

Specifics of Appealing Headlines in Russian Mass Media Materials Dedicated to Science

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ABSTRACT

The article attempts to study the impact of headlines in science news and popular science messages in Russian in the news agencies, the Internet newspapers, on the websites socio-political media, as well as on the popular science sites. It is noted that the theme of science occupies one of the last places in the hierarchy of news content, which significantly limits the possibility of getting news data on the information agenda. Thematic varieties of effective headings are given, in which constants such as health, life safety, and sexual relations are distinguished. Linguistic and stylistic markers of clickbait headings are considered, among which quantitative numerals, colloquialisms, hyperbole created by using the epithet or the superlative degree of the adjective. The analysis of syntactic features leads to the identification of typical sentence schemes in which click-through ratio triggers are determined, forcing the user to turn to the article for details. The organicity of the appealing headlines of the concept of infotainment, which is a productive mechanism for popularising science on Russian popular science sites, is approved. It is indicated that the corpus of appealing headlines on these resources is characterised by individual author's decisions embodied with the help of a comic mode, allusions, precedent texts and quotes, differentiation of the "image" of the addressee, oxymoron, antithesis and grotesque. In the system of popularising science, appealing headlines become organic components of news, gamified, and animated messages.

Keywords: *Headline, clickbait, popularisation of science, mass media, agenda.*

INTRODUCTION

Modern mass media discourse is continuing to attract interest among philologists, psychologists, cultural experts, and communication specialists because of its influence on the system and the evolution of discursive space. The expansion of its cognitive paradigm leads to an understanding of the complexity of the Internet environment. The study of its popular science segment and news content dedicated to science is relevant in connection with the following circumstances. The Russian scientific community is rooted in Soviet educational traditions, the main "trump card" of it was the combination of mass involvement of the population in the field of science (through newspapers, television and radio programmes, films) and repeatedly verified information with its rigorous, academic presentation. The popularisation of science in the Soviet Union was part of the ideological system and reflected the status of science in the state. The extensive and productive background on the strategy and tactics of education has largely contributed to the fact that the perception of science as a condition sine qua non of social progress has not changed in Russia even now. At the same time, the volume of popular science content, the means and forms of its popularisation in mass media over the past 15-20 years have undergone not only an increase, but also a significant communicative transformation. So, the traditional channels of popularisation -

television and the press - have given way to Internet resources, education and edutainment (education + entertainment) have given way to infotainment, information - to appeal and impact. The changes affected not only the content that has become multimedia and hypertext in the Internet environment, but also communication strategies, tactics and language markers of news messages.

It seems significant to identify the specifics of headings in popular science materials and news on science. This component of the message, while maintaining a stylistically strong position, has acquired a kind of multitasking - the need to implement informational, entertaining and marketing functions with their general submission to the educational concept. It is well known that scientific communication is not mass due to the limited circle of people to its perception and production. But the popularisation of science is called upon to create a positive image of science and its actors, which in the public consciousness are on the periphery of social significance. Therefore, the role of the headline, the "vanguard" of the communicative effectiveness of any, not only popular science, message, in capturing the recipient's attention is obvious. The relevance of the study, therefore, is, firstly, to identify the regularities of the popular science segment of the media space, and secondly, to determine the persuasive potential of headlines that can influence the formation of public opinion.

Observations show that the heading does not occupy a subordinate and serving position in the material, acquires the status of an independent attractive unit. Informative headings, containing the main idea of the message, disappear from Russian materials, giving way to appealing, emotive, and influencing headlines. Their goal is to motivate the recipient to one or another action. In the system of active headlines, clickbait headings or headings with clickbait elements multiply intensively, allowing a change in the information meaning or partially updating it, which is also a hyperlink. This phenomenon, common in general political mass media, penetrates into popular scientific specialised publications. Thus, the aim of the work is to characterise the thematic, lexical, syntactic and pragmatic features of the current headings in news articles on science and popular science messages, as well as to identify their functions and role in influencing the recipient.

The empirical base includes the sites of the most popular news agencies and mass media in Russia; their audience amounts to hundreds of thousands of users. In addition, the choice of research materials is due to the fact that popular science sites (their audience is much smaller) <https://indicator.ru/>, <https://nplus1.ru/>, <https://elementy.ru/>, <https://postnauka.ru/>, <https://arzas.academy/>, <https://naked-science.ru/> are the most visited in the Russian popular science segment. Their social media and YouTube public websites have the largest number of subscribers among similar resources. For example, the most popular Russian social network resource "VKontakte" <https://postnauka.ru/> has ≈ 505000 subscribers, the resource <https://arzas.academy/> has ≈ 446000, the resource <https://nplus1.ru/> has ≈ 230000.

