The use of electronic semantization of the cognitive activity manifestations with the aim of detection of intentions of the group of people leading to the destabilization of the digital super system

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Abstract. The article deals with the possibilities of monitoring of information communities and their members' cognitive activity in order to analyze and forecast the actions of these individuals with the use of the method of automated structuring of their real political interests and of detection of inner- and inter-class connections in a digital super system. Analysis is a relevant method to detect tendencies of the political positioning of groups of people that are forming digital information assets as well as of the management of the organizational risks that emerge.

Keywords: digital super system; information communities; cognitive activeness; political interests; digital information assets.

1. Introduction

In last years the new social phenomena are drawing attention, those connected with the realization of information interests by an individual or a group of people that form digital information assets with the use of network technologies [1-3].

The genesis of the active network activity of a vast group of people requires its monitoring, automatic classification and identification the cluster connections in the digital super system because this can make a significant influence on the global socio-politic structure of the various state levels [4-5].
The development of the strategy and the planning of the development of the political events through the implementation of the observation, structuring and forecasting of the individual's acts on the base of the identification and assessment of the nonlinear regularity of the external facts' impact is a strategically crucial goal for all countries [6]. All state institutes are interested in the provision of their political and social stability [7].

It’s necessary develop the basics of the synchronization of the set signals and of the whole complex of the measured parameters of the cognitive activeness in the analyzed information area of a digital super system as well as to detect the following tendencies of the political, social and info-digital reforms.

2. The detection of the taxonomic structure of the information societies and of cognitive activeness for the structuring and forecast of their acts in the digital super system

It’s suggested to carry out the analysis of the electronic subject texts that will enable us to visualize the modern society and the processes of the maintenance of the livability of the political system. The assessments are based on the network information possibilities taken as the means of organized acts of an evident or of a latent group of people. This is an effective method of the identification of a taxonomic structure from the concrete area of information societies and its cognitive activeness that forms digital information assets for the structuring and forecast of the individuals' acts in the digital super system by the computing structuring of their real political interests and of the detection of the inner- and inter-cluster connections. Automated analysis is a relevant method of the detection of tendencies of dynamic development of pro-government and anti-government cognitive activity on the base of information available in the digital area.

Automated observation with the use of network technologies of the information assets logistics and of intellectual mobility makes it possible to detect and identify acts of groups of people in an information area which is of a special interest to a researcher, which forms digital information assets.

The visualized expression of the agent-based analysis results for the effective detection of the current level of aggressiveness of groups of people by an automatic classification of the identified network community members and the detection of the cluster connections inside the digital super system is the information structure of the members' messages making it possible to observe an individual's reaction on some certain events and to identify the dependences and the deviations.

On this base it’s possible pass on to the formation of identified persons’ “aim reflex” towards the operated network resources.

The construction of hierarchic and network connections or of operated network resources is a flexible method of the development of the strategy of management and planning of the development of the political events on the base of identified persons' acts emerging in the especially interesting information interests implementation field which form digital assets [8-9]. The use of the agent-based modeling on this purpose is widely used within the control of those who act in a way that doesn't go along with the official position and in which the state bodies aren’t interested as well as with the aim of maintenance of planning of the state body acts in this sphere [10-12].

The analysis of changes in the frequency of the emergence of key concepts in the information networks — terms defining the essence of the subject interest — over a long period of time can deepen the understanding of the process of development of the latent communities. Another contribution to this is made by the identification and visualization of “hotspots”, new communication opportunities, the development of newly emerging acts of people in the digital super system on the base of detection and assessment of the nonlinear regularity of the external factors’ influence and identification of the evident and latent leaders.

In the computer processing of an analyzable amount of electronic information transactions mediating the expression of information interests and personal contacts in any detectable form we can highlight the information themes or blocks of data taken as the expressions of the dynamism of psychological parameters and conditions detailed by the issues of concern such as parameters of the level of aggressiveness and sociopathy.
The agent based analysis of the distribution of the analyzable amount of electronic information transactions makes it possible to identify the inverse relationship between the response to the advertisement and propaganda elements for the stimulation of digital information asset consumer’s behavior in the spheres which affect the political stability of society and state.

