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## UKRAINIAN AND POLISH POPULAR SCIENCE BLOGS ON THE YouTube PLATFORM: FUNCTIONAL FEATURES

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In this scientific research, attention is paid to the functioning of the Ukrainian and Polish blogospheres. The popular science blogs of those blogospheres with the widest audience are considered. The problem is urgent, since blogs on various platforms are not only informative or entertaining, but also educational. It is already possible to receive educational, scientific and cognitive information from blogs. In fact, popular science blogs function as a relatively free educational resource that operates parallel to government and commercial institutions. Based on the theoretical developments of Ukrainian scientists, we can say that blogs, in which you can use audiovisual and textual components, are the most convenient means of creating popular scientific content. Actually, this meets the demands of the modern consumer of information.

The novelty of the article lies in revealing the specifics and trends of the functioning of popular science blogs and highlighting the features of blogs on the YouTube platform, which have audiovisual and textual capabilities for creating popular science content.

Based on the ranking and content analysis, it was found that the most popular are historical topics, followed by natural sciences, astrology, medicine and psychology. In particular, the top five popular Ukrainian blogs include: «Imeni T.H. Shevchenka

(Named after T. H. Shevchenko)», «Istoriia bez mifiv (History without myths)», «Kliatyrratsionalist (Damn rationalist)», «WAS: Populiarnaistoriia (WAS: Popular history)», «Interesting science». And among Polish popular science blogs, «Historia bez cenzury», «SciFun», «emce», «Uwaga! NaukowyBelkot», «Polimaty».

On the basis of the analyzed popular science blogs, the following trends have been identified: the presentation of material in the blogs has features of the author's journalistic programs; use of historical methods of science; use of emotionally colored vocabulary, subjective judgments and other artistic techniques in materials (in their titles, on the covers or

**in the videos themselves); features of citation of sources of information used in a blog differ in blogs on different subjects (while all the blogs note their sources, their mention specifically in the description of the video is mostly absent in materials on historical subjects, but present in the rest of the studied blogs).**

**Keywords:** blog; blogosphere; popular science; YouTube; subscribers.

**Introduction.** In the conditions of the rapid development of communication technologies, the Internet covers more and more spheres of human activity, and attracts an increasingly large audience of users. At the same time, everyone's equal access to the global information network opens up many opportunities not only for consumption, but also for creating an information product. As of today, anyone with access to the Internet can produce his or her own content. We can see this fact in practice in the format of blogs. The volumes of information in textual and audiovisual forms produced in this way are constantly growing. The involvement of users of digital networks in the creation of the informational agenda has reached such a scale that today the blogosphere is one of the key elements of the public communications system.

In such a situation, the popular science blogosphere looks particularly interesting. This specific direction of Internet communication is aimed at the distribution of scientific knowledge in society in an understandable way. According to BlogHug, the top 20 popular science blogs with the most followers and views include those related to Earth and space science [19]. In general, more than 332,000 scientific and popular science blogs operate in the Internet environment [20].

**Formulation of the problem.** In fact, popular science blogs function as a relatively free educational resource that operates parallel to government and commercial institutions. This, in turn, has an impact on the formation of public opinion, and hence on the course of social processes as such in all directions: educational, scientific, political, economic, etc. In view of the constant growth of the number of popular science blogs and their direct involvement in the formation of dynamic social processes, the study of the peculiarities of their development in Ukraine is extremely relevant.

Formulation of the purpose and objectives of the article. The purpose of the article is to analyze popular science blogs on the YouTube platform.

The realization of this goal involves the final implementation of the following tasks:

- find out the current state and development trends of Ukrainian popular science blogs on the YouTube platform;
- determine the thematic orientation and genre affiliation of the materials that form the basis of the information field of this area of the blogosphere;
- determine the common and distinctive features of the functioning of specialized popular science YouTube channels.

The methodology of research of the topic includes social communication and axiological approaches, as well as statistical methodological techniques. Content analysis, synthesis and generalization are the main methods that were used in the process of scientific research.

