

Axiomatic Typology as a Special Method of Exploring Documentary Information

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Abstract. The study deals with the purpose of substantiation of the axiomatic typology of the blogosphere as a method of establishing a synergistic paradigm of information interaction by model: this author's composition of the blogosphere produces such blogger activity and such information interaction. The methodological basis of the study is a combination of general scientific methods and special approaches to the study of the regularities and features of the functioning of documentary information during mass communication processes and phenomena. The axiomatic typology toolkit allows conducting a study of the Censor.NET blog posting kernel: general characteristics of posting of top bloggers on the Internet portal, thematic classification of the blogosphere, thematic distribution of posts of top bloggers, topics of posts by groups of top bloggers.

Keywords: blog, blogosphere, documentary information, content, behaviour.

1 Introduction

1.1 Problem statement

The methodological basis of the research was the scientific, theoretical and conceptual principle, conceptual and categorical apparatus of domestic and foreign authors' works on the functioning of factual and documentary information in the system of social communications. The basis of exploration is the analysis of theoretical studies of this problem carried out by representatives of document science, social communications, communicology, sociology, philosophy and philology, as well as the scientific hypotheses of the author of this research.

1.2 Methods.

The methodological basis of the study is a combination of general scientific methods and special approaches to the study of the regularities and features of the functioning of documentary information during mass communication processes and phenomena. To study the blogosphere of the Censor.NET web portal, a set of methods is used: general (analysis, synthesis, generalization); theoretical (axiomatic method, hypothetical transition from abstract to concrete); empirical (analysis of statistical material, content analysis); prognostic (conclusions upon an analogy, extrapolation method, method of interpretation).

Thus, the source elaboration was based on the application of analytical and synthetic, logical methods, which helped to formulate the system of outgoing theoretical propositions, principles of selection, analysis and generalization of the material of the research.

The research is based on the following methodological approaches, which rely on general and basic social communications categories:

- informational, which allows using the general scientific category of the information for the theoretical understanding of the subject of study;
- semiotical, which allows considering social phenomena and processes through the prism of the sign as a basic category;
- active, which is based on the activity as a basic category;
- systemic (structural-functional), which is based on general scientific categories of system, structure, function.

The object of the research is to study the resources of the news portal Censor.NET. The subject of the research is the method of the axiomatic typology of the blogosphere. The purpose of the research is to substantiate the axiomatic typology of the blogosphere as a method of establishing a synergistic paradigm of information interaction by model: this author's composition of the blogosphere produces such blogger activity and such information interaction. To accomplish this purpose the tasks are:

- to detect the features of the axiomatic typology of the blogosphere method;
- to substantiate the resourcefulness of the method of the axiomatic typology of the blogosphere;
- to substantiate the concept of "synergistic paradigm of information interaction of the professional group of bloggers" as the final product of using the axiomatic typology of the blogosphere method;
- to substantiate the adequacy of the method of the axiomatic typology of the blogosphere.

2 Analysis of recent research and publications.

Modern research on social networks, in which civil society fulfils its information needs and queries, has become widespread. The social environment of the Internet has

great potential as an information-search field for the implementation of various scientific-theoretical and applied problems. Social networks are used as a powerful ground for developing methods of scientific research based on information technologies.

2.1 Content research methods

A study of document typology shows that there is a significant increase in the variety of document types. In total, 24 document types and 21 publication formats were identified and systematized. Documents that contain not only text but also multimedia information are actively developing. Web formats such as blogs and news and journalism websites play an important role in the dissemination of information on the development of social processes. Such findings will be verified by further research of specific digital types of documents and their impact on the dissemination of scientific, technical and social information to the public. Analyzing the diversity of types of documents broadens the current understanding of the public documentary landscape and shows that coverage of the public debate is no longer limited by the news, analytical and editorial articles in traditional media. Investigating the typology of documents that disseminate information about new social and scientific issues will help to provide better services to different users of information and to develop better tools for accessing and disseminating such information [13].

Social networks are actively used as an alternative environment for scientific communication. Social networking content is considered as a powerful manifestation of diverse communication needs and their implementation. Virtual communities function as a powerful tool for informational interaction on the Internet for scientific, educational and professional activities [18].

Research of specialized information sources with open access is devoted to the problem of sharing scientific information. The subject of the study was information collected on various Internet resources: Digital Library, Database, Directories, Portals, Repositories, Metabuscadores, Blogs. The study found that open access to the web facilitates the exchange of scientific information. The scientific community and society at large are increasing the use of digital libraries, databases and directories that contain open access sources. [4].

