Formation of axiological system of information security of the state: Experience of Ukraine

by *Taras Yu. Tkachuk*[*], *Leontii G. Chystokletov*[**],
Dmytro M. Pavlov[***], *Valerii V. Shyshko*[****],
Leonid O. Ostapenko[*****]

Abstract

The relevance of the study is conditioned by the emergence of information risks and violations of information security, which relate, in particular, to the negative effects of certain information resources of a manipulative nature, intrusion into personal information space, cybercrime, and other violations of information human rights. This state of affairs negatively affects the well-being of society. In this regard, it is advisable to develop criteria for the negative impact on information security and their legislative consolidation, which so far have not been defined not only in legislation, but also at the level of scientific discourse. This issue has become relevant primarily due to vulnerability of the current national security system. The paper is aimed at the formation and consideration of the axiological system of information security of Ukraine. The paper describes the main national goals in the information sphere; national values in the information sphere were identified considering the current condition of state formation in Ukraine. The practical significance of the study is determined by the fact that the developed system of interrelation of national values, interests, goals and achievements can be applied in combating the vulnerability of the existing system of national security.

[*] Department of Protection of Information Protection with Restricted Access, Educational and Scientific Institute of Information Security, National Academy of the Security Service of Ukraine, 22 Maksymovych Str., 03022 Kyiv, Ukraine, e-mail: taras.tkachuk@nuos.pro

[**] Department of Administrative and Informational Law, Educational and Scientific Institute of Law and Psychology, Lviv Polytechnic National University, 12 Bandera Str., 79013 Lviv, Ukraine

[***] Institute of Management State Guard of Ukraine, Taras Shevchenko National University of Kyiv, 64/13 Volodymyrska Str., 01601 Kyiv, Ukraine

[****] Department of the Theory and History of State and Law, Constitutional and International Law, Lviv State University of Internal Affairs, 26 Horodotska Str., 79000 Lviv, Ukraine

[*****] Department of Civil Law and Procedure, Educational and Scientific Institute of Law and Psychology, Lviv Polytechnic National University, 12 Bandera Str., 79013 Lviv, Ukraine

Taras Yu. Tkachuk, Leontii G. Chystokletov, Dmytro M. Pavlov,
Valerii V. Shyshko, and Leonid O. Ostapenko

Introduction

Pluralism as a basic value of the information age means equal coexistence, diversity of views, ideals, ideologies, approaches to the sustainable development of society, etc. Its value lies in taking the variability of development paths, social progress, and social dynamics into consideration. Information, the concept of which was introduced into scientific discourse in the late 1920s by the American researcher R. Hartley as a quantitative indicator of "reports disseminated through technical communication channels" (Hartley, 1928), constitutes an unconditional value of the information world. However, the sacred meaning of the term "information" has not yet been disclosed. The theory of Claude Shannon (1948) is well-known and generally accepted. Considering modern technological progress and information oversaturation, it is described by a formal or even abstract interpretation of information relations. The basis of this statement lies in the hypothesis that Shannon's theory does not take the very value of information for the consumer into consideration. Proof of this is the fact that the researcher called his theory "mathematical theory of communication", according to which messages are certain code transmissions of the transmitter, and not the content of the message itself.

At present, humanity is actively implementing the concepts of "information ecology" and "information hygiene". This stage of information development of humankind produces the development of the phase of meaningful analysis of information, and not just the appropriate set of code values. It is safe to say that humanity has entered an era, the main feature of which is the value of information, which energetically enriches and enables the achievement of the goals. Everything else will be in the fashion of information noise and useless (empty) data. At present, the term "information" in both science and in common use can take on a variety of meanings. According to the apt statement of T. Stonier (1991), the information society has not yet reached a consensus on what information is. However, there is no doubt as to the interdisciplinary nature of this concept, which is used in almost all areas of modern natural and social, technical and humanities, theoretical and applied sciences.

Among the many approaches to understanding information in the context of its value for information security of the state, three leading approaches can be outlined. This is, first of all, the so-called anthropo-communicative approach, i.e. the interpretation of information in communication as a means

of general scientific awareness of interpersonal social connections and relations. The second, functional approach, defines information as a property of self-organising systems related to the ordering of interactions. Finally, the attributive approach considers information as an indicator of such a property of all material systems as the heterogeneity of the distribution of matter and energy. As is evident, with such approaches to the interpretation of information, the possibility of violations of information (cybernetic) security, that is, information risks, follows from the very concept of information (Adygezalova *et al.,* 2018).