For a more deep understanding of the global distribution of events it’s necessary to detect the information organizational structure of the members which will make it possible to observe the participation of a concrete person in some certain events and to identify the dependences and deviations on the base of information concerning the connection between individuals. This is the ground of the entire process of identification of those whose political position is latent and doesn't go along with that of the officials that forms the vectors of their acts that contradict the official position, i.e. that in which the state bodies aren't interested.

Every buyer wants to buy some set of goods. Goods are delivered from the warehouse (to firms and shops), which corresponds to a given type of raw materials and goods. Also introduced the concept of value of each end product. It represents the sum of the value of the goods at the point of extraction of raw materials, transportation costs for its delivery first to the storage warehouse, and then to the firm, production costs, costs for delivering goods to the store and storage costs in warehouses [6-7].

3. The formation of a structured field of thematic chains for the construction of the conditions suitable for the positive interpretation of information and virtual programming of the social reality in the form of acts under the influence of information signals

The structured field of thematic chains on the information and social networks (the ground of the event sequences) can become a powerful instrument of the maintenance of taking important decisions of great responsibility by the management at an early stage of the aggressive trends deployment as well as under the information attacks. The substantive actions of a political or a social group of people can be detected by the analysis of thematic data injection and of semantic characteristics of the amounts of information messages and their sources by the use of inverse relationship signals that reflect a person’s actions in information and social networks (as the ground of event sequences) in regards to the most important spheres of the government’s interests.

Thus, we can get a systematic understanding of groups of people including the modern level of processes of the maintenance of livability of the political system and the activities of organizational clusters in the identified sectors of substantial acts that form digital information assets that belong to the sphere of government’s interests in the organizational field of the maintenance of stability and order which is an issue of concern for them [13]. But because the projects of this kind provide a more broad overview in comparison to the assessment of information themes (blocks of data), they are used in marketing researches, political developments and the assessments of information situations with the aim of linkage between the information strategy and the general aims of the government [14].

The results of the formation of a structured field of thematic chains can be used for the construction of the conditions for the positive interpretation of information or for the virtual programming of the social reality in the form of actions that can be used for offensive and defensive purposes [15]. Depending on the final destination of thematic injections and semantic characteristics of the amounts of information messages and their sources with the use of inverse relationship signals, that describe an individual's activity in information and social networks, the political strategies of the detected groups can vary significantly according to their resources and focusing [16].

The contextual flexibility and the permissible breadth of coverage of information by the information, virtual game based and communication technologies entails both advantages and disadvantages. They can lead to the optimization of the information injections and semantic characteristics of the amounts of information messages (taken as the ground of the event sequences) as well as to the overloading of people with redundant information, to the dispersion of aims and the reduction in the coordination of the received results. The transformation of the sets of data by the information, virtual game based and communication technologies is aimed at the optimization of thematic injections and semantic
characteristics of the amounts of information messages and is focused on the political positioning and management of political risks.

Governmental bodies are interested in the monitoring of the actions of people with the setup space-, frequency- and temporal characteristics of the expression of activeness in the communication networks and in the streets with the aim of detection of the organized actions of a large political or social group [17]. The government is interested in the structured field of thematic chains for the construction of the conditions suitable for the positive interpretation of information and virtual programming of the social reality as the set of acts under the influence of information signals that enable us to identify the strategy of the organized groups [18]. Usually the organization of thematic injections is characterized by a broad coverage of the organizational area [19].

4. The detection of the linkage between the information interests and the cognitive activeness of individuals or groups

The use of the strategy of detection of the linkage between the information interests and the cognitive activeness of individuals or groups has a number of advantages when used by the government in the construction of the instruments of information and social networks monitoring:

— the connections between people are reflected visually helping the analytic to assess the organizational structure in general;

— the analysis of the structured field of thematic chains in the information and social networks (taken as the ground of the event sequences) is carried out taking into account the numbers of various key concepts and words determining the essence of the substantive interest which provides as a result getting more reliable indicators;

— the analysis of the thematic chains within the information and social networks reduces the time and expenses involved because the initial random set of electronic information messages is transformed into the represented visually structured data;

— the configuration of the information field received with the use of advertisement and propaganda elements for the stimulation of the digital information asset consumer’s behavior makes it possible to give the direction to the acts of people with the use of computing structuring of their real political interests and the identification of the inner- and inter-cluster connections through time and from a group of people to the nucleus of the information messages overcoming thematic barriers;

— the strategy of the construction of the monitoring mechanisms in the global networks will make it more easy to analyze the secondary substantive events, the influence of concrete identifiable groups of people, temps of dynamic development of the expressions of pro-government and anti-government cognitive activity.

