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## Media as a Source of Popular Science Information during COVID-19 Pandemic

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### Abstract

Popular science journalism is an effective method of communication between the scientific community and ordinary people. In the article it is considered popular science media as an important part of mediaspace. On the basis of overview of Ukrainian media, it is done the analysis of the current situation with popular science information in media. To understand the expectations of audience it was conducted the survey (N = 200). Thus it was determined the role of scientific information for the audience, as well as identified relevant methods of presenting scientific information. The survey showed that popular science journalism plays an important role in the lives of Ukrainians. Especially it is actual during world pandemic, when citizens want to know about the newest means of treating from COVID-19. Most respondents, as expected, actively use the Internet to learn about the latest advances in science and technology. As it turned out, Ukrainians read not only domestic publications, but also foreign ones, but there are still respondents who are poorly oriented in the topic, are not informed in the current situation with new in science and in particular with the COVID-19 researchings.

**Keywords:** popular science, media, audience, Ukraine, online, podcast, TV, survey.

### 1. Introduction

Science and journalism do not stand still. Information about scientific discoveries and achievements is interesting not only for the scientific world, but also for common citizens. After all, the state of science illustrates the world in which we live. At first glance, popular science materials do not relate to the social, economic or political life of the country, but they show the general state of scientific and technological progress of the world. Thanks to the achievements of the digital age, the dissemination of information about the next discovery in any field of science, becomes available in an instant around the world. But despite the speed and ease of disseminating information, journalists act as intermediaries between science and ordinary people. Scientific terms are difficult to understand, and therefore the role of a journalist is to convey the essence of an event, discovery, achievement as simply and clearly as possible.

The urgency of the topic is also due to the need to cover the current state of Ukrainian popular science media and prospects for their development. The topic is practically unexplored on the territory of Ukraine and needs a deeper analysis, although such media belong to the underdeveloped topics in our country. There is a lack of research on popular science journalism in the Ukrainian media space. Now journalism is a reflection not only of the political, social, secular aspects of life, but also primarily scientific, namely the latest advances in science and technology. Problems and achievements in scientific fields occupy a significant share in mass communications. However,

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scientific topics are often covered not in specialized publications, but in informational ones, so it is obvious that society's needs for narrowly specialized media are growing.

The media play a leading role in modern society, new directions, styles of writing and presenting information appear, new needs of consumers arise. In a rapidly changing society, it is vital to keep up with its pace, knowledge of advanced technology prepares people for the challenges that overwhelm the modern world. Journalism itself has changed with the development of science and technology. Advanced technologies are used by all media without exception - computers, cameras, the Internet, audio recording media, etc. The significant need of the audience in the formation of a scientific picture, in obtaining operational information about various branches of science, as well as the popularization of science in general, forces the media to respond to consumer demands.

Popular science journalism is an effective method of communication between the scientific community and ordinary people who do not participate in scientific achievements directly, but who are influenced by any scientific discovery. In our digital age, information is the engine of progress. This is a product that is treated with special meticulousness. And now the requirements of the population for popular science information are not fully met. Popular science journalism, which aims to disseminate scientific knowledge in society at this stage, is represented by short columns in the media, and very few independent publications. And popular science journalism is a science for a wide range of readers with different levels of scientific knowledge.

## **2. Materials and methods**

To cover this topic, we will first analyze the theoretical sources. The next step is the analysis of Ukrainian popular science media, as well as Internet alternatives. With the help of analysis and analogy we will assess the state of popular science journalism in Ukraine, conduct a poll to find out the role of science for the audience, methods of presenting scientific information.

We have analyzed Ukrainian online and printed media and also radio and TV, which is available for the most of our population to find out if there is a popular science content there.

Popular science media is different from traditional media. But due to the narrow specialization, the circle of readers is not too large. That is why it is important to understand the place of journalism about science in the life of Ukrainians. We decided to conduct a survey on the importance of popular science journalism for the audience, as well as to find out which popular science media Ukrainians consume. The survey had been held during April-May, 2020. Accordingly, our aim was to analyze the needs of the audience in popular science media and analyze their role in the life of modern consumers of scientific information. The main question is what should be popular science media to meet the needs of the modern reader and whether it is necessary to change the established form of media.

The purpose of the survey was to determine the target audience of popular science media, to find out whether the form of work of such media is suitable for users and to determine what modern popular science resources should be in order to be in demand and interesting to audiences. Based on the survey, we will analyze the popular science media that are read in Ukraine, give them a description and form their own project of popular science media, as well as form advice for media that write about science. We conducted a survey by questionnaire. We developed a questionnaire and envisaged two possible ways to fill it out – manually or via an Internet link in Google form. We offered both options, so we were able to determine which part of the audience tends to be traditional and which to the digital future.

