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**MODELS OF SELF-IDENTIFICATION IN DIGITAL  
COMMUNICATION ENVIRONMENTS**

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*Abstract*

The article considers topical issues of personal self-determination in the conditions of ever-increasing complexity of information exchange in digital communication environments. The ideas of cyber-anthropology on the informational nature of personality are under debate. The purpose of the article is to reveal the correlation between philosophical and informational approaches to the individual consciousness unity in the interpretation of a self-identification process in terms of a multi-agent system. Analysis of information and semantic structures in the process of personal identification is based on system methodology and the cognitive paradigm. The new practices of information consumption, self-representation, community organization, manipulations with technological artefacts in everyday life are emphasized to form digital generation representatives' clip thinking and cognitive orientation towards fractal narrative as a way of creating narratives, concepts, and cognitive practices. The process of self-identification is closed in the circle of virtuality. The consciousness unity, which maintains integrity of the personality, is replaced by the modules of digital cyberspace. The Internet can be associated with a creative laboratory where a modern human being experiments with his own identity. The opportunity to experiment with one's identity in virtual environment leads to the fact that in the modern world personal identity is constantly being transformed and thus remains incomplete. A "virtual person", exercising one's self-identification many times in a digital space, turns into a function of the information technology structure and loses its individuality.

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**Keywords:** Self-identification, Digital environment, cyber-anthropology, the individual consciousness unity.



## **1. Introduction**

### **1.1. The influence of communicative environments of the information age on human being**

A specific feature of human living conditions in the information age is the unprecedented amount of information. The complexity of the question about human entity characteristics transformation, happening in the information age, is that human being himself is both an object and a subject of global changes in forms of his livelihood. Human being acts as the subject when creates the new technical and technological base of information and communication processes. As an object, he experiences the impact of this development and has to develop his skills in order to adapt them to the newly created environment (Emelin, 2013). New information technologies allow exercising a comprehensive information influence on human, his vision, his hearing, dynamic information images. Reduction of information distances forms the global information space, where information communications are carried out with far increased efficiency. The effect of mosaic resonance accompanies external extensions of human being (McLuhan, 2003). The whole world acts as the set of messages not connected by any definite logical link. Resonance is mutual reinforcement of these messages in the perceiving consciousness, overcoming their mosaic fragmentation in perception of semantic unity.

### **1.2. Human being in the new computer-digital information and communication paradigm**

The emergence of information and social media has changed not only the human lifestyle, but also the personality structure; new habits, traits, new hierarchy of values appeared. However, human being has got an effective mobile tool to enhance his intellectual activities. How does it affect human being himself, his thinking and consciousness?

The sense making basis of the human life world is interpreted in terms of identity, which is associated with the sense of self-identity, full-value. The problem of identity in the modern era is of interest to many scientists, as an increased rate of changing all social processes, taking place in society, and globalization contribute to the problem of self-identity. The dynamic change of social processes leads to the breaking of many traditional identities (such as political, national, public, cultural) and to the emergence of new psychosocial mechanisms of personal self-identification.

The modern humanities actively involve the conception of identity into their armory. In modern psychological literature, the notion of character is changed to the notion of identity, which is revealed through the terms of "self-conception", "self-system" or "self-experience". Identity formation occurs mostly unconsciously at all levels of mental activity. The process of identity formation continues throughout the life of the individual. Under normal conditions, it can be represented as a process of "continuous differentiation", as it expands the range of persons important for the individual – from the mother to the whole mankind (Erikson, 2000).

In the mind of a mature person, there is a certain "package" of identities. Some of them are less important because of their optional, private, temporary character (a football team fan, a college graduate, a retiree), and others are basic. Among the last ones, there are religious or ideological affiliation, nationality, citizenship, civilizational affiliation. As a rule, basic identities are of lifelong nature. Initially, the basic identity represented the syncretically undifferentiated whole, which inseparably combined tribal,

political and religious aspects (Gashkova, 2014). While considering the presence of certain identity, two problems inevitably arise: to what extent the personality can be independent and self-sufficient, and how the identity (basic) may hound the individual. New aspects of the personal identification study are associated with the virtual self-presentation in the digital network.

## **2. Problem Statement**

Researchers of human being in the information age, set themselves the task of figuring out the features of information behavior of both an individual and a society as a whole. The information society is characteristic of the highly developed computer equipment, information and telecommunication technologies, powerful information infrastructure. The complexity of the information space provides the need for human to learn more and more new skills of information exchange. How would human being change in these conditions? How would he define himself in the new reality? The answers to these questions lie in the field of cyber-anthropology as an independent scientific direction. In terms of cyber-anthropology, human is considered as the digital equivalent of an information transmitter (Dobrenkov & Kravchenko, 2005); the idea of the informational nature of personal identification is developed; self-identification processes are simulated on the basis of general technological principles of multi-agent systems (Wooldridge, 2009; Floridi, 2011).

