DIGITAL ECONOMY AND PSYCHOLOGY

Anatoly Zankovsky, Leo Surat

Abstract: The paper is devoted to the study of the new challenges for psychology in digital economy. The main focus is on the virtual organization – a new organizational model that evolved due to the development of informational and communicational technologies. The aim of the paper is to outline the specific characteristics of virtual organization, its differences from traditional organizational models, as well as, to analyze the organizational and psychological problems that arise in digital management.

Keywords: organizational psychology, digital economy, virtual organization, digital management, values, managerial functions, communication, leadership.

ITHEA Keywords: J.1 Administrative Data Processing: Business; J.4 Social and Behavioral Sciences - Psychology

Introduction

In recent decades, the organizational world and work experience dramatic shift to digital economy that pose a completely new psychological problems and challenges (Zankovsky, 2015, etc.). These challenges are, first of all, connected with the active introduction of new information and communication technologies (ICT), which creates a fundamentally new digital environment and changes the system of those requirements that have traditionally stood in front of the individuals and organizations in the recent past.

These trends are vividly seen in a completely new organizational form previously unknown to mankind – a virtual organization (VO) that has become a popular subject of both scientific research and public debate in recent years. The definition of "virtual" was borrowed from computer technology, which uses the term virtual memory, which is understood as a specific method of managing the memory of the computer, that allows user to run programs that require more memory than is available on the computer (Ebrahim et al., 2009). Similarly, a virtual organization strives to use not only its internal resources, but also external, virtual resources that do not belong to it, to achieve its goals. This new organizational

form, inextricably linked to ICT, has completely new structural and functional characteristics, which pose many new questions, problems and challenges to the psychology and management.

The virtual aspect of the organization

The interpretation of the virtual aspect of the organization is extremely broad: different and even opposing organizational and group concepts are often discussed under the same name (Riemer et al., 2012). The overwhelming majority of definitions emphasize the fact that VO is a dynamic, open system, uniting independent economic agents (subjects), allowing in a single information space to unite the capitals and key competences of the participants for faster and effective satisfaction of business requests (Ivanov, 2003; Ebrahim et al., 2005; Riemer et al., 2012). At the same time, apparently, being under the influence of a few, but striking examples of the successful use of ICT (most often, in the virtual space), such as the creation of Facebook, Google, Wikipedia, open-source software, etc., the researchers put a special emphasis on spontaneity, volunteerism and independence of economic agents, who, uniting, are able to effectively and efficiently create products, services, information, etc.

Indeed, profits, for example, of Facebook in 2016 amounted to more than $ 10 billion, and the company's website is among the most visited in the world, bringing together billions of users. However, spontaneously arising virtual communities are only one and, in our deep conviction, not the most popular and important organizational form in a virtual environment. Therefore, despite of the desire to give in to hopes that soon any virtual business will be as successful as Facebook, in order to understand this issue, it is necessary to refer not to individual, exceptional examples, but to an adequate scientific analysis of VO. Traditionally, an organization is defined as a consciously coordinated social entity with defined boundaries, functioning on a relatively continuous basis to achieve a common goal (Zankovski, 2012, etc.). Based on the main features of the organization, on the basis of extensive scientific literature, we identified three main types of VO: 1) Network, multi-agent; 2) Distributed, outsourcing and 3) "Virtual offices".

1. **Network, multi-agent VO**, as a rule, is a network of small and medium-sized organizations that realize their narrow professional competence, uniting with other companies in order to respond quickly to market demand. In fact, it is not a full-fledged organization, but a partnership focused on the implementation of a specific project. This type of VO is characterized by a decentralized type of management, in which all management processes are carried out only through local interactions of network participants. The organizational structure has a variable, non-fixed form. VO of this type have a

temporary nature, they arise with the emergence of market opportunities or facing some market/social demand and usually fall apart after the first run. To consolidate orders and ensure this organizational form greater stability new special support communities, pools, web platforms, networks of freelancers, groups of open-code software developers, etc. have been evolved.

2. *Distributed outsourcing VO* is an organizational form that parent companies create in order to transfer part (sometimes even the main) of their business functions to the network of suppliers. To this end, a network of external partners is being established and coordinated through ICT. Such VOs have a distributed type of management carried out through a common focal point and represent a set of independent or dependent agents acting on a contractual basis in accordance with pre-defined rules and norms of conduct and interaction. They have a flexible but pre-defined organizational structure. The VOs of this type are of a permanent nature, they are focused on the constant search and receipt of orders in a certain field of activity. One of the participants manages the network and performs the overall coordination of orders. Typical examples of such VOs can serve such companies as Dell, Benetton, Nike, Puma, Apple, etc.

