MODERN INFORMATION STRUCTURES IN THE CONTEXT OF THE TRANSFORMATION OF SOCIAL SYSTEMS

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ABSTRACT
The rapid process of globalization happening in the modern world conducts to the fact that in the sphere of the public relations, business, education and leisure the number of contacts between representatives of different cultures sharply increases. It means that there is an urgent need of judgment and the analysis of what occurs at social interaction which has cross-cultural character. In article process of transformation of modern social structure in the context of information technology development is considered. The concept of network society is analyzed. The question of network communication as about a factor, which begins to play one of leading roles in formation of new type of society, is brought up. The social networks coming to the forefront thanks to the communicative opportunities allowing each person to satisfy the interests, such for example as communication or the need for necessary information are considered. In the same context attention is paid to such process, important in respect of transformation of society, as globalization. It is raised the question of development of the horizontal network structure succeeding vertical administrative communications and becoming a society basis. As a result of it society takes a new form, becomes more independent of the government in the information and communicative plan. Absolutely into other course passes development practically of all spheres of life - economic, political, educational and so on. As a conclusion authors make an attempt to create a concept of network society.

Keywords: social structure, society, network communication, social networks, globalization, information technologies, Internet, M. Castells

Introduction
Development of the Russian society of the last decades is characterized by the radical economic and political reforms which have led to the profound social changes which have affected all social levels from group processes in various organizations to the social system of the Russian society in general that demands studying and judgment [Barabash et al, 2018; Shadzhe et al, 2016]. In the problem field of modern sociology there are research problems of adaptive opportunities of social systems in the changing conditions, problems of increase in management efficiency, definition of tendencies of further social development [Ostrovskaya et al, 2015; Karabulatova, Polivara, 2016; Lyausheva et al, 2018]. The modern sociology has made great progress in a research of the various social phenomena and processes. However the existing sociological paradigms don't allow investigating rather fully the social phenomena arising in the modern dynamically changing world as mechanisms of interaction.
between changes of conditions of the environment and reciprocal adaptive mechanisms of social systems are insufficiently studied.

Development of the new theoretic-methodological approaches directed to identification of fundamental mechanisms of system social interactions and also to studying of historical experience of interactions of social associations with various living conditions is necessary for a research of the specified problems. At the same time there is a need for improvement of methodology and the categorical device of sociological researches, for use of the receptions of the analysis borrowed from other disciplines, in particular the system analysis as the cross-disciplinary methodology having methods of a research of difficult systems. Expansion of methodology of a research due to inclusion of ideas of behavior of the person of various humanities, allows developing the system models of social processes more fully reflecting mechanisms and regularities of both internal, and external interactions. In sociology modern society is considered as information society. Many works are devoted to a research of the person and social groups in information society, "concentrated on knowledge and production of new knowledge". But, despite the achieved success, are insufficiently investigated both the person, and social groups as information systems. As "the information system (IS) – information contour together with means of collecting, transfer, processing and storage of information", the research of social system as information means creation of the model reflecting processes of receiving, accumulation and use of various information [Karepova et al, 2015].

On social behavior of the person, and, therefore, the state and changes of social system are influenced by various flows of information internal and external (arriving from within system and from the environment). In turn external information can be new which the system receives for the first time, and already arriving in the past. Information can be saved on material carriers: genes, tools and products of work, various types of records and so on or to collect and be transferred without material basis (traditions, myths, prejudices and so on), can be realized (for example, cultural) and not realized (for example, genetic), her influence can be spontaneous (for example, the market) or purposeful (for example, training). In sociology researches of influence of this or that information on social processes are widely presented, but system mechanisms of influence of all complex in general and also use of information potential by social systems in these or those conditions of the environment are insufficiently investigated [Chuev et al, 2016]. Logical basis of such research is creation of model of information structures of the social systems corresponding to various conditions.

Ways of system interaction of social systems with the environment were fulfilled and collected as it is adaptive valuable information for millions of years of development of human societies in various conditions therefore the research of historical experience, development of typology of structures of the social information systems which are formed in these or those conditions is necessary for his conscious use in the modern dynamic world. This research is especially relevant for the Russian society as information mechanisms are a key to understanding of mechanisms of transformations and also a wide range of various social processes, both in stable, and in dynamic conditions.

Materials and methods

The real work is development of system approach in sociology within which the author offers expansion of methodology of the system analysis due to use of modern data on systems with various types of management (external and internal), features of receiving, accumulation and use of information as the operating factors of live systems (the principle of two-channel management), and other system-wide properties.

