extremely unsatisfactory, on average, 1.9 points out of 10. The desire of bu-

\footnote{92% of the experts pointed to a decrease in the prestige of the profession of researcher in recent years, and three quarters assessed this decrease as significant.}
business to financially support science is also low and scores 2 points. The media attitude to science got 2.9 points out of 10 (“1” means inadequate coverage of the state and role of domestic science, “10” corresponds to adequate coverage). In general, as compared with the expert survey of 2006, the attitude of the government, society, the media, and business to domestic science has worsened significantly. Unfortunately, the vast majority of domestic experts (26 out of 36 people) continue to predict deterioration in the science environment in Ukraine.

The experts deeply understand not only the crucial role of science for the modernization of society, but also the crucial importance for our country of its state and prospects. At the same time, there is a realistic understanding that science cannot effectively perform its social functions unless it has sufficient funding and support from the government.

At the same time, in Ukraine, in contrast to the indifferent attitude of the current leadership of the state and business to domestic science, there is a public demand for its development. According to the monitoring of public opinion, the vast majority of the country’s population understands the crucial role of science for the development of modern society. Two thirds of the population believe, the development of Ukraine’s economy and society as a whole is impossible without the development of domestic science. Moreover, the trust in Ukrainian researchers remains the highest among the social institutions of society. According to the monitoring data of 2019, it is comparable only to the trust in volunteers (56% and 55%, respectively). For comparison, in August 2019, the President, the government, and Verkhovna Rada had much less trust 37%, 17%, and 17% of the population, respectively.

PROBLEMS TO BE DISCUSSED AND CONCLUSIONS

The analysis of the statements of the most competent representatives of academic science in Ukraine has revealed that their understanding of the essence of society modernization is very diverse. Although, in general, the ideas of experts reflect almost the entire range of definitions of this umbrella term existing in the scientific discourse. The concretization of the content of modernization largely depends on the ideological position of researcher, which greatly complicates the achievement of consensus not only in political but also in scientific discussions. As the Canadian sociologist Gingras emphasizes, reaching consensus is even less likely because of ideological, political, religious or moral points of view, the correctness of which cannot be determined by any scientific method [32, 104]. In addition, it is the social sciences that are always most influenced by external forces. The object of social, in particular, sociological science, in contrast to the natural and engineering sciences, is in the epicenter of social struggle, and therefore “truth” is the object of struggle in the social world and in sociology that seeks to create a true picture of it. As P. Bourdieu, famous French researcher, emphasizes, social interests generate tactics of beliefs, strategies and cultural dispositions, which affect the content and development of scientific knowledge [33, 69, 84, 88, 115]. This directly concerns theories of modernization, which since their inception constantly compete with each other, reaching a temporary peak of fashion and then disappearing into oblivion. As K. Calhoun, a well-known American sociologist and Ex-Chairman of the Social Sciences Council in the United States, emphasizes in his public lecture Theories of Modernization and Globalization: Who Invented Them and Why (Institute of Social Design, Moscow, 2006), social theory is competition between different schools, competition for public attention, political influence, and for resources in the academic environment. He has clearly proven that the theory of modernization is a label that denotes a very specific ideological and theoretical structure. Moreover, according to K. Calhoun, from the point of view of the theory of modernization, the neoliberal shock therapy does not make any sense, because under conditions when modern legislative
institutions, modern political parties, modern culture, etc. have not yet emerged, it may end up in a disaster [34].

Following V. Yadov, once again, “Is it correct to refer to the transformation of society on the capitalist model as “modernization?” and, in general, “Is it correct to transfer the term successfully used in the field of technology to the social world that is an extremely sophisticated social fabric and to all manifestations of sociality?” “Do we need extra terms that complicate rather than clarify, give a fashionable, confusing terminological tint rather than contribute to the public understanding of the truth of social life?” “Is it correct to modernize, for example, to the cultural matrix of society, its inherent values and traditions that characterize the special quality of society, according to a model designed in a theoretical center?” “Is it not more adequate and expedient to talk about the development, promotion of the culture of each society and mutual enrichment with modern achievements?” The concept of modernity as a synonym of innovative ideas is natural and justified, and the problems of modernization of technology, engineering, and economy are clear and important, whereas the concept of modernization of society, its value and cultural components requires careful application, because it is based on a very simplified model of social life, and this gives rise to many questions rather than bring clear answers and benchmarks. The above reasons explain the ups and downs of interest in theories of modernization, the emergence of theories of post- and neo-modernization. It should be noted that there is no single opinion among the researchers as to what is considered truly modern. Naturally, the real diversity of modernity gives rise to many ideas of it.

One cannot but agree with the conclusion of the well-known Polish sociologist, Ex-President of the International Sociological Association (2004—2006) P. Sztompka on the peculiarities of the society modernization. He notes, it gets clearer and clearer that pace, rhythm, and consequences of modernization in various spheres of social life are different and there is a lack of synchronicity in modernization efforts. Ralph Dahrendorf warns against the use of “three-hour dilemma” with respect to the post-communist countries. Six months may be enough to carry out a constitutional reform, six years may not be enough for reforming the economic sphere. At the level of the deep layers of life, attitudes, and values that make up modern “civil society”, the renewal will affect several generations [35, 181]. While thinking of modernization aspirations of the post-communist countries, he notes, “It seems that at the very moment when the Western societies, tired of journey, are ready to jump off the train of modernity, the post-communist East is desperately trying to climb it. In this situation, it is not easy to find an acceptable ideological support for those modernization efforts that are made under the auspices of liberal democracy and market economy...” [35, 183]. The validity and correctness of scientific theory should be assessed based not only on the knowledge and consensus on controversial issues, but also on the real results of its implementation and effectiveness of the impact on the reproduction of basic subsystems of society, including economic, political, cultural, social, demographic, etc.