This study addresses

- The problem of a consciousness unity in self-identification processes under conditions of ever-increasing complexity of information exchange in digital communication environments.
- The analysis of cyber-anthropological ideas on interpretation of the information nature of the individual.

## **3. Research Questions**

The new practices of information consumption, self-representation, community organization, technological artefacts manipulating in everyday life are emphasized to form digital generation representatives' clip thinking and cognitive orientation towards fractal narrative as a way of creating narratives, concepts, and cognitive practices.

Analysis of the correlation between information and semantic structures in the process of personal identification in a digital network is necessary to discover specifics of information and communication technology factors, transforming personal identity.

The design technology of simulating personal identity, based on the principles of building a multi-agent system, is evaluated by the criterion of human integrity and a consciousness unity in the process of self-identification.

## **4. Purpose of the Study**

- The purpose of the article is to reveal the correlation between philosophical and informational approaches to the individual consciousness unity in the interpretation of a self-identification process in terms of a multi-agent system.

## **5. Research Methods**

### **5.1. Methodological attitudes of the philosophical approach to self-identity**

A philosophical approach to identity has deep roots. Two vectors of self-identification process understanding can be marked, phenomenological and sociocultural that radically differ with regard to the source of the identification process. The phenomenological attitude stresses the inner world of the individual, its temporal dynamics and the horizon of consciousness, which are counted as primal phenomena of unconscious mental life, as a primary source for self-conception (Shipunova et al., 2016). The socio-cultural attitude emphasizes the fact that self-identification in any cultural community is crucial for human being. The conception of symbolic interactionism treats identity as a originally social entity (Cooley, Mead G.-H.). The individual sees himself as others imagine him to be, and forms himself as others see him. The personal integrity consists of properties that are produced during "social interaction". In the model of dramaturgical sociology by E. Goffman, the individual self is a consequence of social interactions, in which the individual operates like an actor to an audience. But on the other hand, he is similar to the audience perceiving the social context and developing general definition of the social situation (Goffman). According to E. Fromm, a "social character" is merely a device for the individual adaptation to society and, generally, it could not solve the problem of human identity (Fromm).

### **5.2. The information approach to self-identification process interpretation**

Computer and digital technologies change social practices. The informational approach emphasizes the functional-intellectual action as a source of identity. The basic conception is the idea of the multi-agent information system, for which the dynamics of a system as a whole and a coherent hierarchy of its elements are characteristic (Wooldridge, 2009.). In particular, Floridi (2011), discussing urgency of the problem of constructing personal identities in the infosphere, stresses the importance of self-identification information technology in the broad philosophical aspect. His information model of self-identification based on three membranes (bodily/physical, cognitive, conscious) allows one to conceptually connect two divergent philosophical attitudes in understanding the personal identity construction on the base of hierarchical relationship of information and semantic structures. There are two possible temporal aspects in self-identification process interpretation. The diachronic aspect emphasizes personal identity ontology, deals with those issues, arising from identification through time or possible worlds. The synchronous aspect of personal identity ontology is closer to phenomenology, as it focuses on what may constitute the self as a specific whole unity, continuously existing at any moment in time.

## **6. Findings**

One of the most important features of the information society is the convergence of technologies for information creation, processing and transmission. The process of information digitization resulted into the flow of messages to have begun circulating through various sectors of communication: mass media, telecommunications, computer networks. These sectors have ceased to be isolated. New information and communication technologies allow creating do-it-yourself connections in the virtual cyberspace. Limitless expansion of external system memory removes the need for any information

memorization, blurs the line between an information consumer and producer. The result of the information-computer revolution is the process of individual and social consciousness globalization. The emergence of new information culture is accompanied by the technological virtualization of communication processes.

### **6.1. Interpretation of virtual reality**

The term “virtual” has appeared thanks to medieval philosophical thought and meant something essentially not observable, imaginary and potential at the same time. In modern philosophy, the Platonic line of the virtual perception, relying on the idea of the eidos world independent of human, is present in the works of poststructuralists (Foucault, Deleuze, Lacan, Baudrillard). The Aristotelian line connects the virtual reality with the mental state, operating the categories of actual and potential. According to this line, virtual reality presents some specific content of consciousness, short-term actualization of potential states of consciousness, which is excluded from the physical space of reality. In this attitude, virtual reality is seen as the product of media and communications; there are 4 horizons of virtual existence: technical, cultural, mystical and natural. Currently, the virtual is more often associated with the Internet space, i.e. with the technical virtuality. In the computer world, the term virtual reality determines the specific interactive environment constructed technically with computer means of operating objects, similar to real or imaginary ones.

The Internet produces a stream of texts and is perceived not as an orderly world, but as the element where everything is generated spontaneously and traditional restrictions are removed. Consciousness globalization leads to the loss of national identity; this fact ambiguously effects the process of self-identification, traditionally rooted in language norms and cultural traditions. It is appropriate to mention the mechanism of subcultures operating as mediators between the specific individuals and great cultures (civilizations). These group and collective mediators sometimes strongly deviate from the cultural core, so they are often defined not as subcultures but as countercultures. The existence of countercultures suggests that identity is clearly not a static, but dynamic phenomenon that is susceptible to transformations.

### **6.2. The specifics of virtual communication in cyberspace**

The Internet is associated with the virtual cyberspace, which transforms identity. The virtual structure increasingly separates human from the external environment in favor of autonomously constructed world of meanings and interpretations. But no one can successfully develop his own thoughts about himself, drawing them only based on private semantics (a private language by Wittgenstein). Human forms his own identity within the community, building material and cognitive relations, interacting with the external environment. Language, culture and social interaction remain indispensable in the information age, too. In the digital interactive environment, computer-mediated communication is formed, characterized by the terms “Internet-discourse”, “electronic communication”, “virtual communication”, “Internet communication”, “electronic discourse”, or “computer discourse”. Virtual communication is a synthesis of video information, written and oral speech.

The specific features of virtual communication are the ability of interpersonal communication with a large number of partners simultaneously and language simplification. Thinking actually manifests in speech activity with the help of linguistic structures. This assumption underlies those theories according to which language is a determining factor of thinking. Language reduction changes the thinking process, firstly, in its contents. The interrelation of thinking, language and communication operates at different levels: non-verbal, verbal and Para-verbal (when the flow of speech of an unseen talker corresponds to pauses, voice intonation). The chat communication approaches a para-verbal one due to the use of emoticons and other similar effects. Para-verbal communication largely stimulates the development of image and mosaic thinking.

In the virtual communication process, the talkers have to imagine the images of each other. In general, virtual communication is characteristic of gentle relations, which are often translated to real meetings of virtual talkers. But life situations are diverse. Real communication is not always better than virtual communication. This is due to the mental characteristics of human. Perception of the communicative situation is always accompanied by emotional stress. A characteristic feature of social interaction is the interdependence of participants, when the behavior of one participant acts as a stimulus for the behavior model of the other. Mutual behavioral expectations originate spontaneously on the basis of interpersonal perception of each other. Herewith, the foundation of the interpersonal attitude is the value of actions and motives of other people implied by each interaction participant, and also the expected degree of satisfaction that others can provide. In an electronic communication, it is easier to utter difficult words and evaluations, because direct emotional response is not expected; but it is scary to get an answer. Thus, in virtual communication, one's own behavioral and language responses manifest most freely.

Due to the emergence of electronic means of communication, there appears a new culture of communication. In the network society, mass culture and, simultaneously, cultural contacts are brought up to an entirely different level of intensity. Human trapped and immersed into the media culture becomes himself a product of media (Zizek, 1998).

### **6.3. Self-presentation as a way of identification and communication in virtual cyberspace**

Self-presentation in social media is a new task for modern human (Bylieva, 2014). A user needs to post any "avatar" - the mask (Borges), photo-picture-symbol that describes him at the present time. Changing avatar means changing condition. Thus, the "new love" may be reflected in a joint photo-avatar, or students' "leaving for session" can be marked by "scary" avatars, or "unwillingness to communicate" leads to elimination of avatar and entire account. Filling in the questionnaire sections raises questions about privacy and options adequacy. Many positions (such as, for example, marital status, religion, political views) force the user to specify self-presentation of their social roles and functions. Art preferences indication, audio and video library and photo albums formation, content updating, searching for innovations – all this means continued refinement of identity. However, if the electricity is turned off or something breaks in computer or server, all information can be lost. Therefore, a kind of "lightness" of computer communication becomes a "lightness of being". Incidentally, the dependence on computer network communication raises a number of new services. Thus, recently in Germany there appeared a service that eliminates the excessive immersion in virtual reality. The offer is

"to kill the avatar", that is, to eliminate one's computer "image" along with the "nickname" (computer name). On the specific website for fee, one can purchase a place on the computer "cemetery" and to ceremoniously say goodbye to your avatar. This "game" project resonates with the real problem of eliminating those pages whose users are really dead. That is life, and computer-virtual communication, despite its arcade character, has to deal with serious problems without irony, advertisement, spam. Separate encoded resources are allocated for backing up personal pages, sites, blogs of dead people; only relatives have access to this "cemetery" if they have "keys".

