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EMPIRICAL RESEARCH OF THREAT PERCEPTION

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Abstract

The paper studies perception of the threat by the reader. It is argued that threat is a verbal manipulation act, which often persuades readers to change their behavior. The paper describes the procedure of the experiment and discusses its results. The persons under test were offered three informational messages that contained threat to health, threat to social status and threat to reputation. 70 students took part in the experiment (52% of them were men, $M=20$, $\sigma=1,1$). The experiment aims at revealing the accuracy of perception of the threat, it also focuses on emotions that are caused by the informational message containing threat. The results show that perception of the threat in different messages is not the same. It depends on two groups of variables. These variables influence the accuracy of the threat perception and the response to the threat. The first group of variables is determined by socio-cultural features of the students, their gender and age. It is found that girls are more exposed to the reputation threat, while boys are affected by the health and social status threat. The second group of variables is determined by emotions. It is shown that the health threat is perceived more precisely if it is accompanied by fear and the social status threat is accompanied by anger and sorrow. The reputation threat is stronger when the person is calm and cool-headed.

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1. Introduction

Over the last few years, the influence and control of infosphere have considerably grown in the society. It is a medium of communication, it helps people relax, buy on-line and get education. Consequently, the attitude of the people to the Internet is changing. Information that circulates in cyberspace becomes more and more important for a person. When people get information they may change their behavior, stop or, on the contrary, continue acting in this or that way.

Unfortunately, the popularity the infosphere has got leads to the increase of criminal activity in it. It is not only embezzlement and swindle that are wide-spread, but also extremism and terrorism propaganda. Extremist crimes include propaganda of radical political and religious views, involvement in terrorism (Wilkinson, 1997), recruiting in terrorist and extremist groups (Brachman, 2006), etc. To propagate extremist views they use the images of danger that come from people of different political or religious views (Antonova et al., 2014). The means of informational persuasion include messages, pictures and videos containing some threat.

The experience of the use of information about imaginary threat to manipulate people's behavior arouses interest to the study of the consequences and influence of such threat to Internet users. It is a fact that the needs and demands of a person determine the choice of information. The information containing threat attracts the reader's attention and it has more chances to be read than the entertaining message. The danger of disease, loss of social insurance or status in society and the fear to be deceived by a friend always attract readers' attention. That is why health threat, social status threat and interpersonal relations threat are often used to manipulate a person's behavior and they are widespread over the Internet. Fear is aroused purposefully to influence the decisions, for example, to stimulate or postpone decision making, to persuade to choose the necessary variant, etc.

In the light of these provisions, the study of the threat influence in infosphere is urgent from the theoretical and practical points of view. There are many scientific research works, especially linguistic and socio-psychological ones, devoted to the problem of threat (Spitzberg & Gawron, 2016). The general definition describes threat as a kind of verbal manipulation to wake up fear, to cause the change of social behavior or social status of a person who is affected by the threat (Storey, 2013).

Threat is divided into real threat and pseudo-threat; the goal of the latter is to manipulate behavior (Warren, Ogloff, & Mullen, 2013). There are two approaches to the threat research: one of them focuses on evaluation of its truthfulness and persuasive potential, the second studies the influence of the threat on the victim's behavior (Shuy, 1993). Both of them complement each other, as they allow predicting the threat risk, for example, while reporting to the police about a terrorist attack, and determining the features of an anonymous person (Meloy, Hoffmann, Roshdi, Glaz-Ocik, & Guldemann, 2014). In spite of the importance of complex research of perception of the threat by a person, most of the scientific research works present sociological analyses of the threat to the quality of life, risk of social status loss, risks connected with crimes, politics, etc. Psycholinguistic studies deal with anonymous threat. Such works focus primarily on linguistic features of threat and the consequences of the threat perception by an addressee (Gale, 2010). The analysis of the threat perception involves the study of negative emotions aroused in the reader's mind (Borum, Fein, Vossekul, & Berglund, 1999). This research tries to fill the gaps in this area. Its goal is to describe the perception of the threat issuing from infosphere, and to single

out factors that influence the threat perception. It is believed that if one reveals the patterns of the threat perception and evaluate the role of emotions in threatening information interpretation, it will be a serious contribution to the study of verbal manipulation and its manifestation and influence on the Internet users.

2. Problem Statement

The authors have chosen the psychological cognitive approach to the study of the threat in this research. It is based on the idea that a person's behavior depends on their cognitive abilities – the typical ways of information perception and the strategies of its interpretation. People search for the necessary information, they communicate and exchange information, they make their plans and act according to the information they have.

Theoretical foundations of the conceptual scheme of perception of the threat may be found in the works devoted to the study of situation modeling by a person and self-control of behavior (Konopkin, 1995). According to these studies, the image of the phenomenon determines the attitude to it and further behavior. The model of the process of reading the text of a threat has the following stages: 1) perception; 2) interpretation; 3) modeling of behavior. Successful coping with the threat depends on the results of transition from one stage to another. Precise perception of the threat is followed by its interpretation and finishes with the choice of actions to prevent it, avoid it or decrease its negative impact.

For example, the threat perception by a pilot flying an aircraft depends on the feelings caused by rolling, buffet, engine failure alarm, pressure measuring device alarm, propellant quantity measuring device failure, etc. All this information is interpreted by the pilot as emergency situation and determines his behavior. Of course, wrong interpretation of the alarm, poor knowledge of the devices and instruments causes cockpit failures. That is why the perception of the threat is the initial stage of response to it – the real image of the threat stimulates proper behavior to cope with it.

Information about threats circulating in infosphere has some peculiarities. The authors believe that the image of the threat is not sensory or perceptual, but it is rather semantic. Indeed, while reading an article, a person gets new information about potentially dangerous events and there is no need to compare it with some standard of threat. The person's behavior depends on whether they treat this piece of news as a potential threat or not. This depends on identification of the threat and the belief that this information is threatening.

One more important phenomenon is the content of the threat. There are different kinds of threat over the Internet; they can be roughly divided into three groups: health threats, social status threats and reputation threats (Witte & Mike, 2000). The peculiarities of perception and processing of these kinds of threat are given special attention in this research.

One more important field of the threat perception research is the study of emotional responses to threatening information. The scientific literature presents contradictory views on the emotions caused by threat. Psychological consequences of threat are often referred to the emotional sphere: anxiety, fear, and depression of a reader (Dietz et al, 1991). Intensive manifestation of emotions influences adequate perception of the image of the threat. Intensive emotions cause despair and fixing on the same thoughts (Meloy, Hoffmann, Roshdi, Glaz-Ocik, & Guldimann, 2014). Low emotional response shows that the reader realizes that this threat is unreal and it will never be carried out (Smith, 2008). Thus the study of

the process of perception of the threat should be accompanied by analysis of the emotional state of the readers.

To properly describe perception of the threat it is suggested, the authors combine two approaches: a) comprehension of the information about the threat; b) determination of the kind and level of emotions. Such differentiation is conventional, but it allows identifying two levels of reaction to information about the threat – cognitive and emotional.

3. Research Questions

The research aims at the study of two issues:

3.1. Whether there is some influence of the kind of the threat (health threat, social status threat or reputation threat) on the accuracy of its perception and the emotions it causes.

3.2. Whether the accuracy of threat perception depends on feelings and emotions that accompany the process of perception.

4. Purpose of the Study

The authors studied perception and interpretation of three kinds of threat: health threat, social status threat and reputation threat – the self-image in the eyes of other people. The authors discussed the peculiarities of perception and interpretation of the image of the threat by the reader.

5. Research Methods

The given part of the article describes 1) the experiment procedure; 2) the questionnaire structure; 3) the research sample; 4) the experiment parameters and the methods of data processing.

In order to study threat, the authors worked out the experiment procedure. The experiment was carried out through presenting the information about the threat to a person. The peculiarities of perception of the threat text and interpretation of its content were evaluated via qualitative analysis of questionnaire results (Patton, 2002).

The threat information was presented in the form of a monocode text, though the modern Internet space more and more often uses a creolized polycode text including video clips, drawings and text commentaries.

Persons under test were presented with three kinds of threats. 1. Health threat: “They say a new itch virus has been detected in the city. It does not hit all people but only those having a specific genotype. It is transmitted even by boiled water. The symptoms include itching and psoriatic skin on the face, neck and abdomen; some persons may lose hair. The virus lives for 5-6 months and then fades away”. 2. Social status threat: “There is a rumor that our institute and, naturally, the student groups may be disbanded in the nearest future. Of course, one can continue education at another institution, but they will get a less prestigious diploma in this case”. 3. Threat to self-image in the eyes of other people: “An acquaintance of yours is spreading rumors that your friends and closest people are turning their backs on you”.

5.2. The authors worked out a questionnaire in order to register the answers. It had four blocks; each block was placed on a separate sheet of paper and was presented to the person under test in due sequence.

The first sheet contained the text of the threat, and the following sheets carried the questions and tasks generalized by types and grouped within one sheet. The tested persons read the text by themselves, turned to another sheet and did not go back to the previous one anymore. The same procedure was applied to any subsequent type of task.

