

METHODOLOGY OF CONTENT-ANALYTICAL STUDIES UNDER THE HYBRID WARFARE CONDITIONS

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INTRODUCTION

The problem statement. Informational special operations is not a new concept in the world history of confrontations. Many monarchs and warlords used manipulative technologies and informational influences as the effective tools of warfare. The facts of the implementation of informational influence are found in the history of all time. Napoleon repeatedly confused the enemy with his false news and “four hostile newspapers that are more to be feared than a thousand bayonets”, the Mongol khans used to spread rumors of the cruelty of their troops, and the Chinese general Sun Tzu, in the VI cent. BC, in his treatise “The Art of War”, emphasized the importance of disinforming the enemy, the psychological treatment of his own people and the troops in order to achieve unity in the society before and during the war, to implement informational diversions for dismantling the military alliances of the hostile state with other states, etc.¹

Despite the age-old history of propaganda and studies on this issue by leading scholars, it is rather difficult to detect propagandistic special operations and specific media and materials, since the ideological nature of such issues usually allows us to blame denominators of propaganda for subjectivity and their own interest in obtaining certain conclusions.

To solve this problem during the World War II in the United States, a researcher of propaganda H. Lasswell proposed a method of content analysis. The developed algorithms of media analysis were called “Lasswell tests”, and their results became the decisive arguments for the Supreme Court of the United States in resolving to close publications due to the presence of German propaganda in them².

At the present stage of technology development, informational special operations are being actively used during the hybrid war. And not only by an aggressor country, but also directly by insider agents who conduct informational campaigns in the information field of Ukraine, carrying out a policy of destabilization. It aims at the creation of contradictions within the country, a sense of instability, a split between different social strata of the population and, ultimately, at the intensification of the crisis in the areas of security, politics, and economics.

¹ Магда Є.В. Гібридна війна: вижити і перемогти. Харків : Vivat, 2015. С. 258.

² Юськів Б.М. Контент-аналіз. Історія розвитку і світовий досвід : монографія. Рівне : Перспектива, 2006. С. 21.

Therefore, the study of the regularities of conducting informational campaigns and special operations that increase the social tension and incite panic moods will make it possible to identify them at an early stage, to develop a system of countermeasures for the prompt informing of citizens and to determine the phase of their most effective use.

The article's goal is to determine the regularities of planned information campaigns in the Ukrainian media space during hybrid aggression by means of content analysis and mathematical modeling.

1. Analysis of recent studies and publications

Most scholars who study this phenomenon note the role of informational technologies and media in the hybrid war both in the field of social communications and in other humanitarian spheres. Thus, E. Magda says "the most important is the control over information flows, the victory in the informational war. [...] The main strategic national resource is the informational space, i.e. information, network infrastructure and information technologies"³.

O. Poltorakov's work emphasizes that in the model-scheme of the Russian-Ukrainian conflict one of the second level vectors ("fronts") is "social (creation of a simmering source of social-political and humanitarian-political tension with the potential of rapid escalation if needed)"⁴. Such constantly "simmering source" we can call the media, which use the crisis in the state as a favorable condition for the rapid spread of panic moods and increase the level of mistrust (and not appropriate criticism) to the state authorities.

V. Gorbulin, in his turn, notes that one of the key components of the hybrid war are "operations of non-military influence, in particular by means of special informational operations and "active measures" (including economic pressure, operations in cyberspace, diplomacy, informational space manipulations)"⁵.

The term "informational operation" is also widely used in the monograph "Informational Operations and Society Safety: Threats, Counteractions, Modeling"⁶, which contains a number of provisions on the possibilities of mathematical modeling of informational operations as a component of informational confrontations. Some of these provisions will be used and

³ Магда Є.В. Гібридна війна: сутність та структура феномену. *Міжнародні відносини. Серія "Політичні науки"*. 2014. № 4. URL: http://journals.iir.kiev.ua/index.php/pol_n/article/view/2489/2220 (дата звернення: 10.12.2020).

⁴ Полтораков О. Гібридна війна в контексті асиметричного світоустрою. *Гілея : науковий вісник*. 2015. Вип. 100. С. 258.

⁵ Горбулін В. Гібридна війна: все тільки починається... *ZN.ua* : вебсайт. URL: https://zn.ua/ukr/internal/gibridna-viyna-vse-tilki-rochinauetsya-_.html (дата звернення: 10.12.2020).

⁶ Горбулін В.П., Додонов О.Г., Ланде Д.В. Інформаційні операції та безпека суспільства: загрози, протидія, моделювання : монографія. Київ : Інтертехнологія, 2009. 164 с.

adapted in our study for the work of media professionals, since this scientific work is more specifically intended for analysts in the sphere of information security and information technologies; in addition, it needs some updating as the study was conducted long before the Russian-Ukrainian conflict began.