3. *A "virtual office"* is an internal VO that operates within a particular corporation. On the basis of ICT, the organization creates a network of virtual interaction of individuals, teams, departments and branches of the company, which can be widely distributed in space and time. These represent a set of dependent agents, united by a fixed hierarchical organizational structure and chain of command of rigid vertical connections. This type of VO, as well as distributed VO, are constant, focused on constant search and receipt of orders in a certain field of activity, but the network itself and the implementation of orders are centrally managed. A typical example of such VO is a large transnational corporation.

VO's general and specific psychological problems

Each type of VO is characterized by both general and specific psychological problems. Common problems, such as control, motivation, trust, or personal problems, have a pronounced specificity for network, multi-agent VO due to the "flat", dynamic organizational structure, short-term functioning and uncertainty of the market orders. This calls, for a study of very specific virtual phenomena like "rapid" trust, without which the functioning of such organizations faces serious challenges.

Nevertheless, the psychological problems of virtual organizations, largely due to the intensive use of ICT, are closely related and can be divided into several groups:

1. Management problem.

2. Communication problems.

3. Conflict resolution problems.

4. Problems of work motivation.

5. Problems of values and organizational culture.

6. Problems of organizational adaptation and socialization of employees.

The format of this article allows us to identify briefly these groups of psychological problems and outline some directions of their research.

1. *Management problems* are primarily associated with the implementation of basic management functions: planning, organization, leadership, control, etc. In the absence of direct interaction each of these functions requires a qualitatively new realization from essential and formal sides. How to set a task so that it is properly understood and becomes the main focus of the employee's activity even in the absence of constant interaction with the manager? How and what support should be given to the staff member in terms of organization and self-organization? How to coordinate effectively the efforts of the members of the virtual team, not being able to see in real interactions specific features of their personalities and behavior? How can employees be monitored if they are working at home, on a different continent or in a different time zone?

2. *Communication problems*. This group of psychological problems of VO probably belongs to the most studied today (Riemer et al., 2012; Pink, 2011). Virtual interaction makes it difficult to establish personal informal relations typical of traditional organizations. The lack of personal information about an employee, contractor or manager makes it difficult to form a coherent image of a person and prevents the effective exchange of information.

In virtual communication, usually there is no non-verbal information, which complicates the correct perception of basic information, leads to distortions, misunderstandings and conflicts. When

communicating in person, the partners read nonverbal information and adjust their behavior in accordance with it. In virtual teams, limited communication channels often have a negative impact on the establishment of business and personal relationships and reduce the effectiveness of the organization. Members often mistakenly assess the intentions of their colleagues when, for example, they do not receive a timely response by e-mail, incorrect assessment of the content and emotional orientation of written communications are rather frequent, etc.

3. *Conflict resolution problems*. A separate and particularly acute problem is the management of the conflict in the VO. The latent phase of the conflict may be a long time unnoticed and/or misinterpreted by employees even in direct communication. However, their negative impact in a virtual environment can have more destructive consequences. Prevention, diagnosis and constructive conflict resolution, in our opinion, is extremely relevant not only for the VO, but also for the entire virtual space as a whole.

4. *Problems of labor motivation*. Motivational issues are a cross-cutting theme for all types of VO. Being out of sight of the leader and social influence of the group, short-term labor relations (in the network), the lack of social facilitation and charismatic influence of leaders have a negative impact on the motivation of the staff, requiring the development of new methods and means to maintain it. In this context, particular attention is drawn to new models of motivation based on autonomy, creativity, mastery and purpose (Pink, 2011).

5. *The problem of values and organizational culture*. Perhaps most acute are the problems of trust, openness, responsibility and commitment related to the inability to meet the staff member personally and to ascertain the extent to which he or she shares those values. This problem is particularly important for interactive virtual groups, where the outcome of the activity is born in the process of interaction and depends on the integrity and performance of each of the employees. The problem of values in the VO becomes particularly relevant in view of the fact that the lack of trust, openness, responsibility and commitment can have a negative impact and even blocking the open information exchange, without which effective work in the virtual space is simply impossible.

