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MODELS OF AGGRESSIVE INTERNET TROLLING

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Abstract

The article is devoted to the topical problem of modern Internet interaction, called trolling. The authors of the article rely on the interdisciplinary analytical methods in the study of aggressive trolling, in particular, the methodology of cognitive and functional-structural analysis of social modeling. It is noted that the integration of these methods allows to perform an in-depth research on trolling, to focus on the structural aspects of the problem formation, to find out the cause-and-effect relationships underlying the spread and dynamics of aggressive trolling. The authors have constructed cognitive and functional-structural models. Within the framework of the cognitive node model, they have described various aspects of the influence of the factors on the characteristics of aggressive Internet trolling. To determine the structural aspects of aggressive behaviour of trolls, it is proposed to use multi-contour cognitive models. In conclusion, there has been presented a functional and structural analysis of the process of the free anonymous Internet communication. It is shown that the key to solving the problem of aggressive Internet trolling lies in modern technologies adopted and supported within the Internet community. Thus, the modern model of the Internet communication process has to be radically restructured. It is necessary to fundamentally change the place and role of the participant of the information interaction. The choice of communication strategy, access and protection technology, platform design, etc. must be left to the participant of the interaction.

Keywords: Trolling, aggression, pattern, the Internet

1. Introduction

In the process of the development and widespread use of social networks, a new phenomenon called "trolling" is becoming more and more pronounced. Akulich (2012) to denote this phenomenon the following definition is proposed: "Social trolling is a deliberate provocation of negative emotions and moods of individuals and social communities, carried out in objective social and virtual reality, accompanied by the instability and destabilization of social systems" (p. 36). The phenomenon and its name are new, but the underlying behaviour of the subject is not new at all. In real life, in the process of interaction among people, this type of behaviour is defined as a blackmail, provocation, psychological manipulation, etc. In legal practice applied to real life, the cases of administrative or criminal liability in connection with the above-mentioned behaviour of specific persons are not uncommon.

The review of scientific publications shows that a significant number of works have already been devoted to the study of various aspects of the problems of social trolling, which analyze the influence of trolling on the formation of online identity and reputation (Nycyk, 2015), highlight the socio-psychological origins of the phenomenon (Nycyk, 2016), explore the language (Bishop, 2014) and speech aggression (Vorontsova, 2016), provide the results of the studies of the generalized characteristics of trolling as a type of communicative activity (Williams et al., 2017), or on the contrary, as a manifestation of trolling in a specific professional environment (Duskayeva & Konyayeva, 2017; Tarmaeva & Narchuk, 2020). Each of the studies reflects a narrow professional view of specialists in a particular subject area on the problems of trolling.

2. Problem Statement

However, the scale of the problem requires already the involvement of interdisciplinary methods and tools of analytical research, in particular the methodology of social modeling. It can be assumed that focusing on the structural aspects of the problem formation will allow us to find out the cause-and-effect relationships, logical-semantic and functional relationships that underlie the prevalence and dynamics of aggressive trolling. In this paper, it is proposed to partially fill in these omissions in scientific research.

3. Research Questions

The paper proposes to highlight the following issues.

1. To present the possibilities of integrating cognitive and functional-structural analysis methods, allowing to perform the in-depth studies of the causal and functional relations of trolling.
2. To understand various aspects of the influence of factors on the characteristics of aggressive Internet trolling within the framework of the cognitive node model.
3. To determine the structural aspects of aggressive behavior of trolls using multi-contour cognitive models.
4. To perform a functional and structural analysis of the process of free anonymous Internet communication.

4. Purpose of the Study

To reveal the structural foundations of the shortcomings of the modern process of Internet communication, which give rise to aggressive Internet trolling.

5. Research Methods

It is proposed to use an integrated methodology of cognitive and functional-structural analysis in the process of modeling. The analytical advantages of this scientific analysis tool are related to the fundamental possibility of the visual representation of the structure and dynamics of the functioning of the interaction relations under study (Tarasenko et al., 2019). The methodology allows the analysis process to build up a model in accordance with the specific point of view on the problem, which allows the analyst to explore the situation on the basis of a variety of its descriptions.

Thus, the cognitive model relies on causal connections, while the functional model relies on process connections, both describing the structural organization of the situation. As a result, we get methodologically different models, though built with the same purpose of studying the functioning of a particular social situation, namely, the analysis of latent signs or implicit patterns of trolling.