It should also be noted that the terms “information campaign” (in the field of social communications) and “information operation/special operation” (more specific for the sphere of information technologies and security) will be used in the paper as equivalent.

The general definition of “information campaign” is given in the dictionary by T. Semyhina: “purposeful informational influence on public opinion in order to convince, change the attitude and behavior of the public or its certain circles”⁷.

The researchers V. Furashev and D. Lande consider the information operation to be an integral part of the informational warfare. Its content is directed at the implementation of pre-planned psychological actions in peace and wartime on hostile, friendly or neutral audience by means of influencing the instructions and behavior in order to attain political or military advantages⁸. These operations combine psychological actions with strategic goals, psychological consolidating actions and psychological actions – with the direct support of combat operations. The information campaign arena is the information space, in particular, the web environment for which it can be stated that on the one hand, it is a place of information racing (80%), and on the other hand, it represents the sphere of real combat actions (20%).

It should be mentioned that, with the exception of few characteristics, such as the use of positive images and styles and the combination of social advertising with other activities within the campaign that are inappropriate, all of these measures are fully used in information campaigns in Ukraine during the hybrid war.

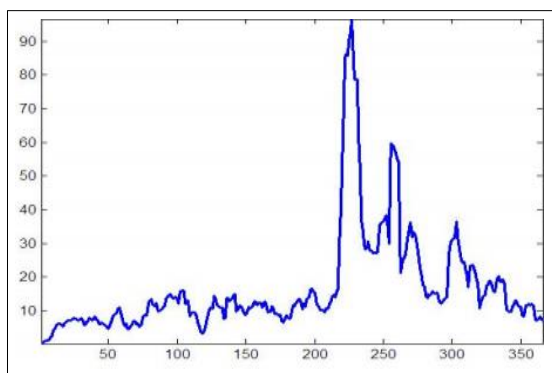
2. Wavelet-analysis method

Nowadays, the information space of most countries is mostly an open system that has been tightly integrated into network communications over the last 10–15 years. Therefore, the availability of a certain professional media toolkit makes it possible to analyze and establish the relationship of possible events or events that are already happening with the informational activity of a certain range of information sources, i.e. among the normal information flows, to identify intentionally planned ones, which can be qualified as information campaigns.

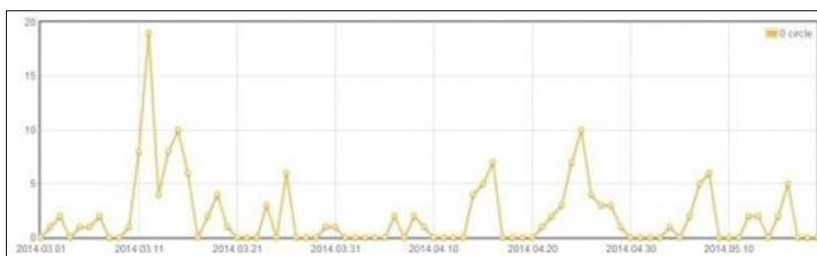
⁷ Семигіна Т.В. Словник із соціальної політики. Київ : ВД «Києво-Могилянська академія», 2005. С. 52.

⁸ Ланде Д.В., Фурашев В.М., Юдкова К.В. Основи інформаційного та соціально-правового моделювання : навч. посіб. Київ : НТУУ “КПІ”, 2014. С. 49.

It is advisable to detect information campaigns through the research of online media messages of various size collected from the Internet by the InfoStream system, which provides the integration and monitoring of network information resources. To understand the dynamics of concept circulation, let us look at the Figure 1 and 2 that show the ready-made graphs of the research results of the search engine issue in the InfoStream system for the requests about the information warfare in Ukraine (the research of D. Lande and V. Furashev, Igor Sikorsky Kyiv Polytechnic Institute, and E. Shnurko-Tabakova, publisher, a head of the Association of Ukrainian Information Technology Enterprises⁹).



**Fig. 1. Dynamics of the use of the phrase
“Ukraine lost the information war” (2009, InfoStream system)**



**Fig. 2. Dynamics of the use of the phrase
“Ukraine lost the information war” (2014, InfoStream system)**

⁹ Шнурко-Табакова Е. Дело в Шляпе: структура информационной войны. *Українська правда. Блоги* : вебсайт. URL: <http://blogs.pravda.com.ua/authors/shnurko-tabakova/537a25565fae1/> (дата звернення: 10.12.2020).