The questionnaire contains 6 questions – open, closed and mixed types. 200 respondents were interviewed – hospital students, representatives of IT specialties, teachers, personal acquaintances of the author, people of different ages and status, 124 women and 76 men. Manual processing was used as one of the methods of information processing. Among age categories: 18-24 years old – 36,5 % of respondents, 25-40 years – 46 %, 41-50 years – 7,5 %, 51-65 years – 5,3%, 65 and more – 4,7 %.

## **3. Discussion**

Scientific and popular sphere of communication is now rapidly developing and gaining new features - virtuality, globality, mosaic, social orientation (Egorova, 2018).

In an era of mass media propagation, the potential to disseminate scientific discoveries to a curious and literate public is unprecedented. Scientist and science advocates have the ability to

bypass gatekeepers of traditional media to grow and nurture their own audiences. What role should scientist play in correcting bad science, fake science, and pseudoscience presented in popular media? We identify two tracks that scientists can use to maximize the broad dissemination of corrective and educational content: that of an audience builder or an expert resource (Thaler, 2015).

The state of popular science journalism primarily depends on the state of science in the country and the world. The state of Ukrainian science can be assessed in one word – threatening. This is due to both insufficient funding and staff turnover, as well as the "brain drain" abroad. The number of scientists per unit of population is rapidly declining in Ukraine (Romanchuk, 2011). Given this trend, the number of popular science media cannot increase, because the topic of science is not popular in our country. The Ukrainian mass media market is full of periodicals not only of informational content but also of entertaining, advertising, and political nature. There is simply no place for popular science journalism, not only because there is no demand for it, or because we have a low state of science, but also because it is almost impossible to make money on such publications. New media in Ukraine are created either for the purpose of earning money or for the purpose of achieving certain personal goals (creating the necessary reputation, promoting one's own ideas, political ambitions, etc.).

For example, in China, the term "science" became known only in the last century. Science education, the discourse of science, and popular imagination of science emerged only during the past hundred and twenty years, over which time they gradually gained recognition. (Yang, 2016). O. Pilkington declares that popular science has a majority of definitions. She argues that even without the replacement of terminology popular science maintains the focus on the specific rather than the general (Pilkington, 2019).

In journalism, there are often battles over the topic: who should write materials that promote science - scientists or journalists? Of course, it is good if professional scientists have the desire, time, and skill to write such materials, but if a scientist does it all the time, will he have time for science itself? On the other hand, journalists often lack the knowledge to correctly interpret certain events or phenomena (Bondarenko, 2012).

So the best thing for this situation is the cooperation of scientists with journalists. Ukrainian scientists are not used to working with the media, and hence the problems with communication. That is why you need to become part of the civilized world and be able to find methods of communication in completely different areas. In Ukrainian realities, such cooperation is not always productive, especially in the humanities and history in particular.

Part of the population consumes only entertaining content, so when scientific explanations are not entertaining, they are less read and watched. That's why media should provide not science information, but in popular format, which can be interesting for audience. On this case Donna G. Show says that children and students may not realize the difference or even that they are being exposed to science because they are only seeking to be entertained (Show et al., 2000).

Science and entertainment represents two of the most powerful cultural institutions that humans have developed to understand and explore their world. Most people are not scientists. Therefore, the public encounters images of science most often through depictions in popular culture (Jamieson et al., 2017).

There are a lot of definitions of popular science media and journalism. In Ukrainian dictionary, popular science publication is a publication of information on theoretical and (or) experimental research in the field of science, culture, and technology, presented in a form understandable to non-professional readers. Such publications are partly similar to scientific ones, but journalists aim to explain certain complex phenomena to the general public, avoiding excessive formulas and terms, instead of explaining everything briefly and in essence. This simplification is also done in order to interest a wide range of readers in science and to encourage scientific activity. In fact, popular science increases medialiteracy of readers and it is very important nowadays because «the discussion around the problem of media manipulation has dramatically intensified in recent years, especially in connection with the spread of fake news via the Internet» (Levitskaya, Fedorov, 2020).

However, Clint Witchalls says that scientists have a societal obligation to deliver credible information to those who can use it. Failing to do so, he suggests, leaves scientists at risk of becoming irrelevant (Witchalls, 2016). He declares that scientists have much to gain by sharing their research with the public. Moreover, it is important to have a relevant argymentation in the

popular science articles. That is why Kononenko et al. pay attention on different types of argumentative structure are considered and the co-occurrence of arguments “from Expert opinion” with other types of argumentative reasoning typical of the popular science genre (Kononenko et al., 2020).

The task of a science journalist is to process complex scientific information, which he must convey without changing the meaning and distortion. That is why such journalists are people who have training in certain professional disciplines because it is not so easy to become a real popularizer of science through the media. There is no special training. With the growth of scientific information, science has actually begun to play a key role in society, as most of the information we consume is related to science.

Researcher Jutharat Jitpranee identifies that one of the most important principle in popular science materials is the availability and interesting presenting of the information (Jitpranee, 2017).

There is no single definition of scientific journalism in world science. Proof of this is the statement of scientists Summ, A., & Volpers, A. In the classic understanding, science journalism is prompted by scientific events and is rather noncritical. Science coverage in a broad sense is defined by a wider range of journalistic styles, driven by non-scientific events, and with a focus on the statements of scientific experts (Summ, Volpers, 2016). With the increasingly growing technological advances and their consequences for societies, the public has the right to be engaged in the outcomes of science. On the one hand, the public are interested in acquiring information about the results of scientists' experiments. On the other hand, the scientists are willing to share their feelings about their discoveries with the public in order to achieve wider audience (Babaii et al., 2017).

The topics of popular science publications reflect the level of the best achievements and achievements of society, which is a litmus test that indicates the level of development of society at a certain stage and the level of interest of scientists in specific fields of science.

Often the media which is not focused on popular science, but has columns, or distributes such news, or makes its own programs. Some media prefer to digest scientific news. But there are also mass media that are exclusively popular science.

The topics of popular science media often change, but this area is alive, dynamic, it covers advanced technologies (Sokolova, 2019). Some topics have been supplanted by newer, more modern and topical ones (eg cloning, the impact of structured water on human health, the latest technical advances, such as mobile phones, laptops, etc.), some have become narrower. only in passing (as a historical fact), others, on the contrary, more broadly (the fight against cancer, the nature of dreams, systems of development of human internal resources - breathing, yoga, starvation, meditation), and a completely new topic. However, all these changes did not happen simultaneously and suddenly. It was a slow and inconspicuous process, which, however, significantly changed the "face" of popular science media around the world. Especially actual popular science became during the world pandemic. COVID-19 has not only caused an unprecedented health crisis; it has also caused an infodemic with the spread of false news (Javier, 2020), so quality popular science materials can help to increase the medialiteracy of readers and avoid fake news.

Now the Ukrainian and world media are trying to provide more environmental news. Media and communication processes are central to how we come to know about and make sense of our environment and to how environmental concerns are generated, elaborated, manipulated, and contested. Media and communications landscape have evolved profoundly with the continued rise of digital and social media. Such changes have gone hand in hand with and often facilitated, enabled, and enhanced shifting balances of power in the politics of the environment. There is thus a greater need than ever to analyze and understand the roles of mediated public communication about the environment, and to ask critical questions about who / what benefits and who / what is adversely affected by such processes (Hansen, 2018) concerning the environment, can most often be found in the sections *Science* in such media as *BBC Ukraine*, *Radio Liberty*, *Novoe Vremya*, on the website of the online publication *Kunsht*, which is also published in print.

There is no separate Ukrainian popular science television channel. Attempts to occupy this niche were once made by the *Mega TV* channel, but it never became a narrow-topic channel on this topic (Kitsa, 2018). The channel now broadcasts some natural programs (*Mind Games*, *Alaska: Rules of Survival*) and short scientific experiments, which, however, occupy no more

than 20 % of the channel's airtime. Some popular science programs were also broadcast in 2016–2017 on *Tonis*, *Eco TV*, and *UFO TV*, but these programs were not authentic, but only translations of foreign media products. Instead, on the most rated Ukrainian TV channels, popular science topics are replaced by pseudo-scientific programs, such as *Show of psychics*, *Molfar*, *Diary of a medium* and others.