Blogs are one of the main content created by the user on the Internet, their number is growing rapidly. Blogging features require the development of specialized search methods customized to the blogosphere. The blog temporary retrieval method involves ranking and classifying blogs based on their timing and content. This method has been tested using a standard dataset of 45 different queries [22].

A method for semantic structuring of the content of a virtual community of web forums, which is a convenient form of community knowledge, is proposed. Semantic structuring of knowledge bases is an important and critical factor for easy navigation and retrieval. The use of automated content restructuring by administrators has led to improvements in content structure. This method can be used to change the structure of sites, web forums, and other forms of communities [12].

2.2 Bloggers Research Methods

A method of computer-linguistic analysis of the information trace of a web community is proposed to test the socio-demographic characteristics of participants in a virtual community. Analyzing the content of web-participants by socio-demographic characteristics (age, gender, education and social identity) provides material for creating a model of the social-demographic profile of the web-participant. On this basis, the software is developed to establish the socio-demographic characteristics of a member of the web community. An informative model for building a social and demographic profile of a virtual community member opens the way to automate the process of checking web user content [6].

Various methods of identifying influential bloggers are being developed, widely used in advertising, online marketing and e-commerce. The problem of identifying influential bloggers is explored and the Model to find Influential Bloggers using Sentiment Analysis model is presented. It consists of two modules: activity and recognition. The activity module takes into account the blogger's postings, and the recognition module measures the blogger's impact on his or her social community. The integration of activity and recognition modules identifies both active and influential bloggers. This model takes into account the lasting and new sentiment expressed in blog content. The MIBSA model compares to standard models using real blogging data. The results confirm that sentiments expressed in blog content play an important role in measuring blogger influence, and should be seen as a feature of finding the most influential bloggers in the blogosphere [9].

The methods of computer and linguistic validation of personal data of user's accounts on the Internet have been tried. Methods of validation of socio-demographic characteristics of users of Internet academic communities based on computer-linguistic analysis of information tracks of Internet users are proposed. The algorithm for determining the adequacy of personal account data is based on the results of the analysis of the online users' communication process. A software suite has been tested to verify the personal data of user accounts based on a computer-linguistic analysis of the content of academic online communities [5].

Recently, the focus of research has shifted to identifying the impact of the user on other users on the social network. The study explores models of the search for the most influential users in the blogger community, classifies models based on the performance of certain functions and blogging on a particular network. Feature-based and blogging models on a particular network take into account important factors for measuring bloggers' impact. Thus, identifying the most influential bloggers on other members of the network is realised by analysis of the structure of social networking bloggers based on graphs. The study presents the features and data set of each model, as well as their comparative analysis [11].

Based on an analysis of new blogging practices, the transformation of blogger consumers into brands has been explored. The transformation of blogging consumers has been tracked upon the basis of 12,000 blog posts by five popular bloggers. There were determined and described three phases of identity, the individual consumer blogger phase and the collective blogger phase. With the ongoing process of identity

matching, adaptation, and re-interpretation with stakeholders, these bloggers are becoming human brands. In turn, individual processes of transformation mutually influence the emergence of blogs as a professional practice and the blogosphere as a new organizational sphere. The study contributes to a theoretical understanding of the processes of consumer transformation in a new industry, where consumers can leave their role by constantly engaging in negotiation, adaptation and re-interpretation, which affects their identity. It promotes understanding of human brands and is important for brands (business entities) who wish to engage with these influential entities [3].

An important aspect of social networking research is the analysis of community dynamics in the blogosphere. Researchers study the evolution of groups in the blogosphere in terms of community dynamics, group availability, user role fulfilment. The author examines the effect of types of group reorganization on the transitions between user roles: a set of roles defined by user behaviour is defined; identified the main types of events that affect groups throughout their lifecycle; community evolution model developed; an analysis of the transitions between the roles of certain users as a result of individual events, which have a significant impact on the change of roles in the community by users. The experiments were conducted on the data of the Polish popular blog Salon24 [14].

To prevent the spread of negative emotions by blog users in times of crisis, a belief-desire-intention (BDI) model was developed based on the posts of blog-NNDC users (BDI-NNDC model). This model was based on three social characteristics: self-interest, expectations, and emotions. The BDI-NNDC model can explain the spread of negative emotions by blog users in times of crisis. It demonstrates a way of modelling social norms and exploring the activity and behaviour of blog users in the context of real-life crises. This method can be applied to predict the emotional tendencies of blog users who have different social characteristics. It can support government agencies to create strategic crisis response, mitigate the impact of real crises on users [21].