Information security is one of the most important components in the formation of human well-being. Negative, manipulative information can do more harm than it might seem at first glance. It is capable of causing fear, aggression, distortion of the worldview, attitude towards a particular state. The consequences of such phenomena are difficult to foresee, but they definitely harm psychological, social, spiritual, material well-being. Information, which covers all spheres of society, creates conditions of information inequality, when distributed, respectively, socio-status, resource, and material factors. And such inequality largely determines the emergence of information risks, violations of information security. This applies, in particular, to the negative effects of certain information resources of a manipulative nature, intrusion into the personal information space, cybercrime, and other violations of information human rights (Khadzhyradieva *et al.,* 2019).

Thus, the information security of person, society, and the state in all its aspects is the most important world value of the information age. The above considerations regarding the information picture of the world, the use of interdisciplinary methodology as a basis for the study of information security problems loses its meaning without clarifying the "location" of a person in this "painting". Understanding the place of the individual in the global information space of modern society is associated with clarifying the essence of the critical thinking age of the information age, which is included in global information communications, in the philosophical and social meaning. The importance of such an understanding is difficult to overestimate, as it allows to identify new systemic relations that emerge in the information age in the duality "person – society", the corresponding new properties of both person and society.

The novelty of the study lies in the fact that an axiological system of interconnection of national values, interests, goals and achievements was developed, based on the list of criteria compiled by the author.

The paper is aimed at the formation and consideration of the axiological system of information security of Ukraine.

Axiological and systemic approaches in the study of information security of the state

Without the implementation of the above values as attributes of the information society and the information picture of the world, the formation of a new type of society, which is based on global information communications (interaction and exchange), is unattainable. The reflection of the axiological approach is precisely the above aspect of consideration, which is based on fundamental personal and social values. The leading idea underlying the axiological approach to the study of the information picture of the world seems rather evident. This is one of the most important steps in building sustainable well-being. However, in our opinion, its components need scientific understanding. This will be the content of the scheme of interdisciplinary analysis as a methodological framework for this study of information security of the state (Nurbasari *et al.,* 2019; Romanenko and Chaplay, 2016).

One of such components constitutes the awareness of the value of the multi-variable method in relation to the ways of development of the information society, as well as evaluative judgments in many systemic approaches to substantiate such an opinion. When forming an information picture of the world, value considerations necessarily cover a wide scope of phenomena and issues, the amplitude of value judgments on which can be very significant, up to the opposite. This applies, for example, to the assessment of the undeniable benefit or absolute harm of something, information security or information risks and threats, etc. Thus, the development of the information society is not only the materialisation of technological advances in the information sphere, but above all the progress of the very social structure of the human community, which seeks to fully meet its needs in this area. However, the development of the information society is even more conditioned by the evolution of person as a carrier of social values, the development of creative potential, personal ability to think critically, the growth of individualisation, personal and civil rights and freedoms, democratic foundations of public life, information culture (Rudenko, 2019; Vasylieva *et al.,* 2020).

From the socio-economic standpoint, the prerequisites for the progress of the information society are the free development of individual creative competition, when among socially oriented technologies the best and most effective ones are selected. Considering the primacy of free creativity, the

attributive prerequisites for improving the information society should also include social security, medicine, education, culture, that is, those industries that ensure the progressive and safe development of the individual, human life. Socio-political principles of information society development are, of course, permanent democratisation of the political system, the formation of civil society, tolerance and pluralism, the priority of human rights and freedoms (Bondarenko *et al.,* 2019; Yereskova *et al.,* 2020).

According to the system approach, authors will consider the information security of the state as a dynamic structure that combines national interests, values, goals, and achievements in the information sphere. National interests in the information sphere are largely determined by the presence of corresponding threats. In turn, the content of these threats is determined by the factors of harmful impact on the objects of national interests in the information sphere, which include: information; information infrastructure; legal status of the subject in the information sphere. National interests in the information sphere can be defined as the natural need of a person, society, and the state in such a condition of this sphere that ensures their stable existence, functioning, and sustainable development. With regard to the general content of national interests, authors agree with the statement of the American sociologist Charles Lerche that their intention is to ensure survival, functioning, progressive development and, to some extent, the leadership of the individual, society, and the state. Therefore, the entire set of issues related to the formation of the national security system – its main purpose, tasks, principles, and mechanisms of functioning – should be considered only in the context of the implementation and protection of national interests (Lerche and Said, 1979).