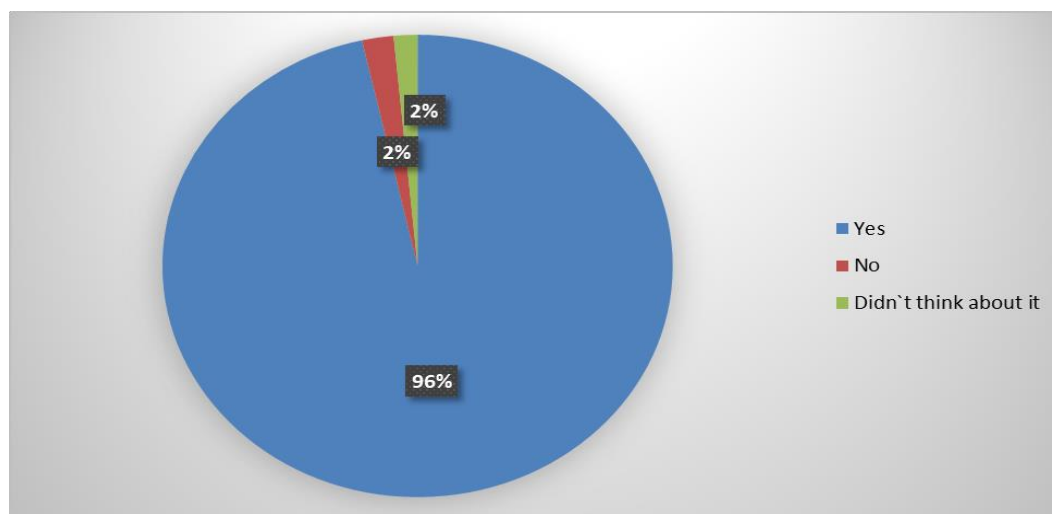
As for the magazine market, at the present stage in Ukraine there are Russian-language versions of popular science magazines *National Geographic*, *In the world of science* (Scientific American), actually *Russian Around the World*, *Science and Life*.

Ukrainian media mostly present scientific information as a note in a news feed and thus perform only an informative function. Instead, editors of popular science publications such as *BBC Future* have set themselves the goal of making people smarter every day, and their material explains how to live smartly in a world that is changing so fast (Barnett, 2015). A significant promoter of science in the United States is the National Aeronautics and Space Administration or NASA for short. After all, NASA not only launches spacecraft but also studies various soil rocks, phenomena, looking for evidence of life in space and on Mars, in particular. Science pop articles appear on their websites, as well as on social networks, where their account is registered (Singh, 2011).

Journalism and journalistic discourses play a crucial role in framing environmental issues not only through narratives but in how media institutions, as stakeholders themselves, are tightly enmeshed with and weigh in globalization and commercialization processes and governance. Embedded in framing, on the whole, be it of news or scholarly analysis, is a significant form of storytelling power (Åberg et al., 2018)

#### 4. Results

To the first question "Do you distinguish popular science news from general?" 193 people answered "Yes", 4 – "Did not think", 3 – "No". In percentage terms, the results look like this:



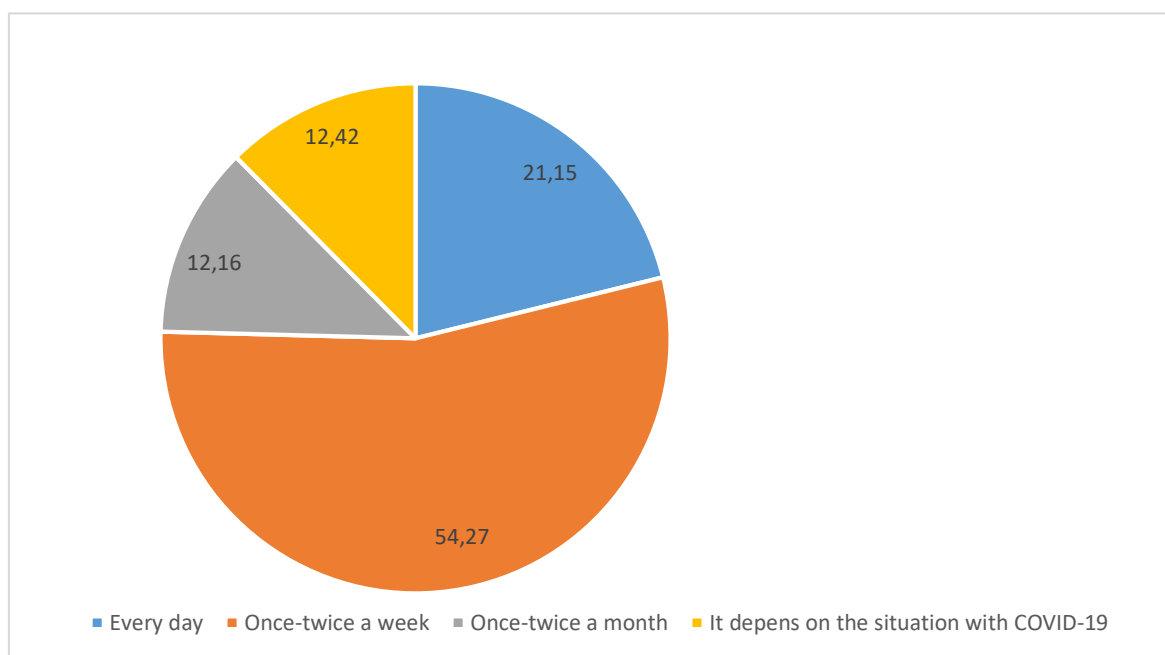
**Fig. 1.** Do you distinguish popular science news from general?