Theoretical basis of a research is the system approach presented in G. Spencer, M. Weber, K. Marx, E. Durkheim, P.A. Sorokin, T. Parsons, N. Luman, E. Meyo, R. Akoff, D.M. Gvishiani, A.I. Prigozhin, B.Z. Milner, A.I. Subetto, A.A. Davydov's researches, and many other scientists. Methodology of a research is the system analysis which foundation is laid by authors of the general theory of systems L. Bertalanfi, A.A. Bogdanov, and developed by M. Mesarovich, D. Mako, Ya. Takahara, A.I. Uyemov and many other researchers.

Work is based on the principles of unity and systemacity of the person, its sotsioprirodny integrity developed in P. Sorokin, V. Tugarinov, V. Afanasyev, I. Merkulov, B. Ananyev, V.I. Vernadsky, A.I. Subetto, V.P. Kazmacheev, E.A. Spirin, L.N. Gumilev's researches. According to B. Ananyev, people is
a complete product of the nature, society and mankind in general, his stories, representing uniform system.

The duality of human nature, according to V. Tugarinov, "should be understood as pervasive interaction and unity of its natural and social beginnings" [1971: 148].

And developments of methodology of a dissertation research have served as a basis for use of the system analysis in a sociological research representations of V. Afanasyev, who selects genetic and social information, emphasizing at the same time a possibility of both genetic, and social inheritance and also notes the integrative principle of formation of live systems which is the general feature and the fundamental principle of formation of any systems. Besides, the offered methodology is constructed on ideas of a modern evolutionary epistemology that "the theory of information allows to look at organic evolution as on process of information development. Any live system, as a matter of fact, is the system processing information and therefore information processing is a general characteristic of the organic nature" [Frolov 1994: 115]. I.I. Shmalgauzen, A.I. Subetto, B.I. Marshak's, I. Drikker, M.W. Wolkenstein considering development of the biosphere and the person as information processes are the methodological base of the thesis on the basis of which personal and social systems are considered as information systems which backbone factors are internal and external information.

Methods of a research follow logic of the system analysis offering both the general rules, and concrete methods of a system research with use of a conceptual framework and regularities of the general theory of systems (for example, to allocate system from the environment to define the purposes for which systems are created, to allocate elements and components of systems, to define backbone factors, structure, to consider regularities of systems, their hierarchical orderliness, regularities of functioning and development, etc.). For a research of interrelations between influence of various conditions of the environment and reciprocal adaptive mechanisms of social systems (the information structures which are formed for the response to external influences) in the thesis it was used the receiving given about rules and uses by the system of information, the known in the system theory, reflecting regularities of interaction of systems with the environment.

As the person is an element of social system, it is logical to begin a research of information capacity of social system and features of management with a research of social features of the person and formation of his information potential.

Discussion
A variety of approaches of studying of the person in sociology, psychology, biology, philosophy, anthropology, etc., limits understanding of the person as unities therefore there is a need for use of various approaches and methodologies. Search of the system uniting basis of structure of the personality is assumed by wider use of exact methodology which the general theory of systems has that is offered in this research directed to creation of model of information structure of the person and society. Typology of social action of M. Weber. M. Weber allocated 4 types of an acts valuable and rational, goal-rational, traditional. Formation of personal system and structure of the personality in ontogenesis. According to Bern theory the first in process of ontogenesis I appear the Child, then I the Parent and the last I the Adult. The child, as it was already told above, also has triple structure: The natural Child, the Adapted Child, Little Professor. E. Burn described behavioural features of all parties of the personality (states I) and their influence on psychology of the individual in general. We will track formation of personal system and structure of the personality in ontogenesis in compliance with information model [Lyausheva, Nagoy, 2014].

The newborn child has no created personal system. It is rather difficult to distinguish behavior of one newborn from another. The baby has only the genetic program which expects the realization. However he already has the simplest, but extremely important genetically coded behavioural reactions, such as food reflex, that is system of the newborn consists of a kernel and 1st the instinctive level, next to a kernel, corresponding to a state I the Natural Child.

It is obvious that the genotype bears in itself fundamental information on a condition of the environment in which all previous generations, that is information "from the past", so important for survival lived that her unconditional fixing was required. But except the universal information which
is available for all individuals, the genotype also defines specific features of an organism, which are less obligatory, than, for example, a food reflex or an instinct of self-preservation, but are very important for formation of the personality and her adaptation to environment conditions [Karabulatova et al, 2017]. Soon at the child the specific features concerning the simplest physiological manifestations begin to appear: "well sleeps - sleeps badly, well eats - badly eats, is more mobile - is less mobile" and so on. During this period the personal genetic program begins to be implemented, and only very rigid influence can influence this process.

Thus, the newborn baby possesses - the 1st instinctive level and the only state I the Natural Child. Further he begins to acquire some rules dictated by the environment that is adapts to a surrounding situation, for example, is accustomed to eat according to the schedule, but only in case environment conditions. This process corresponds - to the 2nd traditional level and formation of a condition of the Adapted Child.