6. Findings

6.1. Nodal cognitive model of social Internet trolling

Social trolling is a kind of indicator of the state of society's culture, i.e. the reaction of society to a joke as "stupid" or unacceptable characterizes the changes in cultural priorities and values observed in the socio-cultural environment. Within the framework of cognitive analysis, these relationships can be expressed as follows (Tarasenko et al., 2019). Changes in the Social Trolling factor are the result of changes in the Socio-cultural environment factor, while the nature of changes in the latter determines the content and level of trolling. The ratio reflects a fundamental inductive scheme that allows us to make assumptions about the state of the socio-cultural environment based on the fixed characteristics of trolling. However, the socio-cultural environment is not the only reason for social trolling. The socio-psychological state of an individual (social group, etc.) is of great importance.

Particularly aggressive behaviour characterizes the individuals who reflect the combined influence of these socio-cultural and socio-psychological factors. In this case, the Social Trolling factor turns into a nodal one, i.e. it integrates changes in the factors of Socio-cultural environment and Socio-psychological state. It is impossible to deny the influence of both factors, but to determine the degree of the influence, it will be necessary to conduct the studies of the dependencies generated by these cause-and-effect relationships.

A significant number of scientific publications (including those listed above) are devoted to such studies. The subject of their analysis is the value orientations and priorities of the socio-cultural environment (Akulich, 2012; Nycyk, 2015), the content aspects of troll messages (Duskayeva & Konyayeva, 2017; Sarada, 2016; Tarmaeva & Narchuk, 2020). But for this study, it is crucial to identify the factor that fundamentally changed the problematic situation with social trolling, intensified the

aggressiveness caused by a "stupid" joke to an aggressive and provocative attack, and finally, which gave rise to the term Internet trolling itself. Such a factor turned out to be the natural lack of responsibility typical of the modern Internet community in connection with the behaviour displayed on the Internet, for possible serious consequences in real life. So, the irresponsibility declares itself as the first and weighty reason for not only the appearance of Internet trolling, but also its continuous demonstration of increasingly aggressive forms. At the heart of the irresponsibility lies the concept and technology of "network anonymity" (Ksenofontova, 2009, p. 285). Figure 1 shows the nodal cognitive model of social Internet trolling.

The nodal cognitive model of social Internet trolling illustrates the task of studying various aspects of the influence of these three factors on the characteristics of aggressive Internet trolling. However, the most important task for the analyst is to identify the structure of relations in which Internet trolling has risen to the level of a social problem, a problem of state and even international relations. It is necessary to build a cognitive model of Internet trolling that allows us to determine the feedback loops that ensure a stable and threatening spread of this type of behaviour of the Internet users in social networks.
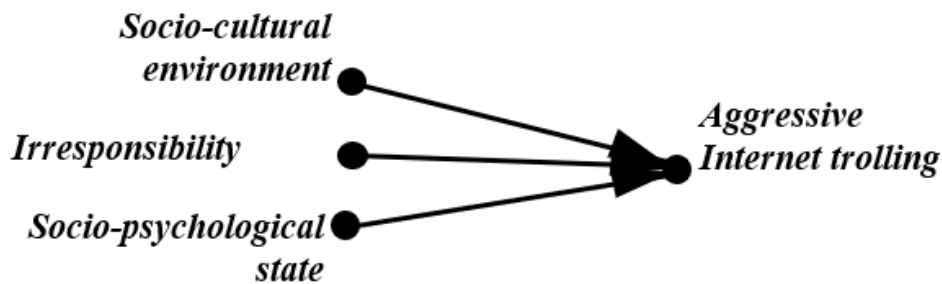

Figure 1. Nodal cognitive model of social Internet trolling

First of all, it is necessary to identify the factors that ensure the formation of an appropriate contour for each of the causal factors (Vorontsova, 2016): Socio-cultural environment, Socio-psychological state and Irresponsibility. As noted earlier, for the factor of Irresponsibility, "network anonymity" (Ksenofontova, 2009, p.285), reflecting the corresponding Internet technology turns out to be such a factor. As follows from the definition (Akulich, 2012), the factor of Destabilization of social systems becomes a contuorforming factor together with the factor of Aggressive Internet trolling.

Finally, together with the Socio-psychological state factor, the Negative Emotions factor is included in the contour. It is the negative emotions and moods of the individual and social communities (Akulich, 2012; Williams et al., 2017) that are the goal and at the same time generate the actions of the troll.

6.2. Multi-contour cognitive model of aggressive Internet trolling

Figure 2 shows a multi-contour cognitive model of aggressive Internet trolling.