Mediated relationships between the employee and a manager can increase subjective distortion in the interpretation of the correspondence of the employee's contribution and organizational rewards that he/she receives. Such situations can be perceived as violations of organizational justice and have a

negative impact on the motivation of VO personnel. In addition to the axiological conflict and the potential decrease in motivation to work, it can be difficult to adopt and translate the principles of organizational culture in cases where the VO consists of a large number of isolated virtual teams. The specificity of the VO imposes restrictions on the formation and maintenance of a common organizational culture, which requires the development of new approaches in this area. In general, virtual forms of work are recommended to be preceded by a sufficient period of adaptation and socialization, during which employees can get acquainted and accept the norms and values of the virtual company.

In addition, crossing all borders, VO can include employees of different cultures, faiths and worldviews. Lack of understanding due to cultural differences in perceptions, thinking, social norms and roles is often a major impediment to the work of virtual groups. Negative impact on efficiency of VO can also have language barriers, differences in experience, age, internalized the principles of corporate culture, etc. These moments, above all, make it difficult for members to form a close understanding of the mission, strategy and overall objectives of the VO.

6. ***Problems of organizational adaptation and socialization of employees***. It is known, that when faced with the inability to meet their social needs in the real world, people are trying to find such an opportunity in the virtual world. The impossibility of regular and full communication with colleagues can lead to social disadaptation of VO employees, to an even greater sense of isolation and affect the indicators of efficiency, satisfaction with work and mental health. The way out of this situation can be a specialized professional selection and introduction of a probationary period, during which it is possible to determine how effectively a potential employee is able and suitable to work in the VO. The uncertainty and short duration of the employment relationship, the high level of competition at which the vacancy can be filled by candidates from any country, frequently changing requirements and tasks create the conditions for stress and neuroticism of the individual. In addition, there is a possibility of the so-called technophobia: VO employees often do not have the necessary technical skills for remote work, do not have sufficient professional skills for the use of certain software products. All of this can also have a negative impact on their motivation and performance.

Conclusion

The lack of direct interaction and control places entirely new demands on the self-organization of the staff member. He/she should have sufficient skills to plan, organize and implement his/her own activities, demonstrate advanced self-monitoring. Studies show that it is impossible to fully compensate individual self-organization shortcomings by mediated managerial impact.

Thus, at present, both organizations and labor activity are experiencing significant changes that affect the basic principles of the functioning and development of the organization and change the system of those requirements that have traditionally stood before individual and organization in the recent past. The virtual organization – a new organizational form based on the use of information and communication technologies that poses a lot of acute issues, problems and specific tasks for psychologists. These problems can be divided into several generalized spheres. There is every reason to believe that the study of virtual organization becomes one of the most promising directions of development of modern organizational psychology and psychology in general.

Refernces

1. Занковский А.Н. Психология организационного лидерства: в поисках корпоративной синергии. М: Литера, 2015.

2. Занковский А.Н. Организационное лидерство в пространстве корпоративной культуры. Дис. на соиск. уч. степени докт. психол. наук/Институт психологии РАН. Москва, 2012.

3. Иванов Д.А. Виртуальные предприятия и логистические цепи. - СПб.: Изд-во СПбГУ-ЭФ, 2003.

4. Культура и поведение в организации: российский опыт/ Отв. ред. С.П. Дырин, А.Л.Журавлев, Т.О. Соломанидина. М., 2008.

5. Ebrahim, N.A., A.Shamsuddin and T. ZAhari, 2009. Virtual Teams: a Literature Review. Australian Journal of Basic and Applied Sciences, 3 (3): 2653-2669.

6. Riemer K., Vehring N. Virtual or vague? A Literature Review Exposing Conceptual Differences in Defining Virtual Organizations in IS Research. Electronic Markets, Aug. 2012.

7. Pink D.H. Drive. The surprising truth about what motivates us. NY: Riverhead Books. 2011.
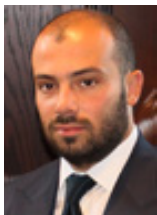
Authors' Information

Anatoly Zankovsky - *PhD, Head of Dept., Institute of Psychology, Russian Academy of Sciences (Moscow), professor of the Moscow institute of Psychoanalysis.*

e-mail: *azankovsky@gmail.com*

Major Fields of Scientific Research:

Leo Surat - *PhD, rector of the Moscow institute of Psychoanalysis.*

e-mail: *rector@inpsycho.ru*

Major Fields of Scientific Research: