Some Physiological and Psychological Aspects of Media Texts Analysis

Albina Rimovna Shakurova, Rezida Vagizovna Dautova
Kazan Federal University, Kremliovskaya str, 18, 420008, Kazan, Russian Federation

Abstract

Investigating the television media text, we can define, besides definition of its linguistic characteristics, its culturological value, a discourse of emergence and functioning, and the way this material affected psycho-physiology of the audience. In particular, whether this information is capable to lead to synchronization of visual perception process in group of people who are united, in fact, only by the act of TV viewing of identical audiovisual information. Studying of perception by the person of audiovisual information assumes an integrated approach and extensive empirical researches, as well as theoretical researches with use of achievements of psychology, psycho-physiology, sociology, philosophy, journalism and other sciences. Results of the research analysis devoted to psychological and psycho-physiological features of audiovisual information perception are presented in this article. Methods of the media texts analysis are listed, and the place of the psychological and psycho-physiological analysis among these methods is shown. Also article contains results of the researches conducted by us. Conclusions about relevance of diagnostic techniques use for psychology and psycho-physiology by consideration of media messages are drawn.

Keywords: media text, methods of the media text analysis, media message, audiovisual information, TV viewing.
1. Introduction

One of the most complex challenges of the media texts analysis is definition of why and how various media product becomes attractive or causes antipathy. In fact, the media text analysis is closely connected with the analysis of perception processes and processing of specific information. The media perception builds the communicative chain: the author – the media product – the consumer. Scales of media products distribution are global, however media products are live for rather a short time. This defines one of the media perception features. The author of the literary work is able to afford to wait for the reader, the author of mass media is put in severe conditions of relevance, novelty, thus, efficiency of information, perception "here and now". It is necessary for him to screen the product for a short time, but to hold viewer at the screen, at the newspaper strip, at the radio.

The media text analysis allows to find, explain mechanisms of audience attraction for further adaptation of media information. The media perception includes all features of psychological perception, but is caused by existence of active, bilateral communicative process, and also indirectly author's message and information technical means. In many respects for this reason, producers of media products actively use psychological and psycho-physiological features of perception for involvement of the reader and the viewer. Among all variety of attraction methods the mass media have to draw attention with habitual symbolics, slogans, colors and voices and, at the same time, unexpected headings, fonts, drawings, fore-shortenings. Media actively use all resources for the efficiency increase. Thus, studying of the media text as "knot in a network", according to the expression of M. Foucault, mass communication allows to understand not only the principles of its internal organization, but also a condition of its emergence, the rule of certain meanings formation and specifics of certain mass messages efficiency.

The term "media text" is most demanded for designation of a wide range of phenomena: from mass and communicative, mass media, journalistic, publicistic texts to texts in newspapers, advertising and the Internet, teletexts and PR texts. At the same time the etymology and evolution of the media term allows to call the media text any data carrier. But as the media text generalizing the term was assigned to texts of mass communication. According to a number of researchers (Lake. Blokdva, T.G. Dobrosklonskoy, N.B. Kirillova, G. Y. Solganika, A.V. Fedorova, N.V. Chicherina, etc.), the media text is a joint product of three global subsystems of mass communication: journalism, PR and advertising.

From this position in this article the media text will be considered as object of the analysis. In this direction various methods of the analysis will be tested: linguistic, narrative, semiotics, contextual, discourse, culturological. Let us consider some of these methods in more detail.
Among methods of the media text analysis morphological, semiotics, syntactic analyses are actively used [1]. All listed methods are included into the group of linguistic analysis methods. They allow to reveal regularities of the organization of each text level, the steady compatibility of units common to different genres and subjects, features of various tropes and stylistic receptions from the point of view of the general communicative prospect realization of the media text. One of collective methods for this group is the content analysis which, however, is not common to the linguistic analysis and can use with success the most different criteria with a high share of results reliability. Rather a new method of critical linguistics which is directed on detection and studying of the text components which are ideologically colored by the author is no less popular.