**Analysis of recent research and publications.** The question of the development of the modern Ukrainian blogosphere arouses interest in the community of media researchers, who consider this problem through the prism of several different approaches to analysis, which reflect the various spheres of activity on which Internet blogs have a direct impact. Thus, a number of researchers, in particular, I. Babii [1], A. Dosenko [6], investigate the trends and peculiarities of the development of the Ukrainian blogosphere in qualitative and quantitative dimensions.

The topic of the influence of blogging on socio-political processes in Ukraine, in particular on the process of formation of national self-awareness, civic identity and other related problems, is considered separately. The following scientists are engaged in this: I. Babii [2], O. Mykhaylova [14], A. Kiselyova [9].

Given the wide range of blogosphere research, there are also works that consider the very process of blogosphere research, focusing on establishing boundaries and describing the processes of the science of blogology. This is done, in particular, by S. Hnatyshyn [4].

The development of blogs as a new direction of information activity, an integral component of the media environment and the features of the interaction of traditional media and citizen journalism of Internet blogs are investigated by S. Vakulenko [3], V. Pertseva [15] and N. Lukiv [10]. M. Rudyk's study of the specifics of compliance with journalism standards in the blogosphere deserves special attention [17].

In addition, there are also studies of the linguistic features of the Ukrainian blogosphere carried out, in particular, by S. Zaitseva and N. Levun [8]. As well there are researches devoted to the study of the current state and dynamics of the development of Ukrainian «booktube» and «bookstagram» as a layer of the blogosphere dedicated to the popularization of reading, carried out by O. Politova [16].

Such scientists as T. Yakhontova [18] and M. Hret [5] are engaged in researching the peculiarities of scientific communication on the Internet, which is a topic directly related to the popular science blogosphere.

**Results.** There are both professional and amateur science channels competing for audience attention on YouTube. Reaching the audience and achieving success depends on how popular the channel and its videos become, which is determined by the number of subscribers and received views. The popularity of any particular video depends on several factors: 1) content of the video; 2) factors that do not depend on the content; 3) YouTube video recommendation systems. Content factors are stylistic and informational characteristics of a video (such as topic, duration, or delivery style), while non-content factors refer to external characteristics of a video (such as the creator's social network or the date and time the video was uploaded). YouTube's recommendation system both determines what is popular and "pulls" what is popular in a "rich-gets-richer" popularity scenario. That is, the recommendation system recommends popular videos to viewers, and this, of course, increases the popularity of these videos.

The type of popular science channel (i.e. whether it is professional or amateur) is of particular interest in understanding YouTube popularity. Professionally created channels (that is, channels that exist to extend a commercial brand) often have higher financial resources compared to user-created channels. Financial resources may allow professionally generated channels to increase the appeal of the channel and/or certain videos by creating regular or high volume content and high performance content.

The study of such a wide range of materials as the Ukrainian popular science blogosphere, which combines text, audio, and audio-visual content of various thematic, genre, and artistic-stylistic directions, requires us to clearly define the boundaries of the object of our research. First of all, we note that in this work we will primarily consider popular science blogs on the YouTube platform, which in its essence is a platform for viewing and/or downloading videos stored in cloud storage. This platform is the most popular among such services in Ukraine, and therefore the results of the study can be considered the closest to representative ones in terms of studying the preferences and interests of the Ukrainian audience of the blogosphere. Another reason for choosing this platform is the fact that it allows content authors to most fully and comprehensively disclose various scientific topics due to the absence of restrictions on the duration of video materials (unlike another popular service «TikTok») and the general absence of strict restrictions on the content of materials.

In the study we will consider a number of the most popular Ukrainian YouTube channels of the popular science direction. This approach makes it possible to study the trends of consumer interest in a wide range of areas of scientific thought, as well as to investigate which areas of scientific activity are represented in the Ukrainian blogosphere.