One can use statistical and content-analytic methods to analyze certain patterns in order to detect planned information campaigns in the media space. In mathematical modelling, an effective method of wavelet analysis is now being used. It is especially effective in cases where it is necessary to identify the local in time characteristics of the behavior of the process under study. The main idea of wavelet transformation is that the time series is divided into separate intervals (the so-called windows of observation) and each of them performs the calculation of the value, which shows the proximity degree in the laws of the data under study with different shifts of some wavelet (special function)¹⁰.

The wavelet coefficients can be presented graphically, if to put wavelet shifts on one axis (time axis), and the scale on the other one (scale axis) and to color the points of the received scheme, depending on the magnitude of the corresponding coefficients (the higher the coefficient is, the brighter the colors are). The obtained images are called a transformation coefficient map or scalogram (see Figure 3).

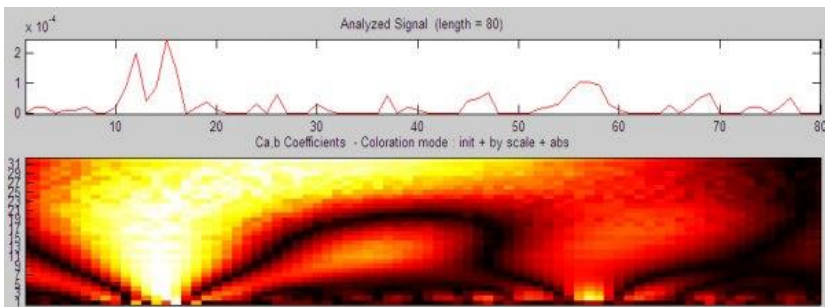


Fig. 3. An example of a scalogram, built on the study of the phrase “Ukraine lost the information war”

Scalogram is composed by the procedure of processing information flows, aimed at separating the natural course of human activity from artificial interference. The lighter the color is in this image, the closer it is to the theoretical curve, which corresponds to the information operation. It should be noted that changes in the number of messages do not affect the marking on artificiality. Natural processes are described with the Gaussian curve – an inverted bell (see Figure 4). However, in case of information campaigns, this curve turns into a “Mexican hat” (see Figure 5).

¹⁰ Ланде Д.В., Фурашев В.М., Юдкова К.В. Основи інформаційного та соціально-правового моделювання : навч. посіб. Київ : НТУУ «КПІ», 2014. С. 156.

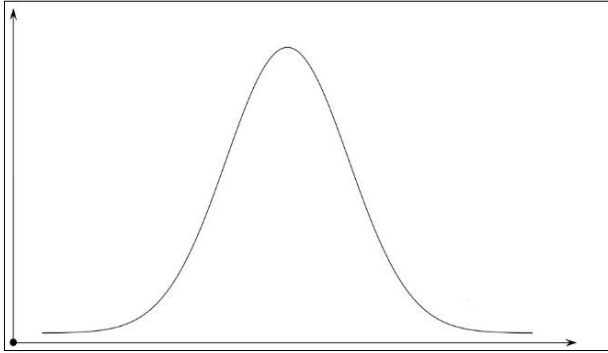


Fig. 4. Gauss curve demonstrating the normal distribution of informational flow

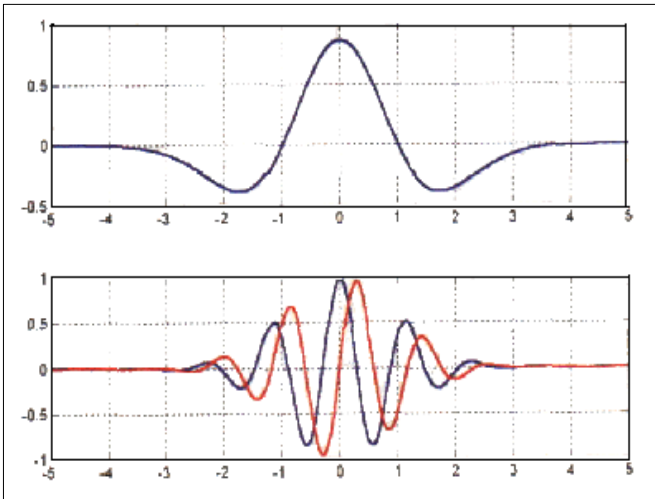


Fig. 5. “Mexican hat” – the curve corresponding to the graphic of a planned information campaign flow

The essence of the “hat” lies in the fact that at the beginning of the period on the general background of the information field, a checking blow comes, a small checking surge, followed by a period of silence – and then goes a major blow with a large burst, possibly prolonged in time and with mild recession. If the image shows that the “Mexican hat” is slightly “crumpled”, it means that the event is artificially delayed in time. Thus, for example, the

thesis under study “Ukraine lost the information war” (Figures 1 and 2) is the thesis for the informational operation implemented to destabilize the psychological state of the population and it does not reflect the reality.