Methods for finding relevant factual information are being developed, including methods for searching and identifying historical information in the social environment of the Internet [1].

A method of searching for alternative queries is suggested. Most current algorithms for finding relevant information are based on the use of word semantics to identify subjective features of blog posts. It is suggested to use new models of semantic kernel formation, namely to specify in the hashtag (names) of authoritative authors and actual realities for finding information in the blogosphere [7].

Identifying anomalies of relevant facts and their connections in dynamic social networks to find key events is complicated by the large amount and variety of information on the Internet. Significant events affect the World Wide Web and the blogosphere. Identification of significant changes in the blogosphere can indicate the emergence of vibrant social events. Two portals (Polish blog Salon24 and Huffington Post) are used as an object to evaluate the dynamics of changing the content in the blogosphere, creating anomalies of factual information as bloggers reaction on important events [17].

An electronic service has been developed to identify compliance with language standards in professional communication. It identifies violations in the creation and use of terms and guides how they work on power websites. The scheme and algorithm of functioning of the terminological online assistant were developed: entering the term into the search field, checking the compliance of the term with the linguistic norms using a database system, suggesting equivalents of the term, adding the term to the database system and providing results [15].

Internet resources have become a source for exploring research ethics, although the procedural and ethical principles of web research are still developing [16].

Important is the problem of ethical aspects of blog authorization. The blog is full of personalities, like blog posts and social media postings. Aliases on blogs and social media are unregulated or poorly regulated. However, in the scientific field, there are ever-stricter rules regarding the use of false identification of authors, lack of institutional or contact details, and no conflict of interest. Such cases are considered violations of the publication protocol because they reduce the credibility of research results and depart from the requirements of academic integrity. The use of aliases in academic blogging and social media is a major ethical issue [20].

Thus, the analysis of scientific publications on social networks makes it possible to draw the following conclusions about the trends of modern research:

- research on social networks as a global social database produces a wide range of methods based on the use of information technologies;
- social networks provide a rapid study of public communication and information interaction;
- a documentary approach to the study of social networks gives valuable results on the circulation of scientific information in the public sphere, on the development of the typology of documents;
- social networks, which have created a very dynamic web society, require more active research in the aspect of social communication, including the study of the mentality, moods, emotions, the influence of different users in the virtual space.

3 Research results

3.1 Features of the axiomatic typology of the blogosphere method

We consider the method of the axiomatic typology of the blogosphere as a special research method that allows us to formulate the correlation between outgoing data, which we consider the blogosphere's authors, and derivative statements, which we consider the features of the content of the blogosphere.

The method of the axiomatic typology of the blogosphere is to establish the obvious dependence of the authors' professional affiliation and content of the blogosphere (by the features of blog content, by blogger activity, by the presence and intensity of feedback, by technical basis).

The application of the axiomatic typology method makes it possible to formulate assertions based on the dependence of certain outgoing statements and inferenced

from them derivative statements. The outgoing statements include the composition of bloggers by the quantitative, professional and gender indicators (Fig. 1).

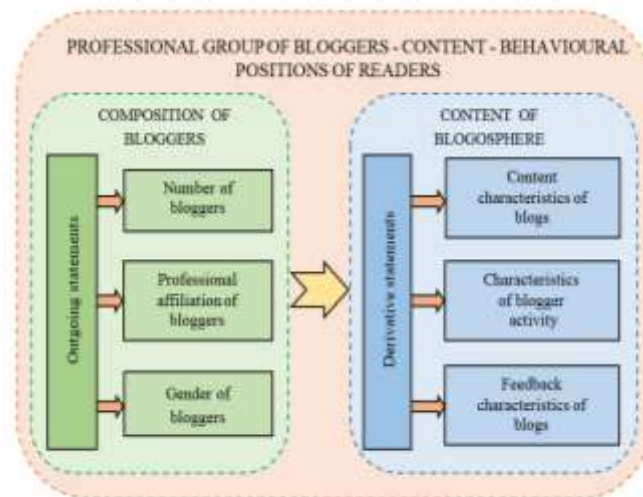


Fig. 1. Scheme of the axiomatic typology of the blogosphere

Derivative statements include:

- content characteristics of blogs (author's composition, level of generalization of information, the character of sign records, genre diversity and emotional colouring of posts, linguistic priorities of bloggers);
- characteristics of blogger activity (number of posts, frequency of posting, size of posts);
- feedback characteristics of blogs (number of views, comments and reposts in Facebook).