The first contour - the contour of the socio-cultural environment includes three factors, namely, the Socio-cultural environment, Aggressive Internet trolling and the Destabilization of social systems. These factors are combined via causal connections into a contour with a positive feedback. The increased aggressive behavior of the Internet trolls will lead to an increased degradation of social systems (a sign of

connection+) and, as a further consequence to the deterioration of the characteristics of the socio-cultural environment (sign of connection -), the latter will lead to a new wave of growth of aggression in social networks (connection sign -). In general, the causal connections in the contour form a chain (connection signs:+, -, -) of positive feedback (Tarasenko et al., 2019).

Thus, the increased aggression in the loop with a positive connection leads to further escalation. The contour of the socio-psychological state is arranged similarly, including the factors of the Socio-psychological state, Aggressive Internet trolling and Negative emotions. The Third Circuit also includes three factors, namely, Aggressive Internet Trolling, Online Anonymity, and Irresponsibility. However, the chain of causal connections in the positive feedback loop is formed only by positive connections. Each of the factors leads to an increase in the aggressiveness of Internet trolling.
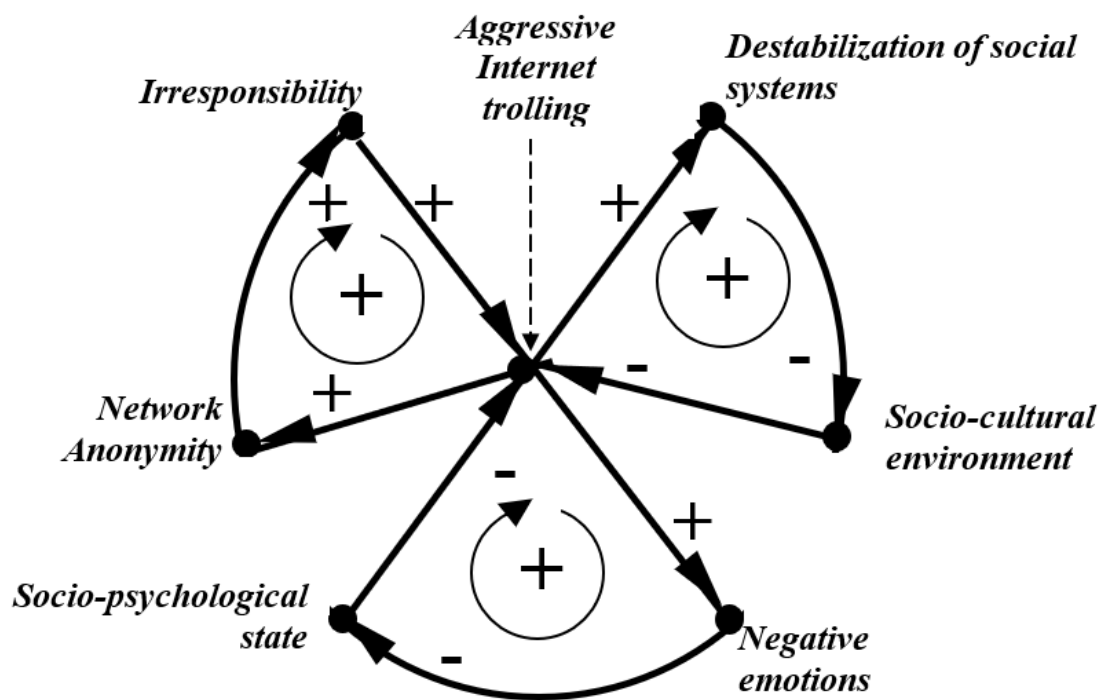

Figure 2. A multi-contour cognitive model of aggressive Internet trolling

It is worth mentioning that the Aggressive Internet Trolling factor in the model is a nodal one, i.e. it is included in all the three contours. The contours intersect at the point of the Aggressive Internet Trolling factor. Therefore, the growth (accumulation) of irresponsibility, which increases the aggression of trolls on the Internet, will be transmitted to the socio-cultural and socio-psychological circuit, where it will receive enforcement from negative emotions and the destabilization of social systems.

Thus, the aggressive behavior of trolls is determined primarily in the contour of Anonymity - Irresponsibility. Attempts to reduce negative emotions (Akulich, 2012; Williams et al., 2017) in the socio-psychological circuit are certainly important, but they are secondary to the factors of Irresponsibility and Network anonymity. The formation of new languages of network communications that correspond to the language adopted in our culture is important in the current situation on the Internet. However, the key to solving the problem of aggressive Internet trolling lies in modern technologies adopted and supported

within the Internet community. To break the chain of Anonymity = Irresponsibility = Agression and, thus, to stop the spinning flywheel of the destruction of cultures and socio-psychological states is the essence of the resulting cognitive model of aggressive Internet trolling.