Thus, the technology of using wavelets can detect single and irregular “surges”, sharp changes in the values of quantitative indicators in different periods of time, in particular, the volume of thematic publications on the Internet. At the same time, the signs of occurrence of the cycles, as well as the moments, when chaotic oscillations occur during the periods of regular dynamics, can be detected.

3. Trends in the Ukrainian information space

The peculiarity of modern Ukrainian mass communications is their functioning in a destabilized society, which, on the one hand, simplifies work with the audience, on the other – largely depends on the level of its trust in various sources of information. Therefore, it should be taken into account while solving different types of communication tasks.

To reveal the current trends of the Ukrainian information space the list of popular search queries for 2019–2020 was concluded using Google Trends and Infostream. It differs significantly from the results obtained in our previous study in 2016–2017¹¹. A method of obtained data generalization has been used in the research. It allows identifying several blocks of the most interesting topics for the audience. At the same time, they are destabilizing and potentially critical, as they provoke the most violent and contradictory reactions in the Internet media and social networks. These blocks of topics can be divided into the following:

1. COVID-19 coronavirus pandemic.
2. Ukrainian authorities.
3. Economic situation in Ukraine.
4. Business problems in Ukraine.
5. World politics.
6. The War in Donbass
7. International policy towards Ukraine.
8. The energy of Ukraine.
9. Crises in the social sphere.
10. Reforms in the country.

In different periods, attention to these topics is distributed unevenly. Yes, some topics tend to be seasonal. For example, the energy issue is exacerbated during the heating season, the rise in prices of certain food groups – due to objective changes in the seasons, and so on. Other topics can be referred to as

¹¹ Політичне консультування як феномен масових комунікацій / Литвин А.В., Магда Є.В., Смола Л.Є., Фісенко Т.В. Харків : Факт, 2017. С. 92.

“extinct” – they are mentioned from time to time, in connection with some high-profile events, such as the violation of the regime of silence in the anti-terrorist operation, exposing bribes to officials, and so on. Another group of topics escalates from time to time, chaotically or thoughtfully. For example, before the local council elections, a large number of candidates created artificial publicities, showing videos of their political advertisements with a humorous or senseless script (Oleg Lyashko, Iryna Vereshchuk).

While covering the country’s topical issues on the Internet, we can trace the use of numerous communicative techniques to influence public opinion. Let’s outline the most common of them.

1. “Growing” the public opinion leaders (“agents of influence”). These can be well-known journalists and bloggers, or newly created characters who appear on the pages of media and social networks with their thoughts about current events and problems. By replicating content (for example, reposting), the audience gets the false impression that “everyone thinks so”. A striking example of such a leader is Anatoly Shariy.

2. Spreading rumors and gossip. They are especially popular due to the taste exclusivity of the information provided – for example, when it comes to restrictions due to a pandemic. The Rebuttal of rumors does not give a significant result, because in mass communications the effect of primacy plays a significant role. For example, rumors about the new lockdown in Ukraine due to the second wave of coronavirus disease received a similar response.

3. “60/40” method, the invention of which is attributed to J. Goebbels. It consists in creating media that provide 60% of their information allegedly in the interests of the enemy. Having thus earned his trust, the other 40% use it to implement extremely effective misinformation. Experts believe that the Ukrainian branch of “Vesti” (newspapers, website and radio) works on this principle.

4. Informational campaigns in the Ukrainian informational field

An example of a constantly changing information field, which is expediently investigated with the help of wavelet theory, is the Ukrainian media. Starting since 2014, they have been operating in the conditions of constant dynamics. On the one hand, some of these changes are positive, for example, an increase of the position in the international rating “Press Freedom Index” of the organization “Reporters Without Borders”. So, for 2019–2020, Ukraine’s rating has increased by 6 points. Our country now occupies 96th place out of 180 and belongs to the regions of the “orange” layer, that is, those who generally have a satisfactory situation with media freedom¹².

¹² Ukraine. *Reporters without borders* : вебсайт. URL: <https://rsf.org/en/ukraine> (дата звернення: 10.12.2020).