To the second question "How often do you read, listen, watch news about science?" For those who answered "yes" and "did not think". And in the Google form, we created restrictions, for those who answered "No" - the survey ended with questions that are classified as passports, i.e. the last three. was made in order to participate in the survey only those who are really interested in science, because on the basis of this survey we have to develop a project of our own media and make recommendations for popular science media, so we got the following results:

So, as we can see, the world pandemic influences on the demand of audience for popular science materials. However, the similar survey has not been provided by us before the COVID-19, so we can't say if the interest of respondents to the popular science has increased or not.

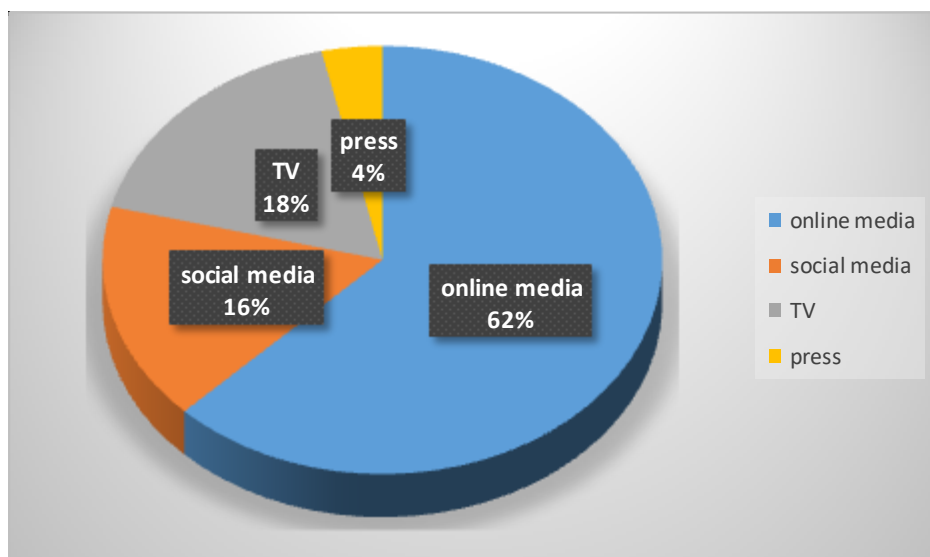
Regarding the next question "What types of media do you prefer?", 113 people were chosen online media. Those are respondents from the first and second age categories, and 33 people were

chosen from social media. Among the third category – 19 people chose online media, 5 – TV, 9 – Radio, 12 – wrote their version – they combine different media and turn to different types.



**Fig. 2.** How often do You read popular science materials?

The oldest category prefers television – 26 out of 50; 4 – TV and press; 7 – radio; 15 – Internet media. So, the choice of today's audience is still for the online media. But the younger age groups are between the ages of 18 and 35 and learn news from social media (9 people). Which is not surprising, because there are not many publications that promote science, so most information can be obtained from the media on the Internet.



**Fig. 3.** What types of media do You prefer to get popular science information from?

There were some completely open-ended questions in this questionnaire. This is done in order not to push the respondent to answer, but to make him think and remember what he knows. The situation is the same with the question: "Indicate the names of Ukrainian media from which you receive information about the state of science?". It is open, because it was important for us to find out what kind of media it is without tips. After all, based on these answers, we will analyze the media and draw up a plan for our own popular science media. Thus, the respondents

gave the following answers: Leader of the survey: *Kunsht* (54 respondents indicated it), TV channel *Mega* (36 respondents), *Cursed Rationalist* (29), *Interesting Science* (29), *Techno. Novoe vremya*, *Technologies* (13), *Science and Technology. BBC Ukraine* (11), *Inventor and Innovator* (10), 2 + 2 (9), *Experiment* (8), *Ear* (5) - no longer available, *Science and Technology* (4) – Russian-language and is not currently available. Some of the respondents indicated several media outlets, so the total number of these media outlets is 208.

It was rather strange that nobody from our respondents chose radio as a source of popular science materials. Nevertheless, in open-ended questions 12% of respondents have answered that they listen to the podcasts on the sites of online media, such as *Ukrainska Pravda*. These are respondents, aged 18-24 year. They also concreted that listen podcasts about medicine, new technologies and space. Also 5 % of respondents have told that they wish such podcasts to be more.