6.3. Functional and structural analysis of the process of free anonymous Internet communication

Further detailed description of the trolling processes can be obtained within the framework of the functional-structural modeling, which implements a consistent progression from a general description of the process (at the level of concepts) to a more detailed one at each subsequent level. Modeling consistently brings us closer to the level of a problematic functional block. Detailing of the processes of functioning allows us to identify the shortcomings of the system even where the functionality seems obvious at first glance. Modeling in the proposed notation constantly encourages the analyst to search for the problems in the feedback loops, plexuses and intersections of flows, controls and resources, which makes the study rigorous and visually attractive.

Figure 3 shows a context diagram of the functional-structural model of the process of free anonymous Internet communication.
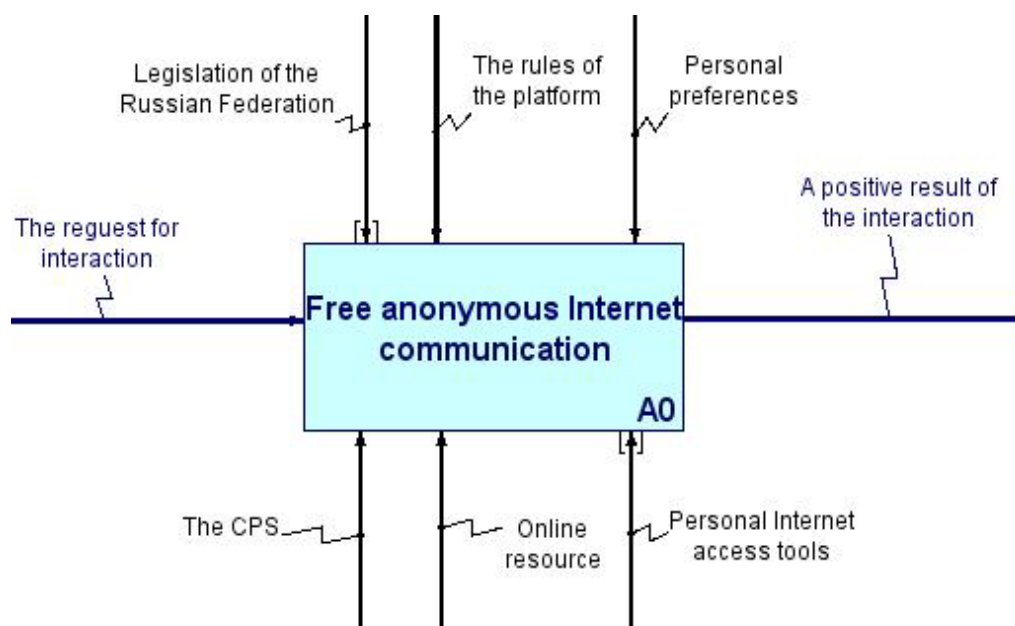

Figure 3. A context diagram of the functional-structural model of the process of free anonymous Internet communication

As you can see from the diagram, a request for the interaction in the Internet environment starts the process of Free Anonymous Internet Communication. Its goal from the point of view of the analyst is its positive performance, a positive result of the interaction. In the process of Free Anonymous Internet Communication, it is proposed to be guided by the Legislation of the Russian Federation, the Rules of the platform on which communication will be implemented, and Personal preferences that reflect the socio-cultural and socio-psychological attitudes of the interaction participant. The resources in the proposed model of Free Anonymous Internet Communication will be used on behalf of the state, the resources of the

state structure Rospotrebnadzor (The CPS), then of course, the Internet resource and the Personal means of the Internet access of the interaction participant.