The indicated selection of research objects according to their popularity will be carried out as follows: from among the entire list of Ukrainian YouTube channels of popular science direction, we choose those that have the largest total number of subscribers and views and that have been active at least during the last few years. It is worth noting that the fact that the channel belongs to the group of "popular

science” is determined by the presence of video materials on it that highlight some of the issues of scientific knowledge, based on valid scientific methods and approaches, or on valid scientific sources. Since the materials of the blogosphere are an author’s product, the author’s subjective impressions, remarks and statements are allowed and will be considered as artistic means aimed specifically at the popularization of scientific knowledge among a wide audience. Materials that directly contradict the original source, radically distort information, or publish information that does not correspond to objective reality, although they use reliable sources, will not be considered popular science in our study.

So, let us consider the 5 most popular Ukrainian YouTube channels in the popular science direction (table 1). They were ranked by the number of subscribers, from the highest to the lowest.

Table 1

**The most popular Ukrainian popular science YouTube channels**

No.	Channel name	Number of channel subscribers, thousands	The total number of views of the channel	Thematic direction of the channel	Channel name
1	Imeni T.H. Shevchenka (Named after T.H. Shevchenko)	876	91 867 185	427 289	History
2	Istoriia bez mifiv (History without myths)	732	104 012 858	268 767	History
3	WAS: Populiarnaistoriia (WAS: Popular history)	360	39 293 926	175 419	History
4	Kliatyyratsionalist (Damn rationalist)	298	18 147 281	93 542,69	General
5	Tsikavanauka (Interesting science)	259	16 232 651	56 956,67	Natural sciences, astronomy, mathematics

We will also list the 5 most popular Polish popular science YouTube channels (table 2).

Table 2

**The most popular Polish popular science YouTube channels**

No.	Channel name	Number of channel subscribers, thousands	The total number of views of the channel	Thematic direction of the channel	Channel name
1	Historia bez cenzury	1650	465 481 089	1 289 421	History
2	SciFun	1130	241 076 132	1 596 530,7	General
3	emce□	761	90 153 394	448 524	General
4	Uwaga! NaukowyBelkot	729	110 770 173	292 269,6	General
5	Polimaty	713	94 641 276	386 290,9	General

From the tables, we can see that popular science topics are very popular among the audience segments of YouTube platform in both analyzed countries. At the same time, we see that in both cases the most popular is the historical theme. It should be noted, however, that among the Ukrainian audience YouTube channels on historical topics occupy the 3 top places, while the Polish one has only the first place.

The next category of blogs that goes after the historical ones in both countries is dedicated to scientific topics as such, and were labeled as «general». The authors of those channels focus on explaining certain aspects of our world from a scientific point of view without being tied to a specific topic. Therefore, the topics of videos on these channels vary from medicine to philology. We can see that in the Polish blogosphere, the channels of this direction are significantly more numerous. What is interesting is that their topics vary more than in the Ukrainian channel «Kliatyy ratsionalist (Damn rationalist)», which occupies the same thematic direction. It is also must be said that materials on those Polish channels may include videos not directly related to science.

We should also point out that the last in the top five popular science channels that have the widest audience in the Ukrainian segment of YouTube is a blog dedicated to the translation of English-language popular science videos. Such a situation is not observed in the case of the Polish blogosphere.

It is important to note that Polish blogs have more views on average than Ukrainian blogs. At the same time, the channels from the Polish segment of the YouTube platform were founded, for the most part, several years earlier than the Ukrainian ones.

Most of the mentioned channels from both countries provide links to the sources from which they draw information. In certain cases, they are indicated separately in the description of the video, in others – the source is indicated in the video itself, or both options are combined.

In addition, all popular science blogs considered, without exception, use emotionally colored vocabulary and various related methods of subjective description of reality in their videos. This is manifested in the titles, covers of materials and in the videos themselves.

Finally, it should be noted that each of the considered channels actively releases videos at the time of conducting of this research. At the same time, most of the popular materials of blogs of the Ukrainian segment were released in the period from 2019–2022, with a predominance of videos from the last year. At the same time, materials from an older release time happen to be the most popular in terms of the number of views in the Polish blogosphere.