The state agencies are assessing and analyzing the available amount of the electronic and information messages observed in the analyzed information area of the digital super system with the detailing by the issues of concern such as the parameters of the level of aggressiveness and sociopathy. The identification of individuals in the interesting field of information interests and the measuring of the level of aggressiveness of such groups of people making stable acts leading to the “gliding” of the super system in a risky direction makes it possible to determine the measures of neutralization of their threats to government and society.

5. Conclusion

Having identified the general trends and the active participants with the use of automatic classification of the identified members of the network communities and having detected the cluster connections in the digital super system we can pass on to the qualitative analysis of the role structure of the organizational members which makes possible to observe an individual’s response to some certain events, to distinguish dependences and deviations. For this purpose we’ll have to enlarge the quantitative assessments received earlier with the analysis of the contents of texts, relevant descriptions of the relevant themes of blocks of information data or network interactions as the base of the organized actions of an evident or a latent group of people.
To identify the nucleus of the active members it’s recommended to focus the concentration on the particularly significant substantive areas of expressions of cognitive activity and the network interactions of the detected and identified group of people. On base of the study of analyzable amount of electronic information transactions we find out the inverse relationship of the response to the advertisement and propaganda elements for the stimulation of the digital information asset consumer’s behavior in any available form. Thus we forecast their position on the general substantive structure of political views, build the diagram of the dynamic development of the expressions of the pro-government and anti-government cognitive activity which reflects the positions of all the relevant groups of people making stable acts leading to the mutual activation or “extinguishment” of the aggressive acts of the dispersed members of network communications in the digital super system.

6. The indicators of the organization of groups of people making stable information acts (implementing information strategies)

The political institutes of the state that don’t possess the information about the substantive trends of the development of network cognitive activeness are losing ground in the political system of the society. To assess the cognitive activeness it’s necessary to identify the groups of people making stable aggressive acts and inter alia the leaders of the dispersed members of the network communications that maintain the management of the organized network groups. The indicators of the organization of groups of people making stable acts enable us to assess more accurately the threat of the destabilization of the super system (network information attacks, the calls for participation in the riots etc.).

The indicators of organization of groups of people as dispersed members of network communications include:

– the number of the information messages to enter the information area of a certain political or social groups of people;
– the average number of the network information contacts mediating the information injections;
– the average age of the members of organized groups;
– the number of the information themes they use;
– the size of the information messages in the network;
– key words used for the description of information themes (or blocks of the used words);
– the availability of a structure of the information interests as the ground of the network information contacts with the previous or the following information injections from unknown authors;
– the dispersion of the information leaders as the basis of the network groups over clusters and groups.

With the use of indicators of the organization of groups we identify the level of structuring of the information area controlled by groups of people, the thematic coverage of the individuals’ acts in the digital super system, their origin and development. The latter is measured with the use of retrospective and forecast analysis of the linkage between the information interests and cognitive activity of individuals and groups. The final assessment of the organization is carried out with the use of data about the enlarged information themes, the timing of the updating of the information assets, reciprocal links, the size of messages and detailing of the description of information themes. The model of the organization of groups of people making stable acts leading to the “gliding” of the super system in a risky, built in this way, is used for the assessment of their political potential.

The assessment methods used are based on the counting of information messages as the base for the organizational structuring of the acts of people in the digital super system with the set space-, frequency- and temporal characteristics of the expression of the activeness in the communication networks for the detection of their coordinated actions. The advantages of these methods consists in the possibility of the use of the electronic information messages of a political or social group of people available in the Internet, and the disadvantage consists in the lack of the direct correlation between the interests of the financial and political groups. Qualitative assessments are most often used in the interests of management of the information portfolio of the electronic Mass Media cluster under the control of the government. They are also used by the ranging of the groups of people making stable acts or by
comparing them to the groups of people from the detected sectors of the substantive actions that form digital information assets.

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