When decomposing the context diagram of the functional and structural model of the process of free anonymous Internet communication into subprocesses, we will try to understand how they are related to each other and which block determines the effectiveness of the interaction implementation. Figure 4 shows the decomposition diagram of the functional-structural model of the process of free anonymous Internet communication.
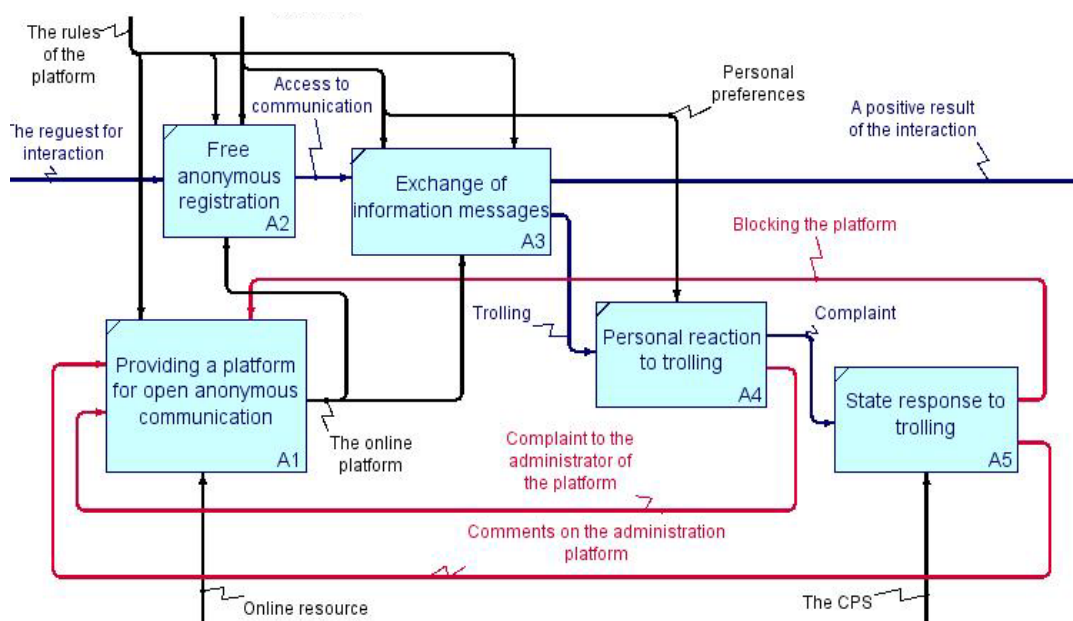

Figure 4. Decomposition diagram of the functional-structural model of the process of free anonymous Internet communication

The module of Providing the platform for open anonymous communication is the primary one in the diagram. It is this module that, within the framework of the implementation of the Platform's Rules, provides the participants of the interaction with the access to the Internet resources necessary for this interaction. So, at its output, the corresponding platform resource is formed, which provides the required Internet interaction. System connections pass through the module, forming control loops for the interaction in cases of trolling detection.

Thus, the request for the interaction is received at the input of the Free Anonymous Registration module. The module is already under the control of both the Platform Rules and the Personal Preferences of the communication participants. In accordance with the latter, within the framework of the rules of a specific platform (social network, forum, site with the ability to communicate, etc.), Access to communication is being formed at the output of the module.

The received access as the implementation of the request for the interaction opens up the possibility of Exchanging information messages on this platform and within the framework of these Platform Rules. In the extreme case, there are two options: getting satisfaction from communication and, accordingly, a positive result of the interaction at the output, or instead of informational and informative communication, getting under an aggressive Trolling and getting a trolling situation or a trolling attack at the output.

The reaction of the interaction participant to the presence of trolling in the model is implemented in the Personal Response to Trolling module. In accordance with Personal preferences, the participant of the interaction has an opportunity to form a Complaint to the platform administrator about the aggression shown against him during communication. However, it is also possible to file a complaint with Rospotrebnadzor for an increasing pressure on the platform administrator (in connection with Comments on the administration of the platform, or even, in accordance with the Legislation of the Russian Federation (if such is applicable in a particular case) and demand that the platform be blocked.

7. Conclusion

Modern Russian legislation is extremely limited in responding to the violations in social networks against individuals, protecting their honor and dignity, in the event of psychological or cultural aggression. Therefore, the feedback loops between the modules State response to trolling and Providing a platform for open anonymous communication are extremely ineffective in terms of preventing aggressive trolling. Even less effective is the feedback loop directly from the module Personal response to trolling to the input of the module Providing a platform for open anonymous communication, since platforms allow extended interpretations of the platform Rules and can only observe the development of the situation with a troll attack on a specific participant of the interaction for a long time.

Finally, all these counteraction circuits fundamentally implement the negative feedback loop, i.e. the violation against the communication participant has already taken place, he has already been attacked by a troll, and in the future this situation may not be repeated to a certain extent. Unfortunately, this is how negative feedback works. Therefore, the described model of communication, which is currently functioning in the Internet, is criticized (Kubota, 2017). According to this model, the interaction participant may not achieve a Positive result of interaction at all, and his attempts to counteract aggressive trolling will be ineffective. In fact, the troll remains unpunished.

Thus, the modern model of the process of Internet communication should be radically restructured. It is necessary to fundamentally change the place and role of the participant of information interaction. The choice of communication strategy, access and protection technology, platform design, etc. must be left to the participant of the interaction. But such models have yet to be developed.

Acknowledgments

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