#### **6.4. Communication environment factors transforming the personal identity**

A basic factor of communication environment in the Internet space is a language game that creates new values, contexts and communicative situations (Lukianova, 2015). The scenario of interaction between its users-visitors is defined by the fact of participating this game, the possibility to move in the certain discourse field, the need to include into this solid text-context, the exchange of information and chaotically constructed arguments that become indistinguishable being broken away from the original facts and situations. All these features characterize the "i" memory: intensity, interactivity, immersivity, illustrativeness, intuitivity.

The system intensity follows from the need to actively interact with the environment, to receive information and to response to its changes. Interactivity is set by user interaction with the computer, specifically with the computer-simulated environment. Immersivity is determined by the degree of subject immersion into the virtual world; illustrativeness reveals itself in the way of presenting information that should be most visual and easy-to-see, facilitating the perception ideally not at the intellectual but at the emotional, intuitive level.

Mosaic effect, highlighted by McLuhan (2003), fully manifests itself in the phenomenon of clip thinking. This type of thinking emergence and active development is inseparably connected with the electronic representation of text, which certainly contributes to the specificity of thinking of those people who spend significant time online. Frumkin (2010) notes that thinking of adolescents and youth is often rewarded by the epithet "clip thinking", believing that this type of thinking is bad. The representatives of the new digital generation utilize other methods of information behavior as compared with previous generations (Prensky, 2012).

The practices of information consumption, self-representation, community organization, manipulations with technological artefacts in the space of everyday life and in the education space change, and, in this connection, the type of thinking does. An idea emerges of "homo clicking" as an inhabitant of a specific world who wanders in digital media by clicking the buttons of a computer mouse. Through this clicks, the individual space is created of equally probable hopping between pages of the websites; however, the person somehow always builds up unequal probability of such communication wandering.

The semantic structure of this wandering forms a "fractal narrative". The term "fractal" (from Latin "fragmented", "broken", "crooked") was proposed by B. Mandelbrot and was identified in general, beyond the special mathematical definitions, as "a structure consisting of parts which in a certain sense are like the whole" (Mandelbrot, 1989, pp. 21-24.). Any fractal is an algorithm or set of procedures

implementation, having the character of successive iterations (multiple repetitions, infinite in the extreme). The result of the previous iteration serves as the initial value for the new cycle, i.e. all repetitions are recursive. Thus, the fractal is not a frozen form, but the endless process of ever new updating of the form. As a result of "fractal" reflection there is a special "fractal narrative" as a way of creating narratives, concepts, cognitive and cultural practices (Tarasenko, 1999). This is what "homo clicking" forms with his hopping. Fractal narrative, in turn, forms the "homo clicking" which himself has no content. He is out hopping around the world and builds the world via his hopping. Thus, modern individuals have fragmented, broken, mobile identity.

Since self-identity is constantly created and supported by personal reflection, it is reflexivity that should be understood as the mechanism of identity (Giddens, 1991). Creating the "text" of one's life is a difficult work that requires spiritual concentration, awareness of responsibility for his "biography" that requires clarifying the meanings, separating the main from insufficient and vain.

## 7. Conclusion

Analysis of the self-identification process on the basis of multi-agent information system dynamics transforms a phenomenological, descriptive-narrative approach into a constructivist one because it emphasizes the role of relation, coherence, rationality, successful interaction with the environment, coordination and collaboration with other agents. In the context of information approach, the self as a realization of personal identity is characterized by reflection and self-awareness, and represents the semantic system, conscious of itself and curing itself. However, the information model does not identify the principle that defines the integrity (unity) of such system. Questions remain open, what causes information structures to be ordered in some hierarchy, and how their purposeful dynamics towards the semantic unity can be defined.

In terms of a broader philosophical approach to the self-identification process, it is possible to designate the purpose vectors, defining the unity of consciousness and action motivation in personality self-determination: 1) cognitive orientation to creative self-realization, free expression of one's self, 2) focusing on the mass consciousness values and identification within the group of individuals embodying the average type of mass human, not crossing the line of stereotype in his actions and plans. There is one more orientation vector formed by constant realignment of goals and values at the level of the fractal narrative. This vector of cognitive orientation is characteristic for a media-dependent person, fully immersed into the content broadcasted by the modern means of communication.

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