LITERATURE REVIEW

Headlines in traditional media perform a number of functions: informative, appealing, affecting, expressive, decorative, etc. (Vinokur, 1928; Muzhev, 1970; Lazareva, 1989). If we turn to the classifications (given by the Soviet scientists who did not use the term "clickbait") of the headlines of print media, we will see that the concept of clickbait is partially shared by them to the same extent as online media. For example, even Vinokur (1928), in addition to the denoting and pointing function of the headings, noted the advertising, which solved the

“problem of external amusement”, sought to “captivate the reader, intrigue with an attractive “plot” (p. 78). Muzhev (1970) also considered the function of attracting reader attention to the material in the spectrum of title functions (p. 88). According to Lazareva (1989), “The headline is the first signal that prompts us to read the material or set the newspaper aside. Psychological studies show that about 80% of readers pay attention only to headings” (p. 3).

Appealing headline has its own features and very common in modern mass media (Inozemtseva, 2015; Plaksina, & Kusova, 2011). Some research works focus on manipulative tactics and advertising potential of media headlines, as well as on the specifics of clickbait (Chanysheva, 2016; Lukashevich, 2019; Trufanova, 2019). So, according to Chanysheva (2016) clickbait “is designed to hook the target recipient and have the necessary impact on him, leaving him under its control and offering a choice of articles for the click. As you know, this type of heading was invented in the advertising business and took into account the psychology of the person reading the text. In advertising, a material response is expected from the reader, the potential consumer of the advertised product” (p. 57). For example, Plaksina and Kusova include such titles in their “set” of means of influencing the addressee, attracting his/her attention, forming his/her certain position” (p.120). For example, Plaksina and Kusova (2011) include such titles in their “arsenal” of means of influencing the addressee, attracting his attention, forming a certain position with him” (p.120). As Klushina et al. (2018) point out, “the success of online text largely depends on the clickbait nature of the headline and the successful lead” (p. 64). The analysis of the specifics of modern popular science discourse, status and functions of popular science materials in the Russian information space is reflected in a number of studies (Emelyanova, & Omelayenko, 2015; Vaganov, 2016; Bakanov, 2018; Surdin, 2016; Diveeva, 2015). As a rule, the representation of science in the Russian media is not always positive. For example, Emelyanova and Omelayenko (2015) note: “<...> the medialisation of science has an ambiguous effect on the development of contemporary scientific communications: simultaneously with the expansion of communication opportunities, scientists face various manipulative practices (p. 159). Vaganov (2016) is forced to state “if the goal of scientific popularisation of previous eras was to make one seek knowledge, the goal of Popular Science 2.0 is to make one communicate. To communicate about any knowledge, as long as it is visual and fun” (p. 73). Surdin (2016), analysing the headlines of the TASS, Kommersant.ru and Vesti.ru publications, notes: “A modern person experiences informational pressure, therefore, in order to “hook” him with an important message, it is necessary to give this message a sensational form or at least provide it with a sensational headline. For commercial media, this is an axiom, and they abuse it, actively replicating false sensations” (p. 54). At the same time effective headlines are also considered as part of infotainment as the main tactic for presenting information in popular science media. The specificity of infotainment regularly becomes an object of study (Deterding et al., 2011; Karpenko, & Lobanovskaya, 2019; Basova, & Belenko, 2017; Burlachenko, 2013).

According to Basova and Belenko (2017), “if the media are looking for ways to engage the audience, why not try gamification (p. 54). Thus, there is no consensus in the Russian scientific literature on the importance of influential headlines in the system of science popularisation. This study attempts to comprehend the persuasive potential of such headlines, which can not only entertain the audience, but also lead them to understand the importance of science and its role in the life of the average person.

METHODOLOGY

The methodological base of the study includes interdisciplinary, functional, and systemic approaches. Mass media content devoted to science preserves traces of social and cultural processes, in the framework of which mass communication, individual and authorial speech searches of journalists of popular scientific mass media and step-by-step communicative practices develop. Therefore, mass-media content should be the subject of interdisciplinary research. The interdisciplinary approach used in considering headlines as components of a mass media message takes into account their structural-semantic, aesthetic and PR-specifics, as well as the psychological role in influencing the whole of socio-cultural stereotypes of users. In the framework of the functional approach in the study of acting headings, it is important to determine the dynamic characteristics of the object, manifested in the communication picture they create. The functional approach focuses on the study of emotive, conative, appealing, directive, aesthetic message settings.

The systematic approach is applicable in the description of the integrative unity of the lexical, grammatical, syntactic, semantic and contextual components of the appealing title. A systematic approach, which is based on the idea of the integrity of the studied object, allows identifying its typical structural and functional models.

The study used methods such as observation, description, and analysis.

RESULTS AND DISCUSSION

Modern Russian-language Internet content dedicated to science is quite extensive. It includes the Internet resources of scientific, scientific and technical and scientific research organisations (sites of museums, research institutes and universities, libraries), project sites (festivals, competitions and etc.) and mass media. In the sector of the latter, the user gets acquainted with the news of science and also turns to popular scientific resources for more specialised information. The studied material in the news media covers 2019, in popular science - 2018-2019. The vast majority of mass media is integrated with social networks VKontakte and Facebook, YouTube, Instagram, etc.

To identify the degree of impact of headings in the analysed materials, it is necessary to indicate the place of popular science content in the Russian news space. The significance of this parameter is determined by the fact that the headlines, being a stylistically strong position of the message, become the main "applicants" for inclusion in the information agenda.

To determine the place of a scientific topic in the content hierarchy, we turn to Russian news aggregators and news agencies. In the Russian segment of the Internet, there are such news aggregators as Yandex.News (<https://news.yandex.ru/>), News.mail.ru (<https://news.mail.ru/>), SMI2 (<https://SMI2.ru/>), Rambler.News (<https://news.rambler.ru/>), as well as the Russian content of Google News. On the Yandex.News website, the "Technology" and "Science" headings are in 11th and 12th places, respectively (out of 12). It is significant that at the beginning of 2019, these headings occupied 10th and 11th places. On the Google News aggregator, the "Science and Technology" column is in 5th place. The "Science" section in the SMI2 is the 6th out of 8. On the Rambler media portal the rubric "Science and Technology" also occupies the 6th place and is not divided into thematic sections. In the News.Mail.ru aggregator, there is no "Science" heading.

Aggregators select the names of materials from resources that quickly create news content. On the TASS website (<https://tass.ru/>), the headings "Science" and "Space" are in 13th and 14th places, respectively, although at the beginning of 2019 they were in 11th and

12th places. At the “RIA Novosti” news agency, the “Science” heading ranks 7th out of 12. In the Lenta.ru online newspaper, “Science and Technology” section takes 7th place out of 14. On the media news portal SM124 “Science” section takes 4th, last, place (after the sections “Cinema”, “Celebrities”, “Facts”). Some of the news agencies like RBC (<https://www.rbc.ru/>), REGNUM (<https://regnum.ru/>), and Rosbalt (<http://www.rosbalt.ru/>) do not have in their structure sections on science.

When creating an information agenda, news aggregators are also guided by the top news of social and political online publications. In “Rossiyskaya Gazeta” (<https://rg.ru/>), science does not have a heading, but is included in the “Society” section along with the thematic sections “Health”, “Education”, “Family and Children”, “Nature”, “Space”, “Ecology”, “History”, “Religion”, “Social sphere”, “Media and social networks”, “Losses”, “Diary”. As observations show, scientific topics are present in any of these subsections, which significantly expands the role of science in the news agenda. Updating news content about science in the publication is operational - from 5 to 15 science news daily. In “Komsomolskaya Pravda” (<https://www.kp.ru/>), “Science” section is on the 8th or 9th place (out of 10 or 11) after such sections as “Politics”, “Society”, “Economics”, “In the World”, “Stars”, “Health” and “Sport”. The daily update of messages in “Science” section ranges from 1 to 4. On the “Moskovsky Komsomolets” website (<https://www.mk.ru/>), “Science” section is in the last place and, as a rule, it consists of 10 -20 news blocks, each of which includes 1-10 news. It should be noted that the concept of this section on the MK website is quite peculiar: here you can find reports of ufologists, conspiracy theories, and mythical dead civilizations. In the Internet newspaper “Izvestia” (<https://iz.ru/>) in the section “Headings”, “Science” takes 11 of 16 positions. The thematic spectrum of science news in the editions under consideration is presented by materials on space exploration, genetic research, neurophysiology, wildlife, health problems, etc. The news content of the “space” topic is formed using materials on physics, astrophysics, and astronautics. The content of information genre materials is often created using data from the magazines Nature, Science, Genome Research, Geo, etc., materials from the NASA website (<https://www.nasa.gov/>). The newsmakers of the publications are also academicians of the Russian Academy of Sciences, employees of Russian research institutes, astronauts, designers, doctors, etc.

Thus, the presence of science in the information agenda of the Russian media is insignificant: it rarely appears in the selection of top news. To expand the presence of science, mass media use a number of technologies, for example, integrating its news into the information agenda (Dolgova, & Orekhova, & Badelina, 2019). A productive mechanism is the use of effective headings that attract the attention of the user and intrigue him. On the whole, G. Huseynov pointed out the tendency to replace informative headlines with acting ones, quoted by Babakin on Lookatme.ru: “For almost a quarter-century I have been comparing headlines of Russian and German newspapers and I can definitely say: almost no Russian publication creates informative headers; to one degree or another, each headline is addressed not to a rational and critical reader who wants only information from the newspaper, but to a reader who scours the media for evidence of a conspiracy theory that this reader shares” (Babakin, 2019). Among the characteristics of the appealing heading, researchers note a “trend toward simplification; a tendency to non-literacy; precedence; active use of the language game; expressive syntax. <...> Namely the headline should immediately, instantly attract attention, since on average there are more people reading only headings on the site than reading the main text. Readers are attracted by expressive,

eccentric headlines, so there are so many of them in the media” (Nikolaeva, 2018, p. 43). As mentioned above, the current heading does not carry the main idea of the message but serves as a trigger to familiarise yourself with it.

Among the effective, uninformative or non-informative headlines is clickbait, the assessment of which by Russian linguists is usually negative. So, according to Chanysheva (2016) clickbait “is designed to hook the target recipient and have the necessary impact on him, leaving him under its control and offering a choice of articles for the click. As you know, this type of heading was invented in the advertising business and took into account the psychology of the person reading the text. In advertising, a material response is expected from the reader, the potential consumer of the advertised product” (p. 57). Lukashevich (2019) points out that the clickbait headings “allow distortion of meaning to attract the attention of the reader, programmed by the addressee setting to evaluate in a given direction” (p. 164). Clickbait is characterised by such stylistic and visual expressive means as antithesis, epithet, hyperbole; syntax tools such as interrogative and exclamatory sentences, dots, and parceling. The lexical characteristics of clickbait are the presence of numerals and phraseological units, the grammatical characteristics are the presence of imperative mood verbs, the pronoun “you” and demonstrative pronouns. The relevant headlines in science news tend to be clickbait and contain some of its features. The thematic field of the effective headings is quite large and is determined by the sphere to which the material is subordinated: the privacy of celebrity, health problems, financial enrichment, etc. The strategic task of the current headings is not to inform the recipient, but to encourage him to turn to the material for information that interests him.

Let’s view the features of the appealing headlines in the media mentioned above. In the analysed material, it is possible to identify such a thematic constant as sexual relation:

Scientists have explained why young people around the world are losing interest in sex (RIA Novosti, 11/15/2019);

Sex with the “Martians” was recognised as dangerous (Lenta.ru, 05/20/2019);

Scientists have called the ideal duration of sex (Moskovsky Komsomolets, 06/11/2019);

Geneticists have learned the history of adultery in Europe over the past 500 years. Scientists also found out where it was more convenient for Europeans to have a lover (TASS, 11/15/2019), etc.

Another thematic dominant of headlines is the safety of human life. The motives are a meteorite flying to Earth, epidemics and pandemics caused by unknown pathogens, climate change, etc., which, as it is written, “outline” the indispensable apocalyptic scenario:

Global warming can destroy humanity in 30 years. Australian climatologists scare a catastrophe that will change the whole world (Komsomolskaya Pravda, 06/10/19);

The quick death of human civilization is predicted (Lenta.ru, 06/05/2019);

Scientists have found life-threatening bacteria in apartments (Izvestia, 11/27/2019);

Three people in Hawaii became infected with worms devouring the brain (Moskovsky Komsomolets, 05/31/2019), etc.

Thus, thematic features to a certain extent are guided by the basic instincts of a living being: self-preservation and sexual instinct. This archetypal interest determines the communicative effectiveness of these headlines, which appear in the news of science daily. The click-through ratio of the heading is created by using certain numerical indicators, which are designed, on the one hand, to indicate the “visibility” of scientific certainty, and on the other hand, to encourage the recipient to turn to the message for details. Common lexical features of headings include the presence of quantitative numbers:

Doctors named 8 products that reduce the risk of getting cancer (Rossiyskaya Gazeta, 12/03/2019);

The oncologist listed seven symptoms of cancer (Izvestia, 08/09/2019);

Four scenarios of the end of the world are described (Lenta.ru, 10.06. 2019), etc.

Internet newspapers more often than news agencies resort to colloquial units in the headings, which are stylistically reduced synonyms of literary words. For example, the authors of Komsomolskaya Pravda show great ingenuity, using colloquial phraseological units and neologisms formed from vernacular as a means of linguistic expression:

Scientists: the dirtier the air, the more madmen and criminals (Komsomolskaya Pravda, 10/14/2019).

The discovery of scientists: the famous Lucy - the ancestress of all people - was a fool (Komsomolskaya Pravda, 11/14/2019);

The pigs grew wiser and armed with sticks. The pigs themselves found auxiliary tools and figured out how to use them (Komsomolskaya Pravda, 10/10/2019), etc.