Some experts, upon conducting a classification of national interests, offer a certain hierarchy. Thus, American theorists R. Yarger and G. Barber (1997) define national interests in four categories (defence of the country; economic progress; harmonious development of society; ensuring productive participation of the country in the world division of labour) and three levels of priority (importance, significance): vital (non-compliance with which will immediately threaten the fundamental national interests); important (non-compliance with which may pose a serious threat to the most important national interests); peripheral (non-compliance with which can cause significant material and other damage without a direct threat to the most important national interests). Some researchers also argue that the formation of a national security strategy requires the construction of a hierarchy of priorities of national interests of the state, which, in their opinion, will allow to avoid inconsistencies between the declared objective and the means of its

materialisation (Goodby *et al*., 2003; Fedotov *et al.,* 2018; Zhilavskaya *et al.,* 2018).

The expediency of developing such a hierarchy, and its legislative consolidation in particular, is seen as rather doubtful, as the priorities of national interests in the information sphere are very variable over time, are conditioned by the operational situation and other factors. Furthermore, each case requires the development of appropriate tactics and the use of specific means of implementation. Thus, the definition of national interests in the information sphere is the most important task of domestic and foreign policy of the state, and therefore requires a systematic, comprehensive approach. American researchers C. Lerche and A. Said proposed a hierarchy of priorities of national interests, which is based on such a value as "good": individual citizens; society; states; social groups; government and officials (They Said: A Global Perspective …, 2020).

At the end of the 20th century, the well-known Ukrainian philosopher and security scientist B. Parkhonskyi (1993) noted that strategic national interests are formed in accordance with the long-term course of development chosen by society and the state. However, under the influence of changing historical conditions, they may be modified. As the scientist predicted, in the 21st century, the situation will change very dynamically, as economic and technological development will be increasingly determined by intellectual and spiritual factors, which can radically change the geopolitical situation. The researcher also predicted that the management of the determining economic, political, technological, and spiritual interests will largely pass from the owners of financial capital and natural resources to the most authoritative representatives of the intellectual and spiritual elite. Thus, the effectiveness of the implementation of national interests in the information sphere defined in the Doctrine of Information Security of Ukraine is largely determined by the legislative definition of national values, which requires further development of national (state) interests. National values and interests shape national goals (Figure 1). The content of the Doctrine of Information Security of Ukraine concerns only national interests in the information sphere. Thus, the definition of legislation requires primarily national values in the field of information, and all the aforementioned triad should become a clear guide to the formation of implementation and improvement of relevant national policy.
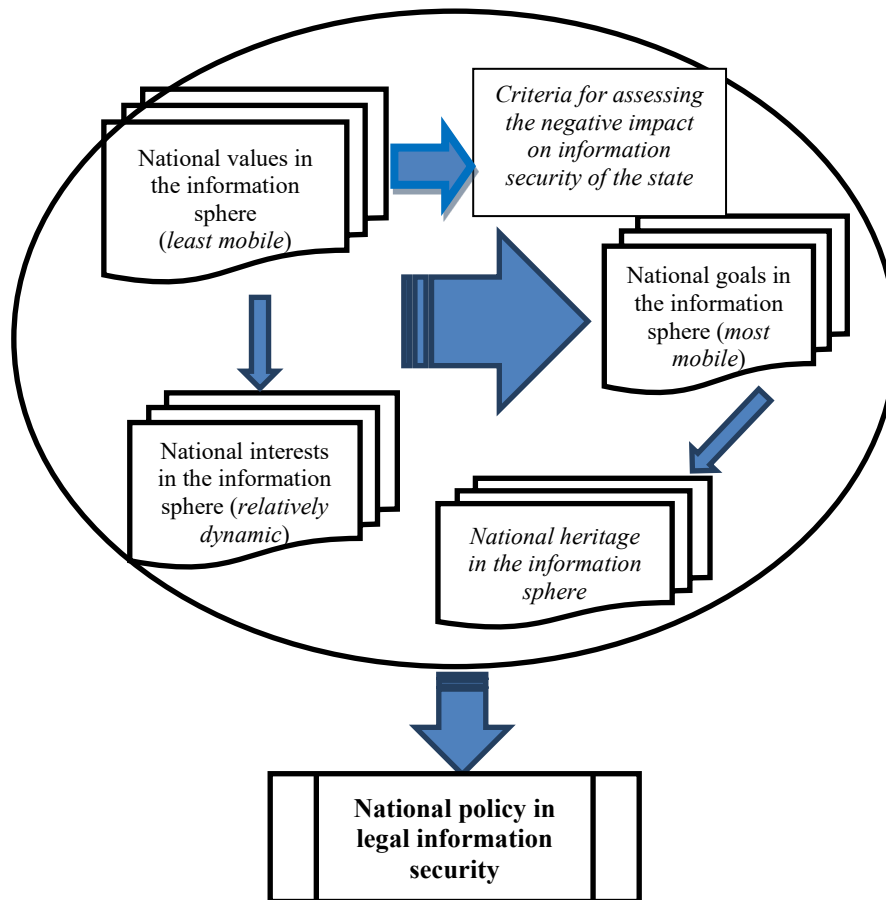
Figure 1 – Interrelations of national values, interests, goals, and achievements in the information sphere