The second sheet of the questionnaire presented two tasks: to literally explain the content of the threat and to write down what the reader understood from the text. These tasks made it possible to figure out the person's perception of the threat interpreted as the correspondence of the threat text with its description by the person under test. The following parameters were used for this end: a) the number of words used in the description; b) precision/imprecision of the threat perception; c) correspondence of the person's Self and the threat (the use of personal pronouns and indications of the reader: "I", "My", "Me" and others were looked upon as identification of the reader with the threat, and their absence – as alienation of the reader from the threat).

The third sheet analyzed the reader's threat perception formed by way of interpretation of the given information. Instructions actualizing the interpretation stage of information procession were used to reach this aim: "Having read the text I first of all thought about ...", "While writing, it occurred to me that ...", "And, finally ...". The tested persons followed these instructions and freely described their thoughts and feelings brought about by the threat related in the text.

The fourth sheet included evaluation of feelings and emotions associated with the text of the threat. For this purpose, the authors used the instruction "What feelings did you have in connection with this news?" and the form of the semantic differential with the set of emotions as described in Izard (2011). They are the basic ones – i.e. they are current in the society, clear for the people and are easily expressed and identified.

The information about the emotions associated with the threat was generalized via calculation of the general average value across the whole list of emotions. It means that the researchers did not differentiate the influence of the threat on the manifestation of certain emotions but evaluated their deviation towards either negative or positive expressions.

5.3. The test sample. 70 students of the Law and Psychology Faculties of the Law Institute took part in the experiment (52% of them were men, aged: $M=20.2$, $SD=1.12$).

5.4. The experiment parameters and the methods of data processing. In order to evaluate the impact of a certain kind of threat, the person under test was asked to reproduce the text of the threat. The parameters were evaluated by the following indices: 1) the number of words used in the threat description (more or fewer than in the text of the threat); 2) the precision of rendering the essence of the threat; 3) the use of personal pronouns in the threat description. The emotional response was evaluated with the help of subjective scaling of emotions by the readers. As long as the answers were graded in the values from 1 – maximum expression of the negative pole of the emotion to 7 – maximum expression of the positive pole of the emotion, the distribution indices were $M=4.36$, $SD=0.56$. These responses can be statistically interpreted as neutral-negative. The standard deviation index calculation characterizes the range of

answers not exceeding 1 point on the scale. This fact makes it possible to suppose that the emotional states of those tested are correlated. The methods of data processing. Extraction of indices from the sheets was effected with the help of the method of content analysis. For this purpose, all sheets were read by the experimenters, and the information was tabled in accordance with the rules of interpretation worked out beforehand. The results were processed via t-Student and one-way ANOVA tests. .

6. Findings

The following two suppositions were put to test in the course of the experiment.

1. The hypothesis about the impact of the kind of threat on the precision of perception and the determination of the emotion is posed. The differences in the threat perception are determined via the parameters of the number of words in the threat description and the precision of rendering the essence of the threat. The description of the threat to one's reputation involves more words than that of the threat to one's health ($t=4.01$; $p<0.01$) and social status ($t=2.75$; $p<0.05$). This affects the precision of rendering the essence of the threat: threats to reputation are distorted to a higher degree than health threats ($t=-2.15$; $p<0.05$).

The persons tested used personal pronouns while reproducing the text of the health threat more often than in the situation of threat to interpersonal relationships ($t=9.39$; $p<0.01$). A similar result was observed in the perception of the threat of losing social status ($t=8.39$; $p<0.01$). One may suppose that these kinds of threat were accompanied by the readers' association with a similar threat and with orientation of the threat towards themselves.

The determination of emotions was achieved through comparison of the average values of evaluation of the emotions caused by different threats. Given the emotion, manifestation is subjective in character; the differences between the responses to various kinds of threats are more significant than their absolute values. The authors found out that the threat to social status was perceived more negatively (average point = 4.23) than the health threat (average point = 4.31) or the threat to the Self-image in the eyes of the surrounding people (average point = 4.58).

2. The hypothesis about the impact of the parameters of the emotions caused by reading the text on the precision of understanding of the essence of the threat. It was figured out via the one-way ANOVA test that emotional responses affect the precision of perception of all threats under experiment by the readers.

2.1. Threat of illness. Better perception of information about an illness is enhanced by fear: the more fearsome the threat was, the more precise characteristic was given, and the more fully its symptoms were described ($F=2.01$, $p<0.05$).