Note that such headlines are almost never found on the news agenda of news aggregators. Researchers pay attention to this phenomenon: “It would be more appropriate to separate the dummy names and the names are figurative, bright, but this does not happen, since automated clickbait detection systems pessimise not only such “flashy” headings “but simply author’s figurative names of materials, which have phraseological units, epithets, expressive syntax, etc. Therefore, we must understand that the media heading, including such speech means, is not always clickbait” (Klushina & Lyulikova, & Nikolaeva, & Selezneva, 2018, p. 65). At the same time, brightness and expressiveness, according to researchers, can become a marker of the inaccuracy of the data presented in lexical, syntactic) also helps to understand how reliable the information is in the publication. If something goes beyond the

bounds of the norm it is more likely to attract the attention of the reader” (Nikolaeva, 2019, p. 57). The issue of the appropriateness of using a number of language tools and pathways in news articles devoted to science has been raised more than once, and especially by scientists. So, Surdin (2016), analysing the headlines of the TASS, Kommersant.ru and Vesti.ru publications, notes: “A modern person experiences informational pressure, therefore, in order to “hook” him with an important message, it is necessary to give this message a sensational form or at least provide it with a sensational headline. For commercial media, this is an axiom, and they abuse it, actively replicating false sensations” (p. 54).

Observations show that in the materials under study the simplification of the syntactic structure of the heading is widely used, as a result, the following scheme is productive: a simple sentence with direct word order, subject (expressed by the noun “scientists” / “specialists”, etc.) + predicate (“Identified” / “named” / “discovered” / “found”) + direct addition:

Scientists have identified a dangerous number of cups of coffee per day (Izvestia, 11/24/2019);

Scientists have learned to recognise Alzheimer's before symptoms appear. The accuracy of the study is 94% (Komsomolskaya Pravda, 08/03/2019);

Nutritionists have revealed the secret of “eternal youth” (RIA Novosti, 11/13/2019), etc.

The lack of completeness of informational content is due to the features of the addition, which, being semantically “blurred”, is a click-through ratio trigger, and makes the user turn to the article for details. This model is transformed, as a result of which the heading becomes a complex sentence. In it, the main thing reproduces the basis of the previous option, and the subordinate part (underlined below) is clickbait:

Scientists told why people have nightmares (Rossiyskaya Gazeta, 11/28/2019);

People lose weight with the help of fat. Scientists have explained how to eat everything and not get fat (RIA Novosti, 08/29/2019);

Scientists have found why beautiful women rarely become bosses. Spoiler: this is due to the effect of the “fatal woman” (Komsomolskaya Pravda, 03/26/19), etc.

A common, if not standard, heading model is a sentence with a reverse word order with a predicate, pronounced passive participle “found” / “named” / “open” something (smth.):

Named least susceptible to cancer blood type. (Izvestia, 26/11/2019);

Named the first symptoms of lung cancer (RIA Novosti, 11/17/2019);

Found an unexpected remedy for aging (Lenta.ru, 02/07/2019), etc.

The prevalence of this type of heading is indicated by Inozemtseva (2015): “Titles of this type are designed for readers who love sensational material. The main idea is presented

in one sentence and is revealed accurately and concisely, but rather mysteriously and makes you read the note” (p. 146). We also note that the productivity of such constructions is due to the high probability of such news getting into news aggregators. To implement the function of attracting attention, the creators of headings use hyperbole, achieved either with the help of an adjective in an excellent degree or with a bright epithet:

An asteroid the size of the three pyramids of Cheops will approach the Earth (Izvestia, 09/23/2019);

A grand red star flares up in the sky. A foil hat will not help (Komsomolskaya Pravda, 09/27/2019);

The appearance of a giant death zone is predicted (Lenta.ru, 06/14/2019), etc.

Precedent texts, allusions, and quotes are found in the analyzed material much less often than other means, here are some of them:

All covered in mold: how to save people from deadly fungi. A technique has been developed for a highly accurate diagnosis of dangerous mycoses (Izvestia, 11/01/2019).

Here is an allusion to a line from a song in the Soviet film Director L. Gaidai’s comedy “The Diamond Arm” “All covered with greenery ...” performed by the actor A. Mironov.

Wider step, maestro! And then you become impotent. Scientists have linked the characteristics of gait with erectile dysfunction (Komsomolskaya Pravda, 09/24/2019).

“Wider step, maestro!” In the quoted title of a novel by Russian writer V. Shukshin, in which, of course, the topic of erectile dysfunction is not mentioned. Combination practice is also very common, which implements the integrated use of clickbait components, for example, a combination of imperative mood verbs, colloquial vocabulary, ordinal numbers and exclamation-question sentences:

Want to learn a lesson? Chat about it with a friend! Seven life hacks how to remember information faster (Komsomolskaya Pravda, 10/03/2019);

The mystery of the Loch Ness monster is finally revealed. The sensational results of the search for Nessie's genetic material in the legendary Scottish lake are summed up (Komsomolskaya Pravda, 09/05/2019), etc.

All of the tactics discussed above provide for the implementation of a pragmatic setting of headings on the impact on the actions of recipients. In addition, observations of the structurally-content specifics of the current headings show that in their corps one can distinguish such a genre formation as a life hack. Lifehack tactics provides for the actualization of a quick and easy solution to a certain problem, life difficulties that an ordinary person faces:

Doctors have suggested an effective way to lose weight without dieting and training (Rossiyskaya Gazeta, 12/07/2019);

Scientists told how not to be bald. The method is the simplest, you don't even need to do anything (Komsomolskaya Pravda, 11/13/2019);

An easy way to get rid of diabetes and obesity has been named (Lenta.ru, 04/25/2019);

Eight tips for good sex have been published (Moskovsky Komsomolets, 06/17/2019), etc.

The informational picture created by acting headlines and, in particular, clickbait headings, is formed by means of using a certain circle of concepts: epidemics, catastrophes, diseases, and infections are always “new” and “deadly”, burial is “mysterious”, use is “unexpected”, method is “new”, “simple”, “effective” and “reliable”. Despite the apocalyptic scenarios offered by the headlines, the informational picture of the world is quite positive. For example, in the Internet newspaper Lenta.ru only in November 2019 “scientists” found for the recipient: “a method to combat alcohol addiction”, “a way to avoid deadly dementia,” “ways to lose weight without exercise,” “a way to get energy of the future”, “a way to stop the spread of cancer”, “an easy way to get rid of diabetes”, “a way to prevent death from cancer”, and also “an effective way to live longer” was revealed. Despite the generally positive view that science is the most important condition for social progress and an increase in a person's life expectancy, not only an educational trend but also a necessary news “plot” is rarely seen in the system of mass media headlines. A number of headings pass from day to day, practically without changing either structurally or in semantic terms. This led to the claims made by the researchers regarding the functional purpose of the mass media: “As a result, even those resources that claim to perform news functions, in the pursuit of clickbait, are forced to stoop to the most low-grade methods of attracting attention, appealing to primitive human instincts or containing knowingly false but attention-grabbing information” (Trufanova, 2019, p. 13). However, we dare to make a cautious assumption that the origins of clickbait should be sought not only in advertising settings of network texts but in the communicative “legacy” of the mass media themselves, which have always exploited the emotive and appealing mode of messages to increase sales of publications and expand their advertising inventory.

If we turn to the classifications (given by the Soviet scientists who did not use the term “clickbait”) of the headlines of print media, we will see that the concept of clickbait is partially shared by them to the same extent as online media. For example, even Vinokur (1928), in addition to the denoting and pointing function of the headings, noted the advertising, which solved the “problem of external amusement”, sought to “captivate the reader, intrigue with an attractive “plot” (p. 78). Muzhev (1970) also considered the function of attracting reader attention to the material in the spectrum of title functions (p. 88). According to Lazareva (1989), “The headline is the first signal that prompts us to read the material or set the newspaper aside. Psychological studies show that about 80% of readers pay attention only to headings” (p. 3).

Thus, the acting headline and its clickbait variety are an organic part of the modern mass media space. The acting headline became a given, and its efficient working mechanism for attracting the recipient turned out to be applicable to the field that was not originally oriented towards commercial content - to science.

The position of the acting headline or clickbait heading in the scientific research is different from its counterpart in the news media: the number of advertisers and information partners of specialised media is much lower than that of general news media. In addition, the tactics of using an incompletely informative, that is, not actualising or partially updating the semantic component of the text was alien to the Soviet popularisation of science. Why does the heading, which has a completely non-informative function, become widespread in modern Russian Internet publications with a common educational strategy? In this regard, the statement of the chief editor of the YouTube channel SciOne V. Goncharuk to the publication "Arguments and Facts" is interesting: "How then to compete with charlatans and anti-scientific propagandists? - To be more interesting. This is the only way to dash them round. Because everything else is on our conscience" (Efimova, 2015).

It is known that the popular science segment of Russian publications is currently struggling for the attention of content consumers and is intensively seeking monetisation opportunities. This significantly distinguishes them from their Soviet counterparts, which received extensive state financial and PR support. Important steps that Russian science popularisers have taken are to maximize the power of the Internet. According to Bakanov (2018), "the editorial teams are trying to do everything possible to maintain the old and attract the attention of a new audience, selecting topics for publication in such a way that they interest as many people as possible" (p. 13). In the struggle for the attention of the recipient, popular science publications use a method of presenting information that embeds an entertainment component in the media message.

This method, called "infotainment" on television in the last century, "consists of a balanced combination of information and entertainment" (Karpenko, & Lobanovskaya, 2019, p. 265). Infotainment serves as a kind of link between science and its presentation in mass media. The widespread involvement of infotainment gives researchers a reason to note that "many popular characteristics of media discourse are also inherent in popular science discourse" (Bagiyan, 2014, p. 38). The involvement of the consumer of the content in this process is also achieved through appealing headings. They are preceded by science news created in traditional informational genres (note, reportage, etc.), and messages created in genres organic in the Internet environment (multimedia longread, games and animated stories).