These methods are applied generally at text processing, that is verbal information. However the media text is any media message, including audiovisual information. Such broad interpretation of concept is connected with rapid development of mass media in the 20th century as a result of which the television by right occupied the leading value among other media. The problems connected with understanding of the media text directly are also connected with changes in communicative process of the end of 20th – the beginnings of the 21st centuries when powerful influence of media on life of the inhabitant became obvious. The special value also belongs to emergence during this period of so-called new media. The media texts created by modern media model and integrate diverse components in uniform semantic space: verbal, visual, audiovisual and others. Within our research, the analysis of audiovisual information as one of media texts types is of interest.

The method of the discourse analysis allows to focus attention on external formal signs of the text, as well as on a number of the extra-linguistic factors accompanying its production and distribution. At discourse approach each media message is considered taking into account social interests and political views of mass communication participants. On crossing of sociology, linguistics, pedagogics and psychology there is a cognitive media text analysis directed to studying of media information as result and the tool of perceiving the world. Cognitive approach describes ways of interaction between reality and its media representation. It is very close to the culturological media text analysis which sees text value in its universality. To narrative analysis - of life stories [5].

Now all-psychological approach to research of the audiovisual messages perception mediated by mass media is timely. Now studying information and how the person interacts with it, gets more and more attention that leads to interference and mutual penetration of methodology and technologies of various sciences. The psychological and psycho-physiological analysis of texts are specific and are used as methods of the identity diagnostics of the author and his features. These
methods find the place and in the media text analysis. In many aspects the psychological and psycho-physiological analysis of texts is obliged to promoting of neuro-linguistic programming method in mass media. However there are also other reasons. With the advent of new data carriers, there were researches directed to examination as there is a process of visual perception of different information submission options. In this regard in psycho-physiological practice the wide circulation was received by methods of ophthalmology and neurology (research of eye-movement speed reactions, EOG, speed testing of eye visual and motor reaction, EEG) which within research of visual perception found development in eye-tracking method. It should be noted that the psychological and psycho-physiological analysis is not used independently, it supplements others – more often linguistic – methods of media communication phenomena.

Value of visual information perception for adaptive behavior of the person is huge therefore studying visual mechanisms is an actual problem of modern science, and in the context of audiovisual information perception features research it is also handy for tele-journalism. The person has to apprehend and realize a plot, and not just specific images. Thus, studying features of visual information perception through the analysis of psychological and psycho-physiological characteristics of visual perception will promote development of control methods and perception efficiency assessment of video and tele-information that is an actual task and has high potential for expansion and deepening researches in the matter, as well as for the realization and introduction received as a result of data in media production. Moreover, psycho-physiological and psychological approaches, as it was told earlier, often supplement linguistic and other methods of the media text analysis.

2. Materials And Methods

Rich material for the theoretical analysis is made by the works of our predecessors devoted to studying features of visual perception (Nakano of T, Kitadzho K., Kitazava S., Freeman J., Rodríguez J. Johnston P.R, Abelson M.B., etc.) and to the analysis of media text.

Having considered the existing researches devoted to studying psycho-physiological features of media information perception brought us to the following conclusions [7-13]:

- characteristics of a blink reflex can serve as reliable criterion for evaluation of visual attention activation (including temporary, frequency characteristics, electric activity assessment of a circular eye muscle and visual brain hemispheres core etc.);

- process of visual perception is carried out so that important visual information was not lost;
- the long scene of video which drew active attention is perceived between blinking intervals. The scene following it most likely is necessary on long blinking, therefore, information which is contained in it, most likely, will be apprehended incompletely;

- people can divide similarity of visual information recognition and assessment of optimum pauses in it, so the visual perception control mechanism in group is synchronized;

- considering high extent of blinking synchronization in group, information after a long interval between blinking, will not be completely apprehended by group of people;

- synchronization of blinking reflex and consequently visual perception in general, demands a plot, however does not assume following of the subject line;

- viewing video and tele-information will organize a blinking reflex in such a way that after viewing we see changes in electric activity of the muscles involved in blinking;