Perhaps one of the most important questions of the questionnaire was about the features that you consider the most important in the popular science media. One or more answers could be given to the question. The first thesis *Topics*. Often important things are left out "is relevant for 189 people. As for the format, it is 154 people, the audience does not like to read long texts. Only 46 people want to read long texts, depending on the complexity of the topic. ¾ respondents want to read popular science topics on the Internet, ie a platform for dissemination should be created there. This could be judged from previous answers about the Internet. 51 respondents are sure that science should entertain. That is, if you count the scale of all respondents, it is ¼. The point of accessibility was chosen by all respondents. All in one voice declare that science should be easy to perceive. The format of popular science newsletters for 71 respondents is also important, so as not to miss anything important. There was also an item "Your option", only 21 people left a comment. There were comments like this: "*For more popular science media*", "*For ordinary media to introduce separate sections on science*", "*It would be good if Ukraine continued to publish National Geographic*", "*We have few specialized journalists, we need to increase the number of them to have someone to write about the popular science*", etc. Several confirmed the theses that were submitted for selection.

Content analysis of popular science topics in the Ukrainian media gives grounds to choose only a few media for more detailed analysis. The reason is that most socio-political media mostly do not have a permanent column *Science*, and there are also very few specialized popular science media.

One of the most frequently read media by our respondents is *Kunsht magazine*. The slogan of the magazine is *Science as Art*, as the name suggests, because *Kunsht* is translated from Old Ukrainian as art. Many artists, illustrators and designers work on the magazine to bring the beauty of science to life. The journalists who create the magazine say the following about it: *Kunsht* is a modern design and texts about how the world is changing. More than 50 people can work on one number. The magazine is illustrated, published on thick glossy paper, has 100 pages. *Kunsht* has a website, but it was rather created to order products there, because in addition to magazines, you can also order a variety of merch. The authors decided not to post scientific news on the site, because this journal is not aimed at information and scientific presentation. That is, they prefer large genres. For example, in the first issue there are 14 articles, from 3 to 10 pages. The first issue is devoted to the topic of space tourism. An article called *to the moon and back* tells how many millions you can become a space tourist, how many people have already seen the "blue planet" from space and why it is so expensive to fly from Earth.

Although the magazine relies on popular science articles, short news items also appear in them. First of all, on the Facebook page, which has 20,000 subscribers. This is almost twice as much as in Ukrainian popular science channels, which also run social networks and promote science on such platforms. So on the fb-page, readers can often watch a short informative video about the landing of a new mission from NASA to Mars, or the peculiarities of aurora borealis in Alaska and others. *Kunsht* applies the principles of convergent journalism in its work. One such example is the free newsletter for registered users – *KunshtWeekly*. This is a digest of popular science information that took place in the world in a week.

One more media which have chosen our respondents is a Ukrainian popular science television channel *Mega*. It is a part of InterMediaGroup media holding. Founded in 2005. This is one of the first popularizers of science in Ukraine on such a scale. The slogan of *Mega* is "always an interesting TV channel". Now the channel has both own and translated foreign projects. The projects of own production include: *Pride of Ukraine*, *Ukraine: forgotten history*, *War inside us*, *Skarb.ua*, *Nauka.ua*, *Fake history*. That is, as for its own production, the channel is more

inclined to historical programs about Ukraine and the world. There are many more translated programs, here are some of them: *Treasures from the landfill*, *Women who changed the world*, *Ruthless Universe*, *The greatest deceptions in history*, *Mega-food*, *Incredible space*, *Naked science*, *Tanks*, *Great Battles*, *Mind Games*, *TopGear*, *Planet Earth*, *Secret Life of Animals* and others. These are the programs that are the most rated on the TV channel. From such a large number of programs, it becomes obvious that the content of the TV channel is not lacking, and there is a specific lack of Ukrainian content, because there are far fewer programs created directly in our country.

The downside for viewers was that you could watch these programs only directly on the channel, later it became possible on the site, but in real time, now many programs can be watched on the official YouTube channel *Mega*. Nevertheless, the YouTube channel continues to be used for program announcements, and the programs themselves can already be viewed on the site. The Facebook page has 8.4 thousand followers.

YouTube bloggers have quickly invaded our lives and are considered the influencers of the modern generation. What they are talking about responds to modern progressive people, which is why moisture is so popular now.

*The Cursed Rationalist* is a popular science, Ukrainian-language YouTube channel, the author of which promotes rationalism and skepticism, he calls it the presumption of the scientific method. The channel has 3.4 thousand subscribers. This is a non-profit project, without advertising. The total number of views is 54,826. The channel was founded by Artem Albul. You can help the channel in its development on the *Patreon* website, where I can officially send voluntary contributions. Anton Senenko wrote in one of his blogs that *The Cursed Rationalist* is a vaccine against populism and lies. There are videos on this channel that relate to different areas of life, but there are many videos that are aimed at debunking the myths. This topic is actually quite popular among Ukrainians, because the level of scientific awareness in our country is much lower than, for example, in America, the Scandinavian countries, Australia. For example, a video about iridodiagnostics on the channel *Cursed Rationalist*, a scientific approach proves that the method of determining diseases of the iris - does not work. Importantly, the author doesn't just say, "It doesn't work because it didn't help me." He cites real research as an example, be sure to link to it in the description of the video, and now even makes a special Google document, where he leaves a link to all the materials he used. In addition, Artem Albul also actively maintains pages in Telegram, Instagram and Facebook. In the latter, he leaves many links to scientific materials, announces popular science events, news of the channel, etc.) In Telegram information is more concise, many author's popular science reviews and articles. Instagram announcements of new releases, photos from backstage, etc.