The derivative statements are the result of the application of the postulate related to the qualitative characteristics of informational interaction in the system "professional group of bloggers - content - behavioural positions of readers": subject topics and orientation of posts; axiological and ideological nature of information interaction. Thus, the new statement is a logical consequence of axiomatic dependence.

To avoid some discrepancy in the use of the term axiom, for which the natural scope of scientific knowledge is recognized, we refer to the term "postulate", which is defined as a statement that serves as the basis for making meaningful reflections and conclusions [19]. As a term included in the conceptual and terminological apparatus of socio-humanitarian knowledge, the postulate implies a lower level of uniqueness, logicity, austerity and linearity of the conclusions obtained during the study, taking into account the outgoing statements.

The application of the axiomatic typology method to the study of the blogosphere as a component of the system of social communications makes it possible to formalize

the mechanisms of informational interaction in the aspect: a professional group of bloggers - content - behavioural positions of readers.

The obtained socio-humanitarian knowledge makes it possible to make meaningful conclusions about the characteristics and features of information interaction, the tone of reflections on the social phenomena of bloggers belonging to different spheres of social activity.

The method of the axiomatic typology of the blogosphere makes it possible to substantiate the assertion that certain professional group of bloggers are peculiar to the content of posts (by topic of posts, author, level of generalization of information, by nature of character records, genres, emotional colour and language of posts), by number of active bloggers, size of posts, frequency of posting), feedback from bloggers (views, comments, reposts in Facebook), by the technical basis of blogs. These features form the typical traits of each professional blogger group. At the same time, they are the hallmarks of which such an axiomatic dependency can be established for every professional blogger group.

3.2 The resource of the blogosphere axiomatic typology method

The resources of the axiomatic typology of the blogosphere method are defined as the ability to use the potential of applied research and formalized methods and their combination, which allows the most complete, reasoned and objective performance of scientific research. The methodology of the axiomatic typology of the blogosphere involves the definition and justification of outgoing and derivative statements through statistical analysis, content analysis, generalization, grouping, ranking, visualization of the obtained results.

So, using the content analysis toolkit, we propose a blogging classification technique. A considerable number of bloggers (548 bloggers as of 01.07.2019) make it impossible to take into account and research all bloggers of the Censor.NET web portal. Therefore, using the content analysis method, we form a sample - an aggregate of a certain number of bloggers whose statistical characteristics are calculated in such a way that conclusions can be drawn and extrapolated to the whole aggregate (total number of bloggers on Censor.NET).

To ensure representative sampling, we define several strategies that are required to ensure the maximum possible compliance with internal and external validity. That is, the results of the study must be justified for both the selected blogger totality and the general totality during extrapolation [2]. For research we use the following strategies:

- stratometric selection, which involves the division of the totality into strata, which have certain characteristics;
- random sampling in the strata (fig. 2).

The classification of bloggers who create blogs on the Censor.NET web portal is based on the functional principle. The differentiation of bloggers is performed according to the function they perform in the social division of labour. The features that distinguish the species include the professional sphere of social activity and voluntary selfless public activity of bloggers. Separation of bloggers on a professional

basis allows us to achieve a certain homogeneity and possibility of comparison because we will a priori assume that representatives of a particular profession may have common beliefs, attitudes, personal values. This will reveal the peculiarities of the axiological priorities of bloggers, as well as the blogosphere of the Censor.NET web portal.