But, on the other hand, adherence to the principles of freedom of speech gives Russian Federation, as an aggressor country and interested non-state agents, the opportunity to deploy media activity aimed at further destabilization of the situation in Ukraine. Among such media communicators, the following media communicators can be distinguished:

- temporary sites with a short life cycle (about 3 hours), which are intended for throwing information in the information field;
- openly pro-Russian media;
- Ukrainian media that support the policy of the aggressor state (for ideological reasons or through the financing of customized materials);
- Ukrainian media working on the “60/40” method, credited to Goebbels (the method is to create media, which provide 60% of their information in the interests of the enemy, and thus gaining its trust, they use 40% for extremely effective misinformation);
- social networks with Russian owners;
- artificially created users and publics (groups) in international social networks that generate a corresponding content;
- agents, ideologically minded or financed by the aggressor state (well-known bloggers, public figures, experts, etc.) from the Russian Federation;
- agents ideologically minded or financed by the state-aggressor from Ukraine;
- specially created channels on YouTube with pro-Russian content.

Let us compare the general patterns of information campaigns in Ukraine with the theory of wavelets using special software (the study was conducted with the help of the InfoStream and Attack Index services). For the analysis, we chose an informational campaign, connected with the creation of the vaccines against COVID-19 (spheres of medicine and politics).

The first case is interesting because of numerous news about the process of creation and testing few candidate vaccines. The newsmaker case is connected with Russian vaccine Sputnik V, the creators of which have declared their readiness first. Although the vaccine has not passed all clinical trials, it is being widely used in Russia nowadays. In the first two phases of the trial, significantly, fewer volunteers participated than is required – only 22 people received the full course of the vaccine that will be administered to humans.

Nevertheless, it is not yet possible to enter the international market, since the international medical community (primarily World Health Organization) has rather strict requirements even for so-called candidate vaccines. That’s why Sputnik V is still being discussed. Russian company even put forward a proposal to Swedish-British pharmaceutical company AstraZeneca to begin clinical trials of the combination of its own coronavirus vaccine with the Russian Sputnik V.

The scandals around the infected people, who were previously vaccinated with Sputnik V, do not subside. The Minister of Healthcare of Ukraine Maksym Stepanov spoke very skeptically of the Russian vaccine: “Today there are no data in the world about the third stage of the Russian vaccine clinical trials. Until it is held, there is nothing to talk about. It is in the third stage that it is seen whether the vaccine is safe and what comorbidities it can cause”¹³.

As a keyword phrase to explore the information campaign around the vaccines “coronavirus vaccine” was chosen. We have made a search query the Attack Index service with time period from May to December, 2020. The system’s evaluation of the informational campaign is 5 (from 10): “The activity of network sources requires your attention and reaction in the form of your own information events. A rich information field indicates the relevance of the topic or participation in resonant events”.

The graph depicting information waves looks uneven, with frequent growth and subsequent decline. The system identified 3 peaks – August 12, October 22 and December 8 (see Figure 6).

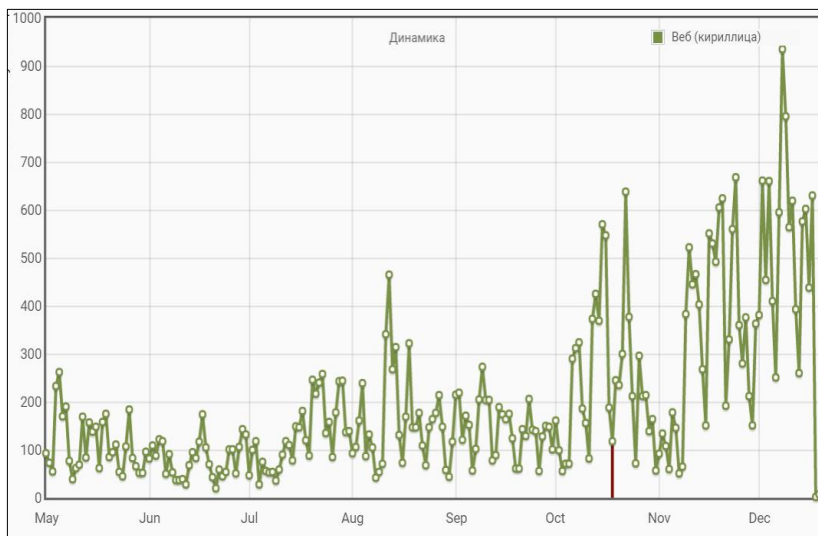


Fig. 6. The graph of the Attack Index system, based on the search query “coronavirus vaccine”

¹³ Степанов про російську вакцину від COVID: До завершення випробувань нема про що говорити. *Українська правда*: вебсайт. URL: <https://www.pravda.com.ua/news/2020/12/4/7275861/> (дата звернення: 10.12.2020).