It is worth noting that among Russian popularisers of science there is no unity of views on infotainment, and many of them express negative assessments regarding its "smash hit". Along with this, it is worth pointing out that when using informational content, Russian popular science sites preserve educational traditions: representatives of the scientific community and popular science journalists act as newsmakers, sources of information are materials from scientific journals, official websites of scientific and research organisations; information in messages is carefully verified.

The use of effective headings, being a traditional form of infotainment, certainly applies to articles. The section "Scientific closures" of the site "N + 1" posted materials "disclosures" about discoveries that turned out to be fictions:

More hype to the god of GMOs (N + 1, 01/18/2019);

Science Mission Failure (N + 1, 06/24/2019);

Cemetery of recalled articles (N + 1, 10/30/2018), etc.

Many of the relevant headlines on popular science sites have the same features as mentioned above:

1. there is a topic of sexual relations:
Scientists have explained why female bonobos practice same-sex sex. The hormonal effect of same-sex caresses helps female bonobos to collaborate (Naked Science, 09/11/2019);
The expanding polymer capsule allowed the creation of an oral contraceptive for a month (N + 1, 12/05/2019);
How to have fun with underground writers. What fun to do in the sad late Soviet Moscow (Arzamas), etc.
2. life safety and health are thematic constants:
Substances that can “awaken” lymphocytes to fight cancer have been discovered (N + 1, 12/05/2019);
Dangerous neighbors: top 5 asteroids that threaten Earth (N + 1, 12/12/2019);
Cancer on the phone. Can mobile communications cause cancer? (N + 1, 11/28/2019), etc.
3. often used interrogative sentences and paths:
Sell Bitcoin! (Post Science);
The 90s: was it or wasn't? Test about the events of that era (Post Science), etc.
4. the headline is sensational:
Piglets with cells of cynomolgus macaques were born in China (N + 1, 12/07/2019);
Who cut off the hands of the bride: a test for knowledge of the characters of the Russian epic (Arzamas), etc.

At the same time, they are fundamentally different from the headlines of the news media by their individual author's approach, which makes each heading “piece-wise”, unique, and, when carefully checking all the data, also adequate. Among the features of appealing headings in popular science network resources, it is necessary to specify:

1. comic mode and, as a rule, its ironic variety:
How to deal with an asteroid without a prosecutor's office. Instruction (N + 1, 02/05/2019);
How to understand what is happening with the climate. Instruction (N + 1, 09/27/2019), etc.
2. A large number of allusions, precedent texts, and quotes:
How much is fuel for progress? Where "quick and cheap" errors are possible: versions of Nassim Taleb and Dmitry Peskov (Indicator, 08/26/2019).

It is an allusion to the rhetorical question of the hero of the novel by I. Ilf and E. Petrov, "Twelve Chairs" by Ostap Bender, addressed to the priest, "How much is opium for the people?", Which, in turn, is a distorted quote from K. Marx's definition of religion "Opium des Volkes").

Fire, water and bioreactors: how to dispose of garbage in Russia (Indicator, 08/20/2019).

It is an allusion to the proverb "Go through fire, water, and copper pipes".

The splendor and poverty of the Russian Empire (Arzamas).

It is a name of the training course on the "Arzamas" resource, referring to the title of Honoré de Balzac's novel "Splendeurs et misères des courtisanes").

Sparta, Persians, two strategists: a test on the history of Ancient Greece (PostNauka)

It is a name of the test game on the resource "Post Science", referring to the Guy Ritchie film "Lock, Stock and Two Smoking Barrels".

And then Crocodile called: guess the scientist according to the description of his colleague (PostNauka).

It is a name of the test game on the PostNauka resource, the first part of the title is a quote from K. Chukovsky's fairy tale "Telephone".

Dolly the sheep and all-all-all: a test about genes and stem cells (PostNauka).

It is a name of the test game on the PostNauka resource, the first part of the title is an allusion to the famous works of A.A. Milne "Winnie-the-Pooh" and "The House at Pooh Corner" translated by B. Zakhoder under the general title "Winnie the Pooh and all-all-all"), etc.

3. Differentiation of the "image" of the addressee, in contrast to the news media, where it is unified. As rightly pointed out by Vorontsova, "... in the popular science discourse, communication tactics and speech methods for representing scientific knowledge are largely determined by the "image of the addressee" which in turn is modeled by the addressee depending on the type of media source in which the scientific popular text (Vorontsova, 2013, p. 28). So, for example, the site "Elements" contains the section "Children's Questions", which includes materials under the headings:
Why do we see only adult pigeons on the street? Where are their chicks?
Why do butterflies fly into the light?
Who came before - a chicken or an egg? etc.
4. The use of oxymoron, antithesis and grotesque:
Emoji-Pasternak. Recover the omissions in verses by dragging the badges into them (Arzamas);
18th century Forbes list. Top 5 richest surnames of the past (Arzamas);
Found "human cancer genes": nonsense or truth? (N + 1), etc.

