



Information security and information hygiene on internet media

Seguridad e higiene de la información en medios de internet

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(recibido/received: 15-October-2020; aceptado/accepted: 25-November-2020)

ABSTRACT

The relevance of the problem of ensuring information security at the level of “information hygiene” is due to the risks of the negative potential of Internet media. The purpose of the article is to analyse the state of the hygiene segment of the information security of Ukrainian Internet media under global threats. The leading research method for this problem is content analysis, which allows to determine the qualitative features of modern media information based on psycholinguistic markers of information. It has been established that the largest part in the information space of Internet media is fake information, and therefore special attention is paid to its analysis. The article highlights the main markers by which you can determine the fake. The need for critical familiarization with the information is noted. The results of the study expand the understanding of the concepts of information security and information hygiene.

Keywords: Security; Information hygiene; Linguistic ecology; Internet media.

RESUMEN

La relevancia del problema de garantizar la seguridad de la información a nivel de “higiene de la información” se debe a los riesgos del potencial negativo de los medios de Internet. El propósito del artículo es analizar el estado del segmento de higiene de la seguridad de la información de los medios de Internet ucranianos bajo amenazas globales. El método de investigación líder para este problema es el análisis de contenido, que permite determinar las características cualitativas de la información de los medios modernos a partir de marcadores psicolingüísticos de información. Se ha establecido que la mayor parte del espacio de información de los medios de Internet es información falsa, por lo que se presta especial atención a su análisis. El artículo destaca los principales marcadores mediante los cuales puede determinar la falsificación. Se señala la necesidad de una familiarización crítica con la información. Los resultados del estudio amplían la comprensión de los conceptos de seguridad e higiene de la información.

Palabras claves: Seguridad; Higiene de la información; Ecología lingüística; Medios de Internet.

1. INTRODUCTION

The urgency of the problem of ensuring information security at the level of “information hygiene” is due to the risks of the negative potential of Internet media, increasing fake content and accelerating the processes of disseminating and using information with the goal of axiological ideological reorientation, reformatting of consciousness and, as a result, creating socio-economic or political destabilization in conditions of pandemics. The aim of the article is to analyse the state of the hygiene segment of the information security of Ukrainian Internet media under global threats. The modern world is increasingly faced with all sorts of risks of a globalization scale.

At the beginning of 2020, the threat of COVID-19 determined the transformation of human life and radically changed the vector of the global information space. According to the results of the monitoring of the south-eastern regions of Ukraine by the Institute of Mass Media in May 2020, coronavirus remains the key topic of online media. The average indicator is 27% of the total subject matter of materials and is determined depending on the regions: from 12.5% in the Kherson region to 47.5% in the Kharkov region. Such a high informational and thematic coefficient of representation of a wide range of pandemic issues has actualized the task of “adhering to information hygiene for the prevention of info-epidemic, panic and mass psychoses” (Eryomin, 2020).

Information hygiene as a science has appeared relatively recently and is in the stage of theoretical and practical development. Promotion of the term “information hygiene” is associated with the name A.L. Eryomin (2020). In his opinion, this concept should mean “a section of medical science that studies the laws of the influence of information on the mental, physical and social well-being of a person, his working capacity, life expectancy, public health of society, developing standards and measures to improve the environmental information environment and optimize intellectual activity”. However, information hygiene is not confined to medical science alone, as evidenced by the works of R. Dukas (1998), G. Andreiko (2015), O.S. Tverdokhlib (2018) and other researchers. The correlation of information hygiene with the general theory of ecology, information space and its safety, with their linguistic expression and legal field allows us to speak about the subject matter of this science, which requires “the application of the most modern methods of studying complex objects, from system analysis to the latest achievements of synergetics” (Andreiko, 2015).

2. MATERIALS AND METHODS

Information security research methodology is a fairly new scientific direction, which is formed at the intersection of various scientific disciplines and areas of methodological analysis. In this regard, an integrative complex methodology is proposed as a fundamental research methodology, which provides for “the synthesis of various ideas about information interaction and the integration of this concept into information security theory” (Dementyev, 2015). Its humanitarian principles are based on information adequacy and counteraction to “aggressive informational influence” (Decree of the President of Ukraine..., 2017).

The article used general scientific research methods. The generalized understanding of information security predetermined the need to analyze the terminological apparatus, in particular, the use of the concepts “information space” and “information security”, “information hygiene”. To study the problem of information hygiene, content analysis was used – a meaningful analysis of publications in the Internet media, which makes it possible to find out the qualitative features of modern Internet communication, the nature of information, the fake nature of publications, their ecotoxicity and interpretive potential.

The significance of the informational Internet space in our life was determined by the object of our research – Ukrainian informational content of Internet media, representing the topic of a pandemic. The source for the analysis was the news of the web portal Ukr.net, social networks Facebook, Twitter, YouTube.

In the stream of information about COVID-19, the most common fakes about the pandemic were highlighted and classified, their characteristic features were noted. Content analysis made it possible to determine the verbal markers of information aggressiveness, its emotional load and the associated threats. The research was carried out at a conceptual, paradigmatic level.

3. RESULTS AND DISCUSSION

3.1. Active models of Internet communication

Coronavirus news reporting has several basic distribution channels. These are traditional media, contacts, Internet media and interpersonal Internet communication. However, traditional channels of information are much less in demand than the Internet. For example, a survey of residents of Odesa from May 29 to June 2, 2020 by the sociological group “Rating” shows that the majority of city residents receive information via the Internet (56%) and only 20% use newspapers and radio or extract it from communication with relatives and friends, moreover, these are older people.

Dynamically developing Internet communication contributes to the creation of new dialogue platforms, platforms and parameters of interpersonal interaction. A special social space determines the functioning of new genres of communication, the formation of a fundamentally different model of communicative communication. Almost every person who has access to the Internet, enters at least one or two social networks, communicates through them with his friends and makes many virtual “friends” whom he never saw, but from whom he receives a variety of information. Moreover, the reliability of such information is in great doubt. Thus, social networks act both as a local communication network of acquaintances and as a global dynamic way of communication, through which news spreads faster, is directed to a specific recipient, and provides an opportunity to instantly respond to information on the basis of “like – not like” with just one Like buttons.

From passive listeners and observers, users have turned into active participants, able to independently generate content through blogs, wiki, social networks, as well as create content and services collectively. A characteristic feature of such a social interaction is not its financial motivation, but “the production of an intangible, information product” (Masuda, 1981). Therefore, it is associated with the movement and mutual conversion of other types of capital (social, cultural, financial, and symbolic). Non-commercial social (civic) activity of people indicates the emergence of a new type of social interaction – collective, with very great potential. Users not only receive the necessary information from other participants in social networks, but also have specific social benefits from virtual contacts (participation, self-identification, social identification, social inclusion, etc.).

Social networks are characterized by a potentially infinite number of independent centres of accumulation and dissemination of information, determine its globality, while creating its uncontrollability. The network quickly spreads both interesting, useful, and clearly dangerous, especially for young people, information that affects their worldview and social behavior. An example of this is the formation of a conflictogenic perception of the requirements of self-isolation to preserve human life and health.

The creation of information is focused not only on the consciousness of information, but also on the methods of its delivery to the consumer of information. Analysis of information consumption models allows us to talk about the development prospects of two types of Internet communication: through Privatechannel – the “ideal” personal user information channel, collected on the basis of social networks, subscriptions, friends' recommendations, based on personal experience, history of actions and reactions (the channel editor is the user himself), and through the Widechannel – the millionth/billionth megachannel of information

dissemination, when huge masses consume the same stream, refusing personal influence on what they receive.

Despite the fact that the information space today is a key factor in the development of mankind, a component of its security, and is increasingly becoming the object of study of many modern sciences: philosophy, law, political science, psychology, sociology, linguistics, information technology, medicine and others, it does not received a legislative definition, which allows scientists to arbitrarily interpret the essence of the concept and define it as an umbrella term, which contains a lot of unifying features: from the information process to the characteristic features or characteristics of information. In this regard, the concept of information space is considered, on the one hand, as a “coordinated, multi-level structure that accumulates the results of communication activities of a society using specific components of an information and communication system” (Shevchenko, 2018), and on the other hand, as a way of global interpersonal communication with the rapid development of communication tools and processes. The information itself has actual and potential value, depends on the form and method of filing by the informant and is regulated by law and the state information policy, the main direction of which is “ensuring the information security of Ukraine” (Law of Ukraine..., 1992).

Considering information security as “a state of protection of the vital interests of a person, society and the state, in which harm is prevented through: incompleteness, timeliness and inaccuracy of information that is used; negative informational impact; negative consequences of the use of information technology; unauthorized distribution, use and violation of the integrity, confidentiality and accessibility of information” (Law of Ukraine..., 2007), the state is building a multicomponent paradigm of information security. The analysis of legislative acts and scientific publications on the topic of the article allows us to say that two fundamental directions in the study of information security are technical and humanitarian in the studies.

The first is related to issues of technical processes and organizational and legal capabilities that ensure the safety of personal, institutional and state information. The second is focused mainly on the development of problems of improving the mechanisms of regulation and protection of the individual and society as a whole from the negative impact of the information itself, both from the improvement of legal support, and by identifying its axiological meaning, relevance, energy impact, psychoemotional influence, verbal and non-verbal confidence markers. In this regard, the solution of two problems becomes relevant: firstly, the protection of personal data on the network from unauthorized access and dissemination; secondly, protection against inadequate information exposure that could harm physical and mental health, as well as the user’s reputation. The second task is related to the hygiene segment in the information space and is of conceptual importance for information security.

3.2. Overview of information security concepts

In the process of the study, the conceptual component of information security, information hygiene and related concepts is analyzed. The terminological dynamics and temporary qualitative changes are noted. Two decades ago, the information array was limited to the use of concepts: “information hygiene”, “information stress”, “information ecology”, “information security”, “information conflictology” (Andreiko, 2015). The modern information space of only one Ukrainian news web portal Ukr.net for the period from February to June 2020 recorded a significant array of new concepts related to the representation of social transformations. Based on their analysis, we distinguish two key concepts that form a collective consciousness in a pandemic: the concept of “fake” and the concept of “aggression”.

The most widely represented is the concept of “fake” with such a verbal embodiment: post-truth, information fake, infodemia, information throw, false information field, information overload, and the like. At the core of the essential characteristics of the modern worldview, we observe a fundamental principle,

which is the rejection of the truth. She was replaced by simulacra: “post-truth” and “post-truth”. Back in the 1960s the positivist consciousness of Europeans was dominated by a consciousness called by culturologists “really”, which, according to V.P. Rudnev (1997), “dotted all I, affirmed the ultimate truth”, and the speaker showed confidence “in his words and that that reality can be described by true statements, rejecting false ones”. At the end of XX – beginning of XXI centuries another type of postmodern consciousness is being formed – “as if”, which no longer guarantees truth, whose speech strategy is aimed at “uncertainty in uncertainty” (Rudnev, 1997).

The transformation of public consciousness, which generates total subjectivity and “universal confusion” (Rudnev, 1997), is reflected in speech communication, increasing the demand for markers for determining inaccurate information, and how to present it. To classify false information, scientists propose the term “information disorder”, which summarizes all fake phenomena in the media and systematizes specific concepts into groups: mis-information – false information with unintentional or random distortions; dis-information – true fakes, those that are the result of deliberate manipulations of facts; mal-information – information based on real facts, the publication of which causes reputation damage (Belovodskaya and Duskayeva, 2018). Among modern forms, a significant place is taken by a fake for manipulations, which can integrate mis-information + dis-information, mis-information + mal-information, dis-information + mal-information.

Fake news regarding the coronavirus COVID-19 belongs to the information disorder. They increased daily, and their content was filled with malicious content against people and the reputation of countries. On the scale of fake stuffing statistics say. Fact checkers #CoronaVirusFacts Alliance (formed by the coalition of fact checkers of the International Organization IFCN) began their work in January 2020 and on average produced 138 materials daily on refuting fakes. The result of the work is almost 7 thousand refutations in more than 70 countries of the world (as of June 11, 2020) (Skubenko, 2020). According to IFCN research, at the beginning of the pandemic, untrue news about coronavirus migrated from country to country and had five waves. The information was similar, with the exception of certain regional differences (Skubenko, 2020).

1. Origin. These fakes talked about the origin of COVID-19: it was created by Bill Gates; it is an American biological weapon; the virus was artificially created in a laboratory in Wuhan and the like. A significant number of video monologues with such information were distributed through instant messengers.

2. People “fall in the streets”. The next wave went through the distribution of videos showing the dead or those who were dying: people who were falling right on the streets. Mostly these were old videos of people intoxicated or shot heart attacks. This information led to a state of mass stress.

3. Fake drugs. The third wave filled the information space with fake drugs, non-existent vaccines and medical items. This wave, in particular, was heated by those who wanted to cash in on a panic. On this occasion, European Commission President Ursula von der Leyen said: “I am worried because some of the recipes can actually harm people. For example, the false claim that drinking bleach cures a virus. If you drink chlorine – you can die. It is also worrying that the people who spread these fakes use people’s intimidation to simply cash in, for example, by selling a very expensive soap that supposedly kills the coronavirus” (Drinking bleach and soap..., 2020).

4. The language of hate. The fourth wave focused on allegations that a particular race is to blame, or vice versa, that representatives of individual races or religions are not sick. The corroboration of this thesis is, first of all, the names of the coronavirus itself used in the news: Trump repeatedly called COVID-19 the “Chinese virus” or the “Wuhan virus”, which outraged many groups of civil liberties advocates who claim that such a language can cause outbreaks racism and violence against Asian Americans. It was also reported

that coronavirus is a disease of the rich who spend their days off in Europe, as a result of which the virus was called Courchevel (at the place of infection).

5. Quarantine and testing. After the introduction of quarantine, the fake quarantine, hospitals, and testing dangers spread throughout the fifth wave. As a reaction to these fakes, information was followed about the possibility of checking its adequacy on the official website of the Ministry of Health of Ukraine.

In Ukraine, according to our monitoring, the following group of fakes was still active: quarantine and education. The fakes of this group concerned the closure of quarantine schools and kindergartens, and created disorganization. Social networks disseminated information about the opening of mini-groups for young children during the quarantine period and false messages about the postponement of the educational process in July. The refutation of this group of fakes was carried out through the Ministry of Education and Science of Ukraine and departments of the ministry. The denial of fakes makes it possible to avoid various risks. Understanding that the perception of fake information can lead to deviant behavior, we consider it important not only to “eliminate the consequences”, but to prevent an emergency. In accordance with the security policy, work is needed “for the future”, an assessment of possible weaknesses and a dialogue that forms critical thinking. Indeed, the ecotoxicity of information in which people begin to believe, gradually changing the worldview and actions of people. Awareness of unreliability is the shortest path to reliable knowledge.

Fake discourse is based on psycholinguistic technologies, therefore, a critical attitude to information based on knowledge allows you to identify signs of a fake article. Within the framework of this method, it is assumed that, based on verbal markers of mass communication, the researcher can draw conclusions about the intentions of the communicator and the possible effects of the message. That is, the meaning of the message can be relatively easily restored from it (Pashinyan, 2012). This will allow us to differentiate between truth and post-truth. In the process of analysis, we found that fake pandemics are characteristic of:

- global themes;
- super dynamic transmission;
- bright headline;
- the appeal of the text is not to knowledge, but to emotions: the text is characterized by great “emotional charge”, phrases about the threat to life and health, about the numerous victims of coronavirus and the like are used;
- pronounced bias of the text, convincing style;
- truthful data may be placed at the beginning of the text, but then dubious or false information;
- abstract phrases such as: “American scientists have established”, “as statistics show”, “I work as a nurse in Italy”, “Chinese scientists have identified”, and the like are used;
- hyperbolization in the presentation of information is characteristic;
- marked mosaic style;
- the absence of a direct link to the source of information, or the source is indicated as anonymous, or an inaccessible resource is indicated as the source;
- calls are used to distribute the message to a wide audience, while at the end of the publication an automatic mail button is inserted.

The concept of fake refers primarily to the field of dissemination of false information by media channels. This is evidenced by the use of words: fake news, fake media, fake journalism, fake accounts and others. In a pandemic, the global and over-dynamic fake production has become a security threat. Therefore, for information hygiene and security, the UN, together with media giants around the world, including Al Jazeera, Deutsche Welle and Euronews and with partners in social networks Facebook, Twitter, YouTube and TikTok launched a content campaign – “Verified!”, The essence which consists in marking the accuracy

of information on television channels, on the Internet and using SMS messages. The purpose of the action is to actively suppress the spread of misinformation, so that all people, when it comes to both their personal health and the health of all mankind, use only reliable information, and not myths and deception.

The second position in the representation of information on coronavirus is occupied by the concept of “aggression”. When representing information related to coronavirus, the following concepts are used: information aggression, information war, information attack, information weapon, information bomb, information sabotage, information de-occupation, information revolution, information explosion, information flood, information viruses, information pressure, information attack. The new phenomenon of COVID-19 in Internet media is also described using metaphorical uses in which the same “war” is explicitly or implicitly updated: the coronavirus attacks, the war on the coronavirus, the coronavirus continues to attack, victims of the coronavirus, the enemy and others (Jenkins, 2006).

The use of these verbal markers of coronavirus in texts in the context of a warning about the global danger of a viral threat leads to an alarmism: “globalization will not survive pandemics”, “the world will become different after a pandemic”. In the projection on verbal aggressiveness and evaluative orientation, these attitudes do not form positive moods, but focus on conflictogenicity, and as a result they can have negative consequences for the psychoemotional health of a person. Therefore, the information security policy should include a strategy for the correct use of verbal means of information, increasing information and language responsibility for the inadequate transmission of information.

4. CONCLUSIONS

During the research, the concepts of information space, information security, information hygiene and related concepts are analyzed. The information space is considered as a multi-level system and a key factor in the development of mankind. Information has actual and potential value, depends on the form and method of filing by the informant and is regulated by law and state information policy, the main direction of which is to ensure information security. The state is building a multicomponent paradigm of information security. In this paradigm, the issue of protection against information impact that can harm physical and mental health, as well as the user's reputation in a period of global threats, is particularly relevant. The issue of information protection without analysis of such components as social conditionality, inaccuracy, negative impact cannot pretend to be an effective solution.

The threat of COVID-19 determined the transformation of human life and the information space. In the context of the new reality during the pandemic, while being isolated and having more free time, users of the Internet space mainly focused on communication with other users, which provided multiple entry points and interpretations of knowledge. From passive listeners and observers, users have turned into active participants, capable of independently generating content. Self-individual got the opportunity of self-realization in the collective. This is evidenced by the priority use of social platforms that transform the culture of communication into a culture of complicity.

The new conditions of human life, self-isolation not only accelerated the dynamics of virtual socialization of a person in the “information – communication environment – people” system, but also aggravated a number of issues related to information hygiene and the mechanisms of its influence on a person. The analysis of the verbal means of representing the pandemic showed the following basic concepts: “fake”, “aggressiveness” and revealed the emotional load of information in a pandemic. Fake information is of particular importance. It contains the potential threat of a change in worldview and an incentive for people's actions. Therefore, fake detection is relevant for humans. The identification of essential markers and the main fake groups of the pandemic period will help in the formation of critical thinking. As you can see, media text is a popular conductor of socially oriented values of social life. However, due to the increase in the information flow, we fix a new form of pollution – information pollution, as a distortion of actual

information, a violation of the information ecology. Our results indicate, that information is a highly valuable asset, and therefore questions concerning information security become increasingly important.

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