The results and prospects of further research are discussed. For scientists, this topic of scientific research is promising for several reasons. First, it will be valuable to analyze the content of popular science blogs on YouTube for fakes. Another direction of scientific research may be the possibilities of using artificial intelligence in the production of content by bloggers.

**Conclusions.** As a result of a study of the Ukrainian popular science blogosphere using the example of popular blogs in this field on the YouTube platform, it was found that this component of the Ukrainian Internet segment is actively developing. It can be characterized by the following trends.

First of all, historical subjects are the most popular. This thematic category have the most blogs in the formed selection. In addition, the blogs with the highest total number of views and the highest number of followers belong to this same category. The next categories by popularity are natural sciences, astrology, medicine and psychology.

As for the thematic distribution of specifically historical materials, it was found that the most popular are videos about the history of Ukraine, the history of the USSR, and those events in history that are related to the current political situation. It should be noted here that linking the topic of the video to current international, often political, events is also observed in non-historical blogs. It is also interesting that the methods of historical science are used in almost all the studied blogs.

During the research, it was also determined that all analyzed channels, without exception, use emotionally colored vocabulary, subjective judgments and other artistic techniques in their materials (in their titles, on the covers, or in the videos themselves). The degree of use of such methods varies

depending on the channel. In general, the channels that were investigated have the characteristics of author's journalistic programs.

Peculiarities of reference to sources of information were also investigated. It was observed that there is a difference in the ways of citing sources or indicating them depending on the topic of the channel. In fact, every blog has links to sources of information in the video. At the same time, their mention specifically in the description is mostly absent in materials on historical topics, but present in the rest of the blogs studied.

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### УКРАЇНСЬКІ ТА ПОЛЬСЬКІ НАУКОВО-ПОПУЛЯРНІ БЛОГИ НА ПЛАТФОРМІ YouTube: ОСОБЛИВОСТІ ФУНКЦІОНУВАННЯ

У науковій розвідці звернено увагу на функціонування української та польської блогосфери, розглянуто найпопулярніші блоги науково-популярного спрямування. Проблема є актуальною, оскільки блоги на різних платформах мають не лише інформаційний чи розважальний характер, а й просвітницький, адже вже зараз із блогів можна отримувати освітньо-наукову та пізнавальну інформацію. Фактично блоги науково-популярного напрямку функціонують як відносно безкоштовне освітнє джерело, що діє паралельно до державних та комерційних інституцій. Опираючись на теоретичні розробки українських науковців, можна стверджувати, що блоги, у яких можна використовувати аудіовізуальну та текстову складову, є найзручнішим засобом творення науково-популярного контенту. Власне це і відповідає запитам сучасного споживача інформації.

Новизна статті полягає у виокремленні особливостей блогів на платформі YouTube з аудіовізуальними та текстовими можливостями для створення науково-популярного контенту, а також розкриття специфіки та тенденцій функціонування блогів науково-популярного спрямування.

На основі рейтингування та контент-аналізу з'ясовано, що найбільшою популярністю користується історична тематика, а потім природничі науки, астрологія та медицина і психологія. Зокрема, до п'ятірки українських популярних блогів входять «Імені Т.Г. Шевченка», «Історія без міфів», «Клятий раціоналіст», «WAS: Популярна історія», «Цікава наука». А серед польських науково-популярних блогів популярними є «Historia bez cenzury», «SciFun», «emce», «Uwaga! NaukowyBelkot», «Polimaty».

На основі проаналізованих науково-популярних блогів виокремлено такі тенденції: подача матеріалу у блогах має ознаки авторських журналістських програм; використання історичних методів науки; використання у своїх матеріалах (у їх назвах, на обкладинках чи й у самих відео) емоційно забарвленої лексики, суб'єктивних суджень та інших художніх прийомів; особливості цитування джерел інформації, використаних у блозі. Вони різняться у блогах різної тематики (зазначення їх в описі здебільшого відсутні у матеріалах на історичну тематику, але наявні в інших досліджених блогах).

**Ключові слова:** блог; блогосфера; науково-популярний; YouTube; підписники.