Also, appealing headings are increasingly appearing in relatively new types of popular science posts, which include gamification and animation. Gamified content, however, was inherent in traditional mass media (for example, tests, charades, puzzles, and questionnaires quite often appeared on the last pages of Soviet printed publications), but it turned out to be quite organic due to the multimedia nature of its messages and the interactive nature of user interactions. Currently, in the Russian segment of the Internet, one can observe the intensive development of these technologies by the popular scientific mass media. According to Deterding et al. (2011), "Gamification is the use of game design elements in non-game contexts" (Deterding, & Nacke, & Khaled, & Dixon, 2011). The works on the study of gamification technology in Russian mass media are numerous, and researchers are inclined to see a marketing dominant in its pragmatic settings. So, Burlachenko (2013) notes: "It would seem that games are just fun, but they very competently affect our internal motivation" (p. 39). According to Basova and Belenko (2017) "gamification in the Russian version of its use is more of a marketing tool to keep the audience's attention on the site than something more serious" (p. 46).

The game content of "PostNauka", for example, includes 113 test publications on linguistics, literary criticism, psychology, history, political philosophy, astrophysics, here are some of their headlines:

Why I bought it: neuromarketing test;
Friday the 13th: phobia test;
Syphilis, koala or philosopher: test in Latin words;
Unclean Power: The Test of Satanism, etc.

Tests consist of 8-20 questions with answers from 2 to 5; the correct or incorrect answer is indicated immediately, and this indication is accompanied by small text commentary and links to courses and projects. The appealing headings act as a component of the animated message. For example, "PostNauka. Animate" section contains popular science videos from the YouTube channel integrated with the portal dedicated to relevant and interesting phenomena of the world, both natural and social, for example:

What will robots eat in the 21st century? How were the first batteries made and what energy sources appear in the future;
What were the Neanderthals? Cartoon about alternative humanity;
Why do we need sex: the hypothesis of scientists. Cartoon about the mechanisms of sexual reproduction, increasing the diversity of life on Earth, etc.

The use of videos is a common form of visualization of popular science material on the N + 1 portal, where 36 videos of YouTube-channel of E. Zyryanov's "Redroom" are presented in the Limb section, also preceded by headlines:

May 1 - how it happened (history);
Marquise Pompadour (Intriguer or victim?); The woman who inflamed the ambitions of Nicholas II, Queen Ming;
Henry VIII. Not only about wives, etc.

The initial functional installation of the technologies under consideration is based on knowledge operations that gamification checks. Researchers noted that "the vast majority of gamified projects released by Russian online media are tests of the "do you know" or "guess how to do it correctly" format (Basova, & Belenko, 2017, p. 43). In the emotional alloys of gamified and animated content, a comic type of author's emotionality is used, which, being an absolutely positive entity and utter "benevolence," is capable of eliminating "false" reality and interpreting the structure of the world. These mechanisms implement a persuasive strategy, according to which science is the only form of social consciousness that can predict trends in social development and develop recommendations for overcoming negative prospects.

The acting heading in these resources creates an emotional involvement in the process of perceiving the material, which the modern consumer of information, in turn, extrapolates to the reception of science and forms a public request for its development. Thus, the appealing headline, including the heading with clickbait elements on popular science sites, is involved in building science communication, a system of interactions between science and society.

CONCLUSIONS

The presence of a scientific topic in the Russian mass media space is small. Articles devoted to science are preceded by effective headings that implement emotive, appealing and directive functions. The relevant headlines in the science news tend towards clickbait, which does not actualise or partially actualises the semantic component of the text. Their thematic constants correlate with concepts that are significant for humans as biological and social creatures. The relevant headings, considered in the materials of Russian news and socio-political publications, demonstrate similar lexical, graphic-expressive, syntactic and genre characteristics, have a constant character of usage. Observations show that effective headlines are widely used in materials of specialised popular science online publications that use infotainment as the main tactic for popularising science. In these types of online publications, headlines are a component of news, gamified and animated content; their

lexical, graphic-expressive and syntactic characteristics testify to the uniqueness of the material and the individual author's approach to their creation.

The results of the study can be applied both in the work of a journalist specialising in the coverage of science and in the practice of teaching undergraduate and graduate students (in the field of popular science journalism) at journalism departments. Possible research could include a comparative analysis of influential headlines in the mass media in other languages to identify. In addition, the materials of the work may contribute to the development in Russia of such a direction as Science Communication.

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