- the perception carries out selection function by comparison of new impressions with old, kept in memory; recognitions; comparisons to the presented standards; classifications; interpretations. The understanding of these mechanisms became an object of research of a number of sciences, a number of researchers (N. Rubakin, A. Potebnya, L. Vygotsky, M. Bakhtin, A. Beletsky, M. Hrapchenko, B. Meilich, T. Vodichka H. G. Gadamer. G. Grimm R. Varning, H. R. Yauss, V. Izer, etc.) thanks to which within the XIX-XX centuries the basic principles and laws of perception were formulated. Media perception is a relatively new object of research;

- researchers note as special tendencies in the modern media text, on one hand, the expansion of the author presence, on the other – its minimizing. The author's beginning has an expression opportunity through huge repertoire of means – implicit, paragraph, grammatical, lexical, case phenomena:

- the most widespread manipulative elements of modern mass media: sketchiness, simplification; identity of logical and illogical; reflection deformation; absence of accurately expressed distinction criteria of superficial and deep interrelations; references to tradition, authority, precedent, norms, divine will; syncretism of aesthetic-shaped, ethic and regulatory and actually informative elements of the myth; reproduction of polysyllabic picture of the world through mythical binary oppositions ("good-evil", "kin-host"); a claim for only right extra historical explanation of the reality phenomena and for absolute correctness of the practical actions following from this explanation; the estimated focusing character of media texts; premeditation of creation, etc.
3. Results

The researches conducted by us confirmed and added these conclusions [6]. In particular, considering characteristics of blinking reflex components for the person perceiving audiovisual information, we found out some features of visual attention concentration. The knowledge of visual perception features which can be brought out of the detailed blinking reflex analysis will allow media to design the message in such a way that information which is contained in it is most effectively apprehended. Experiment during which high school students were offered to watch the training video revealed synchronization of blinking in group.

Synchronism of blinking was estimated by means of the original computer program created in the LabView 7.0 monitoring the movement in the taken video image of persons when viewing the videos. This experiment allowed us to confirm results of the previous researches about features of video information perception on the example of a new format of visual information – the training video. Moreover, we established that reliable gender distinctions in the frequency of blinking are not observed. So, in group of people irrespective of gender visual information leads to synchronization of brain activity. This feature of information influence on masses was noted long ago, but now it was confirmed at the psycho-physiological level.

Our further researches [2-4] established that activation of visual attention for people is connected with specific behavior of components of a blinking reflex. The received results were subjected to the statistical analysis with application $\chi^2$-criterion by Pearson and Vilkokson's $T$-criterion, also we made the correlation matrix considering electro-physiological measurements of 14 people before viewing the different audiovisual information. Such components of blinking reflex as amplitudes and latencies were considered. The correlation matrix was made with use of the SPSS 17 software product.

4. Summary

Detection of interdependence in results of selection allowed to allocate the most significant indicators or groups of indicators which have the greatest number of correlation with other indicators. We received three separate blocks which are connected among themselves by correlations at the average level of reliability $p\leq0.05$. It, of course, does not cancel interdependence of results. Blocks were quite naturally formed of amplitudes measurements of N1-P2, P2-N2 and latency of N2.

Quantitative characteristics of these components of blinking reflex allow to define temporary characteristics of visual attention activation at perception of audiovisual information. And, as we used different videos in experiment, we can judge universality of these conclusions.
5. Conclusion

Allocation and studying of separate components of visual perception allows to understand the process essence deeper, to disclose its regularities, and, means to model process, to have an opportunity to operate visual perception at any stage or to predict possible reactions to various incentive.

These characteristics can be entered into the main analysis of the media text. Investigating the television media text, we can define, besides definition of its linguistic characteristics, its culturological value, a discourse of emergence and functioning, and the way this material affected psycho-physiology of the audience. In particular, whether this information is capable to lead to synchronization of visual perception process in group of people who are united, in fact, only by the act of TV viewing of identical audiovisual information.

The fact of perception processes synchronization, including activation of visual attention, shows the importance and value of information.

6. Conflict Of Interests

Authors confirm that the submitted data do not contain the conflict of interests.

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