2.2. Social status threat. In this experiment, the precision of information transmission was facilitated by the emotions of sorrow ($F=5.64$, $p<0.01$) and anger ($F=8.07$, $p<0.01$). Their manifestations are similar, but the combinations do not have a statistically significant overall effect. In other words, a certain part of the tested persons precisely render the information under the influence of sorrow, another part – under the impact of anger, but both emotions experienced by the same person under test do not influence the precision of the threat perception. It is also important that the maximum precision is typical

of the highest degree of manifestation of emotion; the participants showing complete and utter indignation were more precise and provided more details in describing the threat.

2.3. Threat to reputation is realized more precisely as a result of depression of the emotion of joy ($F=2.69$, $p<0.05$) and lowering the level of sorrow ($F=2.67$, $p<0.05$). The precision may be affected by the level of manifestation of the given emotion in a certain modality but not the modality of the emotion itself. For example, the more neutral the emotions of joy and sorrow are, the more correctly the threat of losing reputation is perceived.

7. Conclusion

The aim of this research consisted in studying perception and understanding information about threats by the reader. This phenomenon is interesting both to linguists and psychologists as it broadens and enriches their realization of the impact of the information environment upon man. To achieve this aim, the authors carried out an experiment in the course of which the participants were asked to read texts containing three kinds of threats: to one's health, social status and reputation. The research provided a general idea about the complexity and heterogeneity of the influence of threat upon its perception by the reader. The results obtained in the course of testing go beyond the hypotheses posed and need further experimental investigation.

It was found out that the perceptions of different kinds of threat by people are not identical. The threat to reputation is realized less distinctly and is described by a larger number of words than the threats to one's health or social status. In contrast to the reputation threats, health and social status threats are understood by the experiment participants precisely and with minimum number of distortions. The explanation of these results may be seen in the fact that the threat of loss of reputation in the eyes of the closest people is perceived in a more direct and salient manner than the threats to one's health or social status. This explanation is also corroborated by the fact that in the course of interpretation, the experiment participants use the words which express the contextual meaning of the threat in a fuzzy way.

What is more, the threat perception is additionally affected by the factor of gender of those tested, which the authors did not take into account while planning the experiment. It may be suggested that the variable "gender" plays the role of a mediator in the threat perception (Baron & Kenny, 1986) – the introduction of the factor of gender in statistical analysis showed differences between young men and women. Thus, the threats to reputation are perceived more clearly by girls; young men better perceive the threats to their social status and health. In addition to the gender factor, this fact may be attributed to the influence of developmental peculiarities of perception of social relations by young people. The results testify to the fact that the girls are more focused on self-presentation than their male peers and, consequently, are apt to better respond to the negative evaluation of their own properties. Young men better evaluate the threats to their social status and health.

The second conclusion of the experiment consists in the confirmation of the hypothesis about the correlation between the emotions and precision of the threat perception. Still this kind of correlation is dubious and is determined by the modality of the emotions (joy, anger or fear). The threats to one's health are perceived in more detail if they are accompanied by fear; the risk to social status is combined with anger and sorrow; the threat to reputation is perceived more precisely and adequately if the person is in a

neutral balanced emotional state. The threats of loss of the social status on the whole are perceived more negatively than the threats to one's health or reputation. But still, the gender of those tested functions as a mediating factor influencing the manifestation of emotions. Thus, the reputation threats are perceived by the male members of the sample in a more positive way than by the girls who negatively evaluate the threat to their reputation. Yet the authors have not found any statistically significant differences and these results need further empirical assessment.

Summing things up, let us generalize the conclusions the authors have arrived at. It becomes clear that the results obtained in the course of the pilot research need further investigation in terms of concepts and methodology. From the conceptual point of view, it is clear that reading the text of the threat is not the final stage of its realization by the reader; it is quite probable that the time of thinking it over and the peculiarities of its comprehension may be also rather significant. In fact, the threats are perceived differently – those tested differently approach what they have read, including a most light-minded attitude. Light-mindedness negatively influences the perception the threat as real. In this sense, the pilot research did not include the context of the threat text presentation. The authors have not studied the role of the addressee and the situation of reading the text of the threat. These factors may affect the perception and interpretation of threatening information. That is why, in the authors' future research, they will lay special accent on the influence of the psychological properties of the reader upon the interpretation of information containing threat. From the methodological point of view, the experiment sample should include a group of older persons which may serve as a contrast to the student sample. The experiment should contain the procedures of randomization of threat presentation in order to avoid the sequence effects and should combine with self-reports of the participants to control the real nature of the threat.

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