As for the practice of modernizing the Ukrainian society, it is quite obvious that modernization that destroys society, is a modernist, neoliberal experiment rather than modernization. As a result of this experiment, Ukraine has been ousted from the most industrially and scientifically advanced economies to the periphery of the modern world. This is accompanied with impoverishment and total despair of the majority of citizens. Within the existing economic model and the entrenchment of oligarchic power, the combination of business and the state, and even more so, in the conditions of military actions and physical destruction of the country’s economic potential, it

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8 Ukraine has introduced the resource-based model of economy, which does not aim at manufacture of products with high added value and rapid development of state-of-the-art technological systems.
is almost impossible to modernize it and to move to innovative development. It is also unrealistic, in the conditions of further financial bleeding of the R&D sphere, to hope for the development of Ukrainian science and the tangible role of its applied component in growing the domestic economy and improving the welfare of the people. Despite the natural optimism inherent in the Ukrainian people, which was brilliantly and vividly expressed in the poetry *Contra Spem Spero!* by Lesia Ukrainka, successful implementation of any project, program, strategy requires not only a clearly formulated idea, but also the appropriate resources, including material, financial, and human ones.

The purpose of this research is to initiate a responsible professional discussion on the mentioned issues, active citizenship, and urgent measures to preserve and to strengthen the social potential of our country, rather than to develop recommendations for successful modernization of Ukrainian society (this is the task of the expert community).

There is no universal answer to the eternal question “What to do?”, but there are universal approaches to solving any problem: decency, professionalism, constructiveness, responsibility, and service to people. Searching for answers on the basis of these principles is the only guarantee of moving in the right direction. Unfortunately, the majority of researchers does not actively fight for and defend their rights as employees of the Academy, as well as the interests of long-suffering Ukrainian society and the domestic science, at the individual or at the institutional level (as representatives of the main scientific organization of the country). The R&D sphere, like any other sphere of a chronically crisis / sick society, needs serious reform and, at the same time, careful attitude from the society and the government. Careful treatment is required not for the sake of the property of the National Academy of Sciences of Ukraine or tempting "savings" on the expenditure, but in order to stop further degradation of the domestic science, to preserve the accumulated scientific potential, and to gradually develop it. It is worth repeating the prophetic words of L. Pasteur that science must be the highest embodiment of the motherland, because out of all nations, the first will always be the one who is ahead of others in terms of thought and mental activity. Therefore, researchers as representatives of the intellectual elite of society shall be true leaders of advanced thinking and culture, committed to the principles of scientific impartiality and objectivity, in order to solve the most pressing problems of the Ukrainian society and to ensure a better future for its citizens.

REFERENCES
СОЦІОЛОГІЧНЕ ОСМИСЛЕННЯ МОДЕРНІЗАЦІЇ СУЧАСНОГО УКРАЇНСЬКОГО СУСПІЛЬСТВА

Вступ. Попри поширене вживання, поняття модернізації не є чітко визначеним. Конкретизація його змісту залежить від світооціків позиції дослідника.

Проблематика. Внаслідок запровадження неоліберальних принципів господарювання відбулось не вдосконалення суспільства й зростання добробуту населення, а перетворення України в сировинний придаток глобального капіталізму і найбіднішу країну Європи.
Мета. Дослідити суспільну думку щодо модернізації українського суспільства і з'ясувати перспективи вітчизняної науки та інноваційного розвитку України.

Матеріали й методи. Аналіз статистичної інформації і наукових публікацій з проблем модернізації, даних соціологічного моніторингу соціальних змін в українському суспільстві і двох експертних опитувань (науковців НАН України і фахівців з питань інноваційного розвитку).

Результати. Доведено, що проведена трансформація українського суспільства за своєю суттю є не модернізацією, а неоліберальним експериментом під модерністським прикриттям, що відкинув Україну з когорти найбільш промислово і науково розвинених країн на периферію сучасного світу, призвів до зубожіння і тотальної зневіри більшості громадян. Показано, що у межах існуючої неоліберальної моделі й укорінення олігархічної влади здійснити модернізацію України і перейти до інноваційного розвитку неможливо. Вітчизняна наука внаслідок фінансового геноциду й відсутності державної підтримки позбавлена можливості ефективно виконувати свої суспільні функції, зокрема бути одним із вирішальних агентів модернізації суспільства в інтересах усіх громадян.

Висновки. За теорією модернізації як ідеолого-теоретичним конструктом сучасності стоять конкретні політичні й ідеологічні інтереси великого капіталу. Нав’язана Україні теорія і практика неоліберальної модернізації як основного засобу виходу на шлях успішного соціально-економічного розвитку не виправдала покладених на неї надій і призвела до хронічно-кризового стану суспільства. Це вимагає пошуку іншої, альтернативної моделі розвитку.

Ключові слова: модернізація суспільства, неоліберальна модернізація, українське суспільство, інноваційний розвиток, вітчизняна наука, суспільна думка, соціологічні опитування.