Authors support the absolute correctness of Ye. Manuilov's opinion that the strategy of the state in the value sphere of society should lie in its transformation by means of reproduction of values through education and upbringing, maintenance of information security, and protection from external influences of cultural and information space of the country. Introduction of clear democratic value priorities and information stability and well-being will guarantee the competitiveness of the state in the global processes of the information age (Manuilov and Kalynovskyi, 2017).

Components of information security as a dynamic structure in scientific discourse

American military researchers Yarger Richard and George Barber (1997), upon considering this triad in the system of national security, identify national *values* as the least mobile and most stable element of the system. Values are formed in the course of the historical process, the development of material and spiritual culture of society, correspond to the geopolitical direction of the country. National interests constitute a relatively dynamic element that is formed on the basis of national values under the influence of long-term tendencies in social development. National goals are the most mobile element. B. Hogwood and L. Gunn (2004) view national values as beliefs, morals, standards, and more specific norms that influence the policy-making process at all levels (individual, group, organisational, and social) by directing and restraining the behaviour and actions of participants in the policy-making process, influencing their perception of the desired final state (final values) and acceptable means (instrumental values) to achieve it.

This statement should be complemented with an important warning of the famous sociologist M. Weber that each historical epoch has its own system of values, i.e. this category is fundamentally historical (Weber, 1994). It is necessary to agree with the opinion of S. Larin that national values constitute certain conceptual, ideological bases, consolidating factors, important life guidelines on the path towards effective social development (Larin, 2016). The three-level structure of the system of national values – individual, social, and state values – was proposed by domestic experts V. Gorbulin and A. Kachynskyi, who thoroughly investigated this issue (Horbulin and Kachynskyi, 2009). Researchers associate the development and even the future existence of the state and the nation as such with the existence and stability of a system of values that unite and consolidate society. Such basic values, according to scientists, include national security, spiritual heritage, prosperity, patriotism, and social justice, the system of international relations.

In general, agreeing with this position, authors believe that the proposed system should be complemented with an array of original, fundamental values that are professed and nurtured by the Ukrainian nation, namely conscientiousness, peace, tolerance, religiosity, freedom, diligence, family values, etc. V. Horbulin (1995) especially noted the importance of national values in the context of national security of Ukraine, the strategy of which, based on the international situation, is formed on the basis of opinions on national values. The armed aggression of the Russian Federation against Ukraine in such a harsh way confirmed the validity of the researcher's thesis.

National values in the information sphere include the system of spiritual and material values of a person, society, and the state, which are described by clear features – worldview, socio-economic, cultural, demographic, geographical, etc. (Dovhan and Tkachuk, 2018). This system constitutes the legal and philosophical-ethical framework for the further evolution of society and the state, contributes to the formation of the national goal facing the state in the information sphere. Thus, given the nature and, accordingly, the importance of national values in the information sphere, as the most specific segment of the system, they require special protection.

The national values in the information sphere, considering the current condition of state formation in Ukraine, should include the following:

1. Material well-being of the population, in particular based on ICT development.

2. Information security of a person, society, state.

3. Spirituality. Accessibility of religion, prevention of religious fanaticism and extremism, inadmissibility of the use of religion as a psychological factor of terrorism, development of traditional Ukrainian religious tendencies.

4. Language as the main identifier of the nation, as a means of transmitting information and knowledge, as the memory of generations.

5. Culture of information relations.

6. Freedom of information. Protection of information human rights, access to information, neutralisation of negative information influences.

The socio-economic component of information security is fundamental in the structure of national values in the information sphere. Therefore, there is every reason to believe that such a basic category of economic policy of the state as material well-being should also become a component of information security of the state, and even more so the national security of Ukraine. Almost 30 years ago, B. Parakhonskyi (1993) noted that the protection of national interests in the modern world can no longer rely solely on the strategy of counterforce. Much more productive in terms of fulfilment of national interests is economic, intellectual, cultural, etc. expansion. Contemporary history of Ukraine, resulting in the annexation of Crimea by Russia and the occupation of part of Donbass Region confirmed the validity of this thesis.

The question of the expediency of developing criteria for negative impact on information security and their legislative consolidation was raised by A. Marushchak (2008). But so far, such criteria have not been defined not only legislatively, but also at the level of scientific discourse, although at present this issue, in authors' opinion, has become relevant primarily due to the vulnerability of the existing national security system. At the same time, it is

advisable to clarify this concept with the help of a value-based approach, i.e. to consider the criteria for assessing the negative impact on information security of the state. In this regard, authors join the apt statement of former US Secretary of Defence (2015-2017) A. Carter, who stressed: "Talking about security is the best thing you can do, because security is like air. If there is air, you don't care, but as soon as you get deprived of it, it becomes the only thing you can think of" (Security of Ukraine …, 2017).

At the level of international law, information security criteria have been developed, which can serve as appropriate guidelines for the development of criteria for assessing the negative impact on information security. The so-called "Orange Book" of the US Department of Defense (Trusted Computer System Evaluation Criteria, TCSEC) initially defined reliability as such a criterion, i.e. a certain degree of confidence in the information system (United States Department of Defense, 1985). In 1986, European countries jointly developed common "European criteria for information technology security" (Information Technology Security …, 1991), which, in particular, defines the objectives of information security. To determine the effectiveness and reliability of remedies, the concept of "adequacy of remedies" was first introduced in the European criteria (Nesteriak, 2013). This suggests that the criterion for the effectiveness of information security should be a high level of security at a minimum of the corresponding costs. Somewhat later, the "Common Criteria for Information Technology Security" were developed, which were declared an integral part of information technology (Common Criteria for Information …, 2019), according to which such well-known basic features of information security as confidentiality, integrity, and availability were identified – the so-called CIA triad.

The above scheme of interrelation of national values, interests, goals and achievements in the information sphere proves that national values constitute the main criterion for assessing the negative impact on information security and well-being of the state. Their non-compliance, violation, distortion, or neglect can significantly damage the state of protection of a person, society, state, nation in the information sphere. Thus, the criteria for assessing the negative impact on information security of the state constitutes the methodological framework that determines the state of national values in the information sphere, in which its functioning and development are not exacerbated or denied under the influence of external and internal factors. This methodological framework allows to identify the weakest points of the information security system of the state, to develop directions and measures for its improvement, concentration of relevant forces and means.

The main national goals in the information sphere are as follows:

1.   Spiritual security – the elimination and prevention of destructive influences on the worldview of people and public consciousness, carried out by promoting false values, instilling false priorities, tasks and goals of individuals and society at large.

2.   Military security – the introduction of information technology in the military sphere, as well as its protection.

3.   Economic security – the increase in the pace of development and implementation of the latest competitive information and communication technologies in the socio-economic sphere.

4.   Social security – the achievement of the appropriate level of information culture of society.

5.   Environmental security – the formation of the national information system of constant ecological monitoring.

6.   Promotion of the integration of the national information infrastructure into the corresponding global infrastructure.

7.   Improvement and strengthening of human rights protection in the information sphere.

8.   Organisation of urgent measures to create a high reputation of Ukraine in the context of information globalisation, as well as to form a positive image.

Due to the effective work of information technology in these areas, the best sustainable development of these areas is possible. The draft law "On Information Security of Ukraine" states: the most important, valuable part of information resources, especially the final results of intellectual, creative activity, the best samples of domestic (national) information product without deprivation of ownership can be declared national treasure of Ukraine and regardless of forms of property be protected by the state as monuments of history and culture (Draft Law No. 5732 …, 2004). It is not entirely clear why the legislators limited themselves to historical and cultural monuments, as these treasures have a much wider scope of values. Considering the extremely wide range of values covered by information relations, authors can offer a more accurate, in their opinion, definition of national heritage in the information field as a set of unique information products that have exceptional socio-economic, military, cultural, historical, and other significance for implementation of national goals in the information sphere.

Conclusions

The system of interrelation of national values, interests, goals, and achievements in the information sphere, which was developed by authors,

assumes that national goals determine national treasures in the information sphere. First and foremost, national heritage concerns the cultural and artistic sphere. However, considering the powerful progress of information technology, its significant impact on the entire set of public relations and all spheres of society – economy, defence, healthcare, etc. – a set of achievements of the Ukrainian information industry undoubtedly constitutes a national treasure. It should also be noted that these treasures will serve as a certain performance indicator as to the implementation of national goals in the information sphere.

Of course, it is impossible to compile an exhaustive permanent list of national achievements in the field of information, as it can be supplemented with the latest achievements or certain exceptions almost every day. The main prerequisite for inclusion in such a list is the uniqueness of the information product by its nature and its exceptional, strategic importance for the development of various spheres of life, including information security of a person, society, and state. The above is only a fraction of what can be attributed to the national treasures in the field of information. The progress of this industry, its role in ensuring information security, the contribution to other spheres of human life, society, and the state will largely depend on a balanced national information policy and effective legal mechanisms for its implementation.

The national goals also include the sustainable well-being of the state, which largely depends on the information security of society. Well-being consists of the ability to have various kinds of benefits, such as financial, cultural, material, psychological. Information security affects all forms of wealth that a person possesses. Therefore, we can conclude that sustainable development in the information sphere is the most important component of the state's well-being.

Promising directions for the study on this topic are the following: study of the weakest points of the information security system of the state, the development of directions and measures for its improvement, the sustainable development, the concentration of relevant forces and means.

References

Adygezalova G. E., Allalyev R. M., Kiseleva A. V. and Grigorieva N. A. (2018), "Copyright violation and distribution of prohibited content on the internet: Analysis of legal arrangements in the legislation of the Russian Federation", *Journal of Advanced Research in Law and Economics,* 9(1): 6-14.

Bondarenko S., Liliya B., Oksana K. and Inna G. (2019), "Modelling instruments in risk management", *International Journal of Civil Engineering and Technology,*

10(1): 1561-1568.

Common Criteria for Information Technology Security Evaluation. (2019). Available from: https://www.commoncriteriaportal.org/

Dovhan O. D. and Tkachuk T. Yu. (2018), "Legal support of information security of the state as a sub-branch of information law: Theoretical discourse", *Information and Law,* 2(25): 73-85.

Draft Law No. 5732 "On Information Security of Ukraine". (2004). Available from: http://w1.c1.rada.gov.ua/pls/zweb2/ webproc4_2?id=&pf3516=5732&skl=5

Fedotov A. M., Murzakhmetov, A. N. and Dyusembaev, A. E. (2018), "Expansion of ideas and processes in social and biological communities", *Eurasian Journal of Mathematical and Computer Applications*, 6(4): 17-28.

Goodby J., Buwalda P. and Trenin D. (2003), *A strategy for stable peace: Toward a euroatlantic security community,* Mezhdunarodnyye Otnosheniya, Moscow.

Hartley R. V. L. (1928), "Transmission of information", *Bell System Technical Journal*, 7: 335-363.

Hogwood B. and Gunn L. A. (2004), *Policy analysis for the real world*, Vydavnytstvo Solomii Pavlychko "Osnovy", Kyiv.

Horbulin V. P. (1995), "In defence of national interests", *Politics and Time,* 2: 3-8.