Another material of the *Cursed Rationalist* concerns the debunking of myths about oral care. Video *Fluoride in toothpastes - a necessity or a conspiracy of dentists?* talks about fluoridation of teeth from a scientific point of view, he gives specific figures of the amount of fluoride that should be contained in toothpaste to be effective, explains how fluoridation at the dentist prevents disease, but only if the doctor prescribed it to you. The channel's channel insists in its videos against self-medication, especially with methods such as iridodiagnostics, as mentioned earlier.

Each video on this channel is an example of good popular science journalism that meets all standards. There are no empty evaluative judgments, all conclusions are made by the author based on scientific research, he has no evaluative judgments, there is only a healthy scientific skepticism. The channel began its existence in 2017 and has 20 videos, with the number of views from 1500 to 7.5 thousand views. Also noteworthy is the material on vaccination, which is very ambiguously perceived in Ukraine, feared and considered a conspiracy by corporations, while suffering from measles outbreaks. Video *Vaccines. Genocide or Salvation* was written by the author precisely because the popularity of vaccination refusals has risen sharply. This video is almost twice as long as the previous ones (11 minutes), the author debunks the myths about vaccines based on advanced research by scientists.

## 5. Conclusion

Thus, the survey showed that popular science journalism plays an important role in the lives of Ukrainians. Most respondents, as expected, actively use the Internet to learn about the latest advances in science and technology. As it turned out, Ukrainians read not only domestic publications,



but also foreign ones, but there are still respondents who are poorly oriented in the topic, and therefore included in the list of media that are no longer published. The most popular are the media that operate on the Internet, they are popular not only among young people, but also among all age groups that we have considered. However, several groups of respondents do not mind reading a popular science magazine or newspaper, arguing that they will not miss anything. After all, a newspaper or magazine is like a digest of scientific news that can be obtained by mail.

Some respondents admitted that it is important for them to send such news so as not to miss anything important from what happened in the world of science. It is also important that popular science media write in an accessible way, because it turned out that respondents are poorly oriented in scientific terms and, nevertheless, do not want to miss important events happening in the world of science and technology. Respondents also know many Ukrainian and foreign popular science media. There were those who called the media, which ceased their activities, but nevertheless, respondents are guided by what is offered to them in the field of science. This is not surprising, because education in the world as a whole has increased, and the number of people who use many technologies in their lives has increased, and therefore must be able to use them.

Ukraine definitely has an audience for popular science media. The only problem is that our domestic market is not yet able to meet the needs of consumers. After all, there are very few projects that promote science, and often those that are, are difficult to write and do not try to meet the audience, for which it is important that information platforms are on the Internet, to develop applications, have the opportunity to receive newsletters. The traditional press, for example, is also not bad, but it must also use modern approaches. People want more Ukrainian-language content, as well as for the media to have a separate section on news from the world of science. Then in any media you can quickly find out what is happening in science.

Based on the results, we will form our own concept of popular science media, a modern media platform that will be as convenient as the traditional press, but at the same time interactive. It is important to surprise, encourage and influence the modern consumer of information. If the media cannot answer the user's question "Why should I do this?", Then such a user will not consume the information provided by you, in whatever wrapper it would be. It is important to explain the need for this knowledge. And you can do this through the rebranding of your own media, if it is outdated.

Today's audience needs new approaches to presenting information. It is necessary to create applications for Android, IOS platforms, work in social networks - make official accounts, develop the site as interactive as possible, be sure to be able to comment and distribute news. It is also important to involve not only social networks, but also various video hosting services, because the modern consumer requires maximum interactivity. One of the demanded formats of popular science information are podcasts. They can be situated on the sites of online media or on the platform Spotify. It is also important to present the information concisely and clearly, so that only from the title the author gets an understanding of what it will be about, so that each material distributed on social networks has a short intro. And, as the experience of other media shows, it is important to maintain accounts on many social networks to increase the audience.