It is possible to claim that at this stage for the present very small cultural cover designed to adapt the child to requirements of the concrete environment that I am shown in behavior from a state of the Adapted Child begins to appear. And is normal if Wednesday provides identical conditions, then each child masters the same skills (there are no others just), but one child studies it quicker, another, perhaps, with some delay that depends on genetically put abilities to adaptation [Khmyreva-Pruyel, 2002].

Despite a significant amount of remains of the formed people, experts are still far from a consensus how there was a formation of physical type of the person. It is even more difficult to track history of social relationship, and, especially, formation of social features as not having material certificates which could be found and studied [Mkrtumova et al, 2016]. It is necessary only to build guesses and the assumptions, based on what could be an ecological situation and as in similar conditions there are modern societies which are at low steps of social development.

Formation of a type of Homo sapiens as however, and any other animal species, happened over many centuries in the dangerous and hostile world around in which it was only possible to exist, having created certain behavioural reactions, which had to promote survival and, therefore, be supported by natural selection [Saenko et al, 2016]. The main of them, undoubtedly, are genetically coded (but can be corrected substantially by the environment). Repetition by a germ in the development of the main stages of phylogeny gives the grounds to assume that process of formation of behavioural reactions at the child may contain information on experience of survival which was gained by his ancestors, and will be consistently shown from the earliest forms to later.

The theory of network society most popular for today belongs to M. Castells. He claims that "network society" is a specific form of social structure which is established by empirical researches as the characteristic of information era [Castells, 1996: 15]. According to Castells's concept universal distribution of information processes in the modern world leads to radical shifts in social life of society. Emergence of a huge number of information networks becomes the reason that the value is lost by vertical communications of management, to replacement with which intensively developing horizontal social communications come. As a result, the state sovereignty weakens, there is an internalization of social life [11]. Emergence of networks of communication has led as well to basic changes in economic life thanks to what production becomes more flexible; there is an opportunity to react quickly to the defining socio-economic factors - supply and demand.

It should be noted transformation of the social relations which were based on attachment of the individual to the residence earlier, but today the person stops being is dependent on territorial communications [Lyausheva et al, 2018]. The basis for social metamorphoses is development of the communication resources giving an opportunity to realize such needs as distant work for foreign firms, communication with foreign citizens and many other things. The Internet provides a new type of social interaction between people, allowing feeling belonging to the certain more general group united by similar interests with which it isn't obligatory for person to communicate in reality. Thus, the new social identity is formed.

In the light of the aforesaid it should be noted such concept as globalization. In spite of the fact that the information technologies existing today contribute to the development of network structures,
incorrectly will only explain these formation of new type of society as on transformation of public structure huge impact is exerted by globality. Usually understand expansion of communicative social borders as a result of contacts between representatives of the different countries as globalization, and today a territorial framework doesn't play absolutely any role. As a result we has a large number of the international social organizations created as a result of interaction of adherents from the most different states. The phenomenon of globalization is extremely dependent on the information sphere of life which is characterized by functioning of the processes based on creation and dissemination of information therefore essentially new type of information social exchange is formed. Proceeding from the aforesaid it is possible to draw a conclusion that globalization depends first of all on existence of modern technologies which generate variety of information exchange not only within one social group determined by the state or territorial framework but also in really planetary scale. It has become possible thanks to development of the Internet which allows to transfer information to any point of the world almost instantly, respectively, it is possible to say that virtual communication becomes not dependent on territorial distinctions of social actors.

Results
Rapid information technology development, undoubtedly, has played a significant role in acceleration of communicative processes. Information became the main resource of development of society. As a result, today we have the updated format of the social, political and economic relations, education and also everyday life which is implemented by means of information networks. Such social structure allows us to speak about modern society, as about network. The social structure in this case is understood as some "an internal society organization which consists of the ordered parts interacting among themselves in a certain framework" [Frolov, 1994: 258].

At the moment in sociology and social philosophy there is no complete and academically recognized concept which in rather full degree would define the term "network society", its properties and borders. This fact can be explained with the fact that now a kernel of network society is the Internet which is in continuous intensive development therefore development of the theory of network society which would provide fluctuations of the Internet in all points him bifurcation [Kazakov, 2014] significantly becomes complicated. Thus, we consider justified promotion of own assumptions based on the analysis of modern society and its modern transformations under the influence of, first of all, information and technical factor.

Before describing a phenomenon of network society, once you note such concepts, "network communication" and "social network" which are closely correlating with him and defining him the main properties [Kazakov, 2014].