So let us consider the main news items on these dates:

– August 12, 2020: “The chief US infectious disease specialist criticized the Russian vaccine against coronavirus”¹⁴, “The head of German Ministry of Health doubts the effectiveness of the Russian vaccine against COVID-19”¹⁵ and few similar news about WHO and its position about the vaccine research validation;

– October 22, 2020: “Zelensky on Ukrainian vaccine against coronavirus: in case of successful tests, I’m ready to test it on myself”¹⁶, “Ukrainian vaccine against coronavirus may appear in 9 months or a year”¹⁷. So the main newsmaker was Ukrainian vaccine;

– December 8, 2020: “UK starts mass vaccination against coronavirus”¹⁸, “Charts and "risk groups": Stepanov spoke about preparations for COVID vaccination”¹⁹, “WHO opposes mandatory vaccination against COVID-19”²⁰, “Poland decided to purchase vaccines 1.5 times more than the country’s population”²¹, “Sinovac Coronavirus Vaccine Shows 97% Effectiveness”²².

¹⁴ Главный инфекционист США раскритиковал российскую вакцину от коронавируса. *Укринформ*: вебсайт. URL: <https://www.ukrinform.ru/rubric-world/3079763-glavnyj-infekcionista-ssa-raskritikoval-rossijskuu-vakcinu-ot-koronavirusa.html> (дата звернения: 10.12.2020).

¹⁵ Глава Минздрава ФРГ сомневается в эффективности российской вакцины против COVID-19. *Interfax*: вебсайт. URL: <https://interfax.com.ua/news/general/680599.html> (дата звернения: 10.12.2020).

¹⁶ Зеленский об украинской вакцине от коронавируса: В случае успешных испытаний готов испытать ее на себе. *112.UA*: вебсайт. URL: <https://112.ua/zdorovie/zelenskiy-ob-ukrainskoj-vaccine-ot-koronavirusa-v-sluchae-uspeshnyh-ispytaniy-gotov-ispytat-ee-na-sebe-554540.html> (дата звернения: 10.12.2020).

¹⁷ “Украинская вакцина от коронавируса может быть через 9 месяцев или год”, – доктор Михаил Фаворов. *ЕСПЕСО. Захід*: вебсайт. URL: https://ruzahid.espresso.tv/news/2020/10/22/quotukraynskaya_vakcyna_ot_koronavyrusa_mozhet_byt_cherez_9_mesyacev_yly_godquot_doktor_mykhayl_favorov (дата звернения: 10.12.2020).

¹⁸ Великобритания начинает массовую вакцинацию от коронавируса. *Слово і діло*: вебсайт. URL: <https://ru.slovoidilo.ua/2020/12/08/novost/mir/velikobritaniya-nachinaet-massovuyu-vakcinaciyu-koronavirusa> (дата звернения: 10.12.2020).

¹⁹ Графики и «группы риска»: Степанов рассказал о подготовке к COVID-вакцинации. *Укринформ*: вебсайт. URL: <https://www.ukrinform.ru/rubric-society/3150449-grafiki-i-gruppy-riska-stepanov-rasskazal-o-podgotovke-k-covidvakcinacii.html> (дата звернения: 10.12.2020).

²⁰ ВОЗ выступает против принудительной вакцинации от COVID-19. *Укринформ*: вебсайт. URL: <https://www.ukrinform.ru/rubric-world/3150441-voz-vystupaet-protiv-prinuditelnoj-vakcinacii-ot-covid19.html> (дата звернения: 10.12.2020).

²¹ Польша решила закупить вакцины в 1,5 раза больше, чем население страны. *From-UA*: вебсайт. URL: <https://from-ua.com/news/578061-polsha-reshila-zakupit-vakcini-v-1-5-raza-bolshe-chem-naseleniya-strani.html> (дата звернения: 10.12.2020).

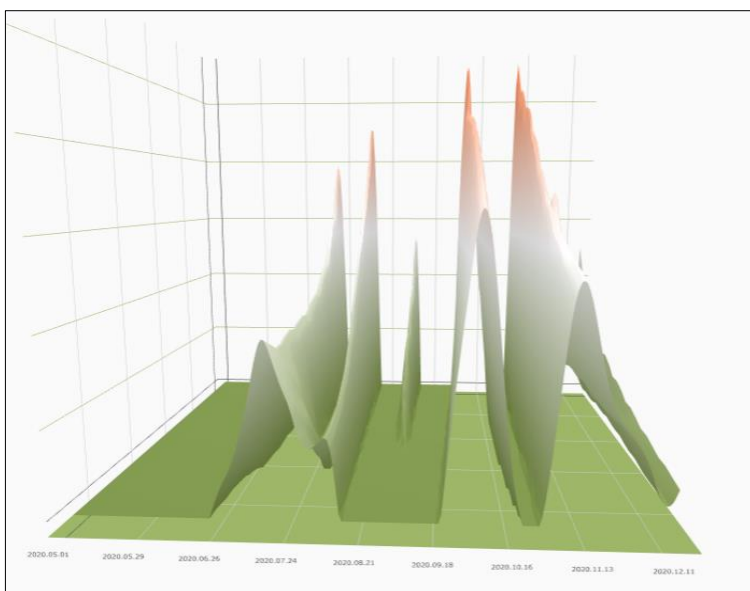
²² Китайская вакцина против коронавируса Sinovac показала эффективность 97% – СМИ. *Сегодня*: вебсайт. URL: <https://world.segodnya.ua/world/wnews/kitayskaya-vakcina-protiv-koronavirusa-sinovac-pokazala-effektivnost-97-smi-1493761.html> (дата звернения: 10.12.2020).