## References

- Åberg et al., 2018 – Åberg, A., Christensen, M., Lidström, S., Larsen, K. (2018). Environmental Themes in Popular Narratives, *Environmental Communication*. 12:1: 1-6.
- Babaii, Atai, Saidi 2017 – Babaii, E., Atai, M.R., Saidi, M. (2017). Are scientists objective? An investigation of appraisal resources in English popular science articles. *Iranian Journal of Language Teaching Research*. 5(1): 1-19.
- Barnett, 2015 – Barnett, S. (2015). BBC Charter Green Paper: Unprecedented threat to BBC's future. *Media Policy Blog*. [Electronic resource]. URL: <https://blogs.lse.ac.uk/mediase/2015/07/16/bbc-charter-green-paper-unprecedented-threat-to-bbcs-future/>
- Bondarenko, 2012 – Bondarenko, T. (2012). Populyarizatsiya nauki v ukrains'komu mediaprostori [Popularization of science in Ukrainian mediaspace]. *Derzhrava ta regiony. Serija: social'ni komunikacii*. 1: 221-232. [In Ukrainian]
- Egorova, 2018 – Egorova, L.A. (2018). Popular science discourse development in the cyberspace. *Advances in Language and Literary Studies*. 9(5): 79-83.
- Fischhoff, 2013 – Fischhoff, B. (2013). The sciences of science communication. *Proceedings of the National Academy of Sciences*. 110(Suppl. 3): 14033-14039.

Fuller, 2015 – Fuller, G. (2015). Cultivating science. *Reading science: Critical and functional perspectives on discourses of science*. 113: 35.

Hansen, 2018 – Hansen, A. (2018). Environment, media and communication. Routledge: 244.

Javier, 2020 – Javier, C.F. (2020). COVID-19 and infodemics: how to solve this problem. *International Journal of Media and Information Literacy*. 5: 2.

Jitpranee, 2017 – Jitpranee, J. (2017). A Study of Adjective Types and Functions in Popular Science Articles. *International Journal of Linguistics*. 9(2): 57-69.

Khan, 2016 – Khan, S. (2016). Scientists have much to gain by sharing their research with the public. *The Conversation*. [Electronic resource]. URL: <https://theconversation.com/scientists-have-much-to-gain-by-sharing-their-research-with-the-public-64129>

Kitsa, 2018 – Kitsa, M. (2018). Popular science programs on TV as a part of media education: features, types, importance for the audience. *Mediaeducation*. 1: 145-158.

Kononenko et al., 2020 – Kononenko, I., Sidorova, E., Akhmadeeva, I. (2020). The Study of Argumentative Relations in Popular Science Discourse. *Russian Conference on Artificial Intelligence*. Springer, Cham: 309-324.

Levitskaya, Fedorov, 2020 – Levitskaya, A., Fedorov, A. (2020). Typology and mechanisms of media manipulation. *International Journal of Media and Information Literacy*. 5(1).

Pilkington, 2019 – Pilkington, O.A. (2019). Definitions of scientific terminology in popular science books: an examination of definitional chains. *Science Communication*. 41(5): 580-601.

Romanchuk, 2011 – Romanchuk, O. (2011). Rol' naukovo-populjarnoi' literatury v propagandi znan' [The role of popular science literature in the propaganda of knowledge]. *Visnyk LNU. Serija: zhurnalistyka – Bulletin LNU: Series Journalism*. 34: 188-194. [In Ukrainian]

Shamne, Shishkina, 2017 – Shamne, N.L., Shishkina, E.V. (2017). German popular scientific medical online media: structural and functional aspects. *Vestnik Volgogradskogo Gosudarstvennogo Universiteta*. 16(2). [in Russian]

Show et al., 2000 – Shaw, D.G., Dybdahl, C.S. (2000). Science and the Popular Media. *Science Activities*. 37: 22-31.

Singh, 2011 – Singh, V. (2011). Using NASA science news articles to enhance learning in the classroom. *The Physics Teacher*. 49(8): 482-483.

Sokolova, 2019 – Sokolova, I. (2019) Scientific and Popular Resources of Russia: Journals and Internet Media Projects. *Sci. Tech. Inf. Proc.* 46: 187-191.

Summ, Volpers, 2016 – Summ, A., Volpers, A.M. (2016). What's science? Where's science? Science journalism in German print media. *Public Understanding of Science*. 25(7): 775-790.

Thaler, Shiffman, 2015 – Thaler, A.D., Shiffman, D. (2015). Fish tales: Combating fake science in popular media. *Ocean & Coastal Management*. 115: 88-91.

Yang, 2016 – Yang, Q. (2016). Mr. Science Goes Popular: Science as Imagined in Twentieth-Century. *Chinese Literature and Culture*. [Electronic resource]. URL: <https://etd.ohiolink.edu/>