Many researchers notice that though information and continues to play a significant role in life of society in the context of knowledge, gradually to the leading roles there is a concept communication [Davydov, 2015]. To it we can find confirmation in M. Castell's works where he says that it is necessary to refuse the concept "information society" and to define society in the light of what will be valid new in present period, namely through networks information technoligy4. The similar opinion is expressed by A.V. Nazarchuk who urges to cease to discuss "yesterday's concepts" of postmodern society and to pass at last to a research of "communication society" [Nazarchuk, 2005]. O.B. Davydov also notes that "the increasing medialization" societies and rapid development of network technologies mark themselves formation of a new information paradigm which has succeeded industrial social structure [Davydov, 2015]. From the aforesaid it is possible to draw a conclusion that network communication at the moment becomes the fundamental factor setting tendencies of development of network society.

It should be noted that communicative processes are in direct dependence on social networks. Rigid pressure of the environment allowed to create only the levels, next to a kernel, in personal systems and kept ability to make decisions at very low level, at the same time the endogenous type of management and information channel of the first sort was used.

It should be noted that communicative processes are in direct dependence on social networks. Moreover, it is possible to claim surely that in the modern world everything is surrounded with "social networks", and in certain cases they are quite capable to play the dominating role that is caused by the
fact that the network organization has advantages before the habitual hierarchical organizations of communication in various spheres of life. The main advantages of social networks are inaccessible in the communicative plan of an opportunity earlier: the decentralized management, control of execution of problems of any complexity, remote coordination of actions and decision-making. It is also necessary to note that the network structure consists, in fact, only of conditional "knots" and communications between them. This property gives an opportunity more precisely and quicker to transport various data in huge amount [Kazakov, 2014; Karabulatova et al, 2017]. As a result of it in the course of interaction of network actors, unlike a hierarchical way of communication, no structural obstacles appear, participants of interaction are equal on the status and situation that would be almost impossible for hierarchical communication structures.

As S. Tisserion, thanks to technological capabilities of new social networks by which we mean, first of all, virtual communication has noticed, users can realize a number of motivations:
- the aspiration to increase the value of the personal experience which is the cornerstone of a self-assessment;
- requirement never to be forgotten similar;
- desire to disappear for one reason or another which is the cornerstone of autonomy/intimacy;
- the return to the above a factor, desire to prove to be as an estimate basis, that is the need to parade everything that is connected with private life;
- an opportunity to control a distance in the relations with others that gives the chance to keep communications and at the same time not to cross border of desirable rapprochement [Tisserion , 2011].

Conclusion follows from the aforesaid that the network is the optimum format of the relations in the modern world allowing everyone without exception to the member of society to communicate and self-express in the way convenient to him. Besides, communication on social networks already has an appearance of certain interactions which for rather short time have created own system of rules of conduct, culture in which all regular participants of this kind of communication are anyway involved [Fil, 2012; ]9.

Concepts "network" and "information society" are often used in parallel. But it is worth noticing that the first concept makes broader sense as modern network society isn't limited only to a technological component, but includes also some other factors: cultural, educational, economic, political and religious. All these parameters just also influence formation of network society. At the same time they can make polar impact - both to contribute to the development of network society, and to break it.

**Conclusion**

Social systems in the course of historical development got this or that steady type depending on environment conditions. The received information and structural typology reflects the accumulated experience of system interactions accumulated by social systems for all history of development of human associations [White, 2004]. Processes of transformations, differentiations, integration or lack of social changes, depend on external conditions and information capacity of social system (a condition of backbone factors). The essential changes of the environment (backbone factor) putting in the forefront problems on which the existing type of an information system can't find the solution break harmony of system interactions that leads to social tension, the conflicts between various social systems and to crises of management. Types of information social systems are specialized for decision-making on a certain circle of problems, emergence "not those" problems, leads to the social tension and transformation of the social system consisting in establishment of the new purposes and formation of the new information structure more corresponding to new conditions.

Summing up the result, we will allocate a number of the main properties of network society:
- network communication transforms social structure of modern society which becomes more and more committed to Internet communication;
- communications go on the way of openness, it becomes more difficult to government to hide information from the population;
- hierarchical vertical social communications are succeeded horizontal in which all participants are equal;
- a kernel of network society is the Internet giving the chance to conduct modern network communications on a global scale;
- not limited civil interaction online allows members of society to contact as among themselves, and to governing bodies and the authorities at any convenient time;
- network communications have the potential for the solution of many social problems existing today, even concerning possible negative side effects of this process such as permissiveness and not controllability in networks which lead to different types of illegal activity, such as, opposition of the government, Internet fraud, etc.

Thus, the concept of network society becomes the fundamental concept displaying a situation in modern society; - practically all spheres of life in a varying degree take a form of network structure.

Based on the aforesaid, it is possible to conclude that network society - global network structure with the developed horizontal communications which cornerstone Internet communication is. Thus, according to us, the main prospects of development of network society lie in the sphere of Internet communication and social networks. At the same time it is worth noticing that not the network structure changes society, and rather she changes under the influence of current trends, that is network society vividly reacts to changes in one and all spheres of human life and under the influence of these factors is transformed.

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