Thus, the latest block of news topics indicates that the audience's interest in the use of different vaccines has dissipated and is no longer focused only on the Russian vaccine or the potential development of the Ukrainian version.

Among the top 20 publication sources for the entire request period the Attack Index system detected such web-sites as: MY.UA, RBK-Ukraine, Glavk.info, New Time, UA.news. None of these sources can be considered reliable enough – they are not official news agencies, mainstream television channels or independent journalistic projects.

In addition, such media as RBK-Ukraine or Novoye Vremya are pro-Russian, and their semantic analysis, conducted by researcher S. Fialka²³, indicates the presence of separatist convictions that are indirectly imposed on readers.

The system analysis of informational special operations has shown that “On November 11, the largest coincidence of the information operation template with IO = 74 was found”. It means that artificial newsmakers interfered the informational space (see Figure 7).



Fig/ 7. The information operations graph of the Attack Index system, based on the search query “coronavirus vaccine”

²³ Фіялка С.Б. Мова ворожнечі на сторінках сепаратистських інтернет-медіа. *Інформаційне суспільство*. 2017. Вип. 24. С. 14–21.

For the date 2020.10.11, which most likely coincides with the information operation template, the corresponding information disseminator resources are presented by the Attack Index system (see Table 1).

Table 1

Topics of the information operation date

Subject	Number of messages	Distributors
In Russia the first test results of the “live” vaccine against Covid-19 were reported	140	Dream of Zaporozhye Ukr-Today.com Glavred Informator.press Komsomolskaya Pravda in Ukraine United Odessa Glavk.info Censor.No UAzmi Микола.net
WHO: The Covid-19 vaccine may be ready by the end of the year	84	URA-Inform Glavred New Time ТОНЕТО Channel 24 E-Finance ReplyUA.net FinOboz NewsOne UNIAN

We can see the lack of the reliable sources again, and the quantity of the replicated news is quite big.

The forecast of the informational campaign shows that it is balancing between the stability and unpredictable conditions (the Hurst index is about 0,85). The values of the Hurst coefficient close to 0.5 indicate the chaos of the process. The closer the value is to 1, the more stable the process, the future repeats the past. Sharp jumps in the coefficient indicate the presence of very different inhomogeneous processes (see Figure 8).

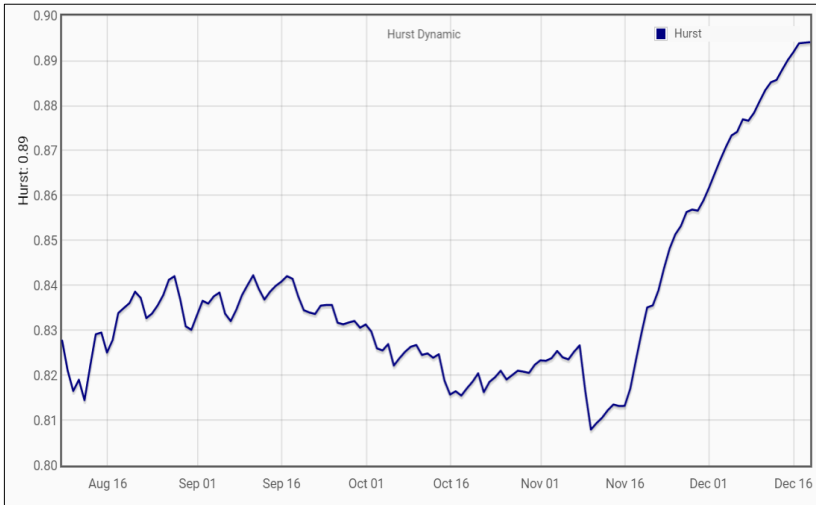


Fig. 8. The information operations forecast of the Attack Index system, based on the search query “coronavirus vaccine”

The resulting graphs of the keyword mentionings, considered in the analysis of cases of information campaigns, on the whole, coincide with the general patterns of information operations schedules obtained through the mathematical wavelet analysis method (see Figure 9).