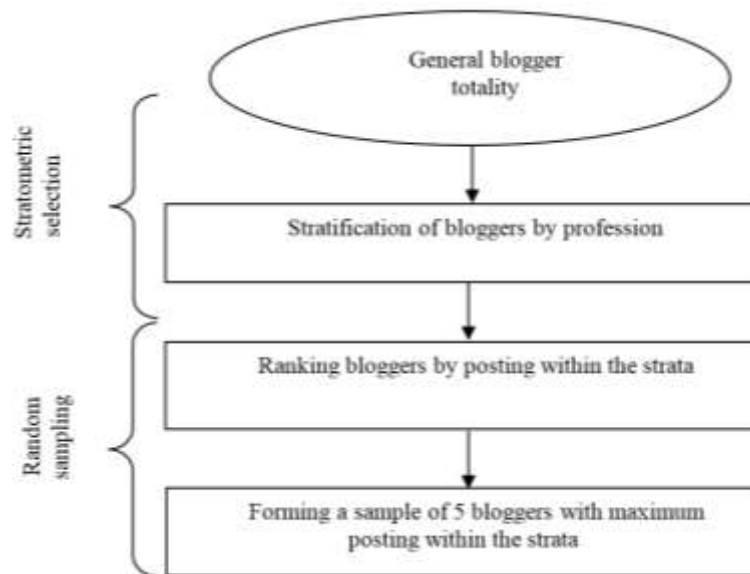


Fig. 2. An algorithm for forming a sampling of bloggers

3.3 Substantiation of the concept of "synergistic paradigm of information interaction of a professional group of bloggers"

The final product of using the axiomatic typology of the blogosphere as a method of creating new knowledge is termed the concept of "synergistic paradigm of information interaction of a professional group of bloggers". The synergistic paradigm of information interaction is a communication model of the relationship between bloggers' professional affiliation and content of blogs and their quantitative characteristics. The synergistic paradigm of information interaction is a formalized manifestation of the content and quantitative characteristics of blogs created by a particular professional group of bloggers.

Effective information interaction in the system "professional group of bloggers - content - behavioural positions of readers" is the result of synergetics of all socio-communication factors. We consider the phenomenon of the synergistic paradigm of information interaction as a partial detailing of the concept of information interaction. The synergistic paradigm of information interaction extends to the interpretation of information interaction as a complex, open system, for which structural, functional, coordination, channel, semantic manifestations are inherent [8].

The use of a synergistic paradigm is appropriate to formalize information interaction since the processes and phenomena of information exchange are inherent in self-organization. Information interaction is within the scope of synergetics as an open, complex system in which information is exchanged between a person (consumer of information) and the external environment through any channels of information - print, electronic, interactive, mobile, multimedia.

Adaptation of the principles of synergetics to the system of information interaction, proposed by Khaken H. [10], reveals the specifics of its self-organization:

- the system should be open: all components of the communication process must be available, any information barriers should be eliminated;
- the open system must be as far as possible from the boundary state of thermodynamic equilibrium (absence of changes in the main parameters for a long time): the processes of transmission and reception of information must be continuous;
- an open system integrates phenomena and processes that may result in properties that are not peculiar to any of the parts: heterogeneous information from different sources forms a qualitatively different social consciousness, modifies the behavioural positions of consumers of information;
- self-organization of an open system manifests itself in the emergence of a new order and complication due to fluctuation (accidental deviations): the assimilation of new information by society causes the emergence of new realities of social life, increasing the likelihood of errors in the prediction of social processes or unpredictability of information impact on society, individual; however, the flow of new information, the deepening of information interaction increases the loosening of rules, stereotypes, the main stream of information space and through chaos in public opinion leads to the evolution of public consciousness and public opinion on a qualitatively different level;
- self-organization occurs only if positive feedbacks that operate in the open system outweigh the negative feedbacks: the presence and effectiveness of feedback in the information interaction within the blogosphere can be detected by comparing the rates of viewing posts, comments to them and reposts in Facebook; as monitoring the intensity of post-viewing, the feedback information changes and accumulates along the way of self-organization, indicating delayed action and keeping the message up to date.

Thus, formalizing the interaction of subjects in the system "professional group of bloggers - content - behavioural positions of readers" in the form of a synergistic paradigm of information interaction gives the opportunity to predict the trends of influence of blogging of different professional groups on public consciousness, axiological shifts, the level of critical thinking .

3.4 Adequacy of the axiomatic typology method of blogospheres

The validity and objectivity of the conclusions, the rigour of the procedure for obtaining them with further interpretation, provides content analysis. The study of

verbal behaviour (as a form of human behaviour) at the level of a separate group of bloggers using content analysis will reveal not only the real behavioural positions of bloggers but also the orientation in the process of information interaction of the Censor.NET resource itself.

4 Conclusions

Using the methodology of typological and specific segregation as a method of determining the specificity of segmentation of certain realities, it becomes possible to formulate typographic and speciation features and to offer on their basis classification schemes of such phenomena of mass communication activity as "blog classification," "blogger classification" of the Censor.Net portal. The axiomatic typology toolkit allows conducting a study of the Censor.NET blog posting kernel: general characteristics of posting of top bloggers on the Internet portal, thematic classification of the blogosphere, thematic distribution of posts of top bloggers, topics of posts by groups of top bloggers.

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