Horbulin V. P. and Kachynskyi A. B. (2009), *Principles of national security of Ukraine,* Intertekhnolohiia, Kyiv.

Information Technology Security Evaluation Criteria (ITSEC): Preliminary Harmonised Criteria. Commission of the European Communities. (1991). Available   from: https://www.bsi.bund.de/SharedDocs/Downloads/DE/BSI/Zertifizierung/ITSich erheitskriterien/itsec-en_pdf.pdf?__blob=publicationFile&v=1

Khadzhyradieva S., Hrechko T. and Smalskys V. (2019), "Institutionalisation of behavioural insights in public policy", *Public Policy and Administration,* 18(3): 95-113.

Larin S. V. (2016), "The essence and meaning of "national values" in the context of current research", *Bulletin of the NAPA under the President of Ukraine,* 2: 44-49.

Lerche Ch. and Said A. (1979), *Concepts of international politics in global perspective,* Prentice-Hall, New Jersey.

Manuilov E. M. and Kalynovskyi Yu. Yu. (2017), "Axiological dimension of Ukrainian information security", *The Bulletin of Yaroslav Mudryi National Law University,* 3(34): 13-30.

Marushchak A. (2008), *Information security: Legal analysis*. Available from: https://detector.media/infospace/article/38472/2008-05-20-informatsiina-bezpeka-pravovii-analiz/

Nesteriak Yu. V. (2013), "International criteria of information security of the state: Theoretical and methodological analysis", *Bulletin of the National Academy of Public Administration under the President of Ukraine*, 3: 40-45.

Nurbasari A., Lukiyanova M. N., Nguyen P. T., Shichiyakh R. A. and Shankar K. (2019), "Role of social media in the successful implementation of business user data management", *Opcion,* 35(88): 2899-2921.

Parakhonskyi B. O. (1993), *National interests of Ukraine (spiritual and intellectual aspect),* NISD, Kyiv.

Romanenko Y. O. and Chaplay I. V. (2016), "Marketing communication system within public administration mechanisms", *Actual Problems of Economics,* 178(4): 69-78.

Rudenko M. N. (2019), "Economic security of the region (Perm krai)", *Astra Salvensis,* 7: 385-410.

Security of Ukraine: How American Politicians See It. (2017). Available from: https://mind.ua/publications/20179511-bezpeka-ukrayini-yakoyu-yiyi-bachat-amerikanski-politichni-diyachi

Shannon C. E. (1948), "A mathematical theory of communication", *Bell System Technical Journal*, 27: 379-423.

Stonier T. (1991), "Towards a new theory of information", *Journal of Information Science,* 17: 257-263.

They Said: A Global Perspective on Access to Assistive Technology. (2020). Available from: https://scholarworks.wmich.edu/ojot/?utm_source=scholarworks.wmich.edu%2Fojot%2Fvol6%2Fiss3%2F2&utm_medium=PDF&utm_campaign=PDFCover Pages

United States Department of Defense. (1985), The Trusted Computer System Evaluation Criteria, CSC-STD-001-83. Available from: https://csrc.nist.gov/csrc/media/publications/conference-paper/1998/10/08/proceedings-of-the-21st-nissc-1998/documents/early-cs-papers/dod85.pdf

Vasylieva O. I., Slukhai S. V., Khadzhyradieva S. K., Klochko A. A. and Pashkova A. G. (2020), "Ukrainian civil service: implementation of the public administration reform strategy in Ukraine", *Journal of Advanced Research in Law and Economics,* 11(4): 1439-1445.

Weber M. (1994), *Selected works. Image of society,* Yurist Publ, Moscow.

Yarger R. H. and Barber G. F. (1997), *The U.S. army war college methodology for determining interests and levels of intensity,* Army War College, Carlisle.

Yereskova T. V., Mazuryk O. V., Aleksandrova O. S., Tymofieieva H. V. and Zavadskyi V. N. (2020), "Uncertainty as a regular feature of modern Ukrainian society", *Teorija in Praksa,* 57(3): 928-946.

Zhilavskaya I. V., Ivanova T. V., Gayazov A. S. and Vladimirova T. N. (2018), "Media education and democracy", *Espacios,* 39(20): 1-11.