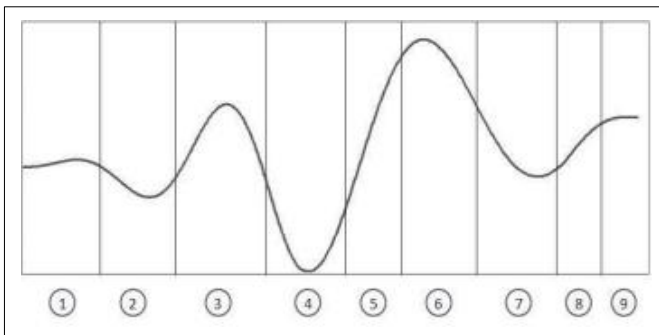


Fig. 9. A generalized diagram corresponding to all stages of the life cycle of information operations: 1 – background; 2 – standstill; 3 – "airstrike"; 4 – standstill; 5 – attack / growth trigger; 6 – peak of steep expectations; 7 – loss of illusions; 8 – public awareness; 9 – productivity / background

The following graph is proposed by the scientists D. Lande, V. Dodonov and T. Kovalenko²⁴ and it describes the phases of informational operation. The researchers note that the first three phases can help to predict the following events with a high probability.

CONCLUSIONS

Thus, the use of the content analysis method for determining propagandistic and pro-enemy media makes it possible to avoid accusations of subjectivity and ideology of such steps. The focus and content of blogs on media sites may be regarded as additional arguments in the definition of propaganda character of media and they *require an additional careful study*.

Overall, the influence on propaganda media activity under conditions of hybrid warfare is a necessary step from the side of the state to counteract aggressive manifestations, including the information field.

Summarizing the results obtained through the content analysis and wavelet analysis, we can assert that in order to identify planned information campaigns on destabilizing the situation in the country, it would be advisable to use the following recommendations for media professionals:

1. To have and use the knowledge about the structure of organized information campaigns (operations).

2. To conduct content monitoring of the country's information space.

3. To identify potentially crisis topics and track the growth of popularity of keywords on these topics.

4. To appeal with information requests to primary sources, such as public authorities and non-state organizations, for clarifying potentially conflictual issues.

5. To spread information promptly in order to prevent a second wave of destabilizing information campaign.

6. To replicate information that will avert panic and escalation of dissatisfaction in as many types of large and rating media as possible.

7. To involve experts, who have a reputation of honest and as objective as possible specialists in their field, scientists, public figures who have the image of patriots.

8. The stage of information spread should last no less than the cycle between information waves, that is 6–10 days.

9. To have an anti-crisis plan in case of a massive informational attack at the beginning of the second information wave, to be prepared for refutations, operative preparation of answers from the primary sources.

²⁴ Ландэ Д.В., Додонов В.А., Коваленко Т.В. Информационные операции в компьютерных сетях: моделирование, выявление, анализ. *Моделирование-2016*: материалы пятой Международной конференции, 25–27 мая 2016 г. Киев: ИПМЕ НАН Украины, 2016. С. 198–201.

10. In the quiet periods between information campaigns (operations), one should not forget about the strengthening of the positive image of the country as a whole and state bodies in particular.

SUMMARY

Information technologies in hybrid warfare are widely used not only by the aggressor country, but also by insider agents directly carrying out information campaigns in the information field of Ukraine, causing destabilizing policies. It aims to create controversy within the country, a sense of instability, split among various social strata, and ultimately deepen the existing crisis in the fields of security, politics and economics. The paper deals with cases that demonstrate the algorithms of conducting information campaigns in Ukraine, which lead to increased social tension in the society. In addition, it determines the approaches to the definition of the terms “information campaign” and “informational special operation” in various sciences, outlines the peculiarities of the term “information campaign” functioning in social communications.

The main objective of the study is determining patterns of information campaigns in the Ukrainian media space during hybrid aggression. Using content analysis and wavelet analysis information, typical planned informational special operations over last year concerning the problems of the state in various fields were considered. The diagrams of dynamics mentioning keywords cases, examined in the analysis of information campaigns, generally coincide with the patterns schedules of information operations obtained through the method of mathematical wavelet analysis. An overview of planned information campaigns made it possible to define the basic principles of informational work to prevent the worsening crisis in the country as well as organize the work of media professionals of different specializations during the hybrid aggression.

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