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## Information security as the concept of social and philosophical research Tomsk Polytechnic University

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### Abstract

In the paper social and philosophical approach to the research of information security is implemented. It is considered that protection of data is connected with the restriction of access to it. However, the information security has appeared during an era of openness and globalization. The author has made an attempt to trace the changes of the role and function of information in the society in the context of globalized world. During the research such methods as descriptive, retrospective and comparative are used. The conclusion is drawn that this contrast is caused by the fact that the concept of information security understands information at the same time as reflection of reality and as character set out of reality.

*Keywords:* Information, globalization, information security, information society, social philosophy;

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### 1. Introduction

According to the reference of online media “Ucheba.RU”, the direction of preparation “information security” (code 90900) is presented in 73 higher educational institutions of Moscow [1]. Such prevalence of programs of training of data protection demonstrates that protection of information is relevant both for entrants, and for employers, reflecting reality of social life.

The reason of growth of the importance of ensuring information security in the modern world is the following: the globalization and technical progress have created convenient and fast communication channels between a large numbers of participants of communication and as a result they transformed general communication into the content of historical process of the present. Hence, operational understanding of information security, which presents the consideration of this phenomenon only as set of practical skills, seems insufficient.

The need of an integrated approach which would consider a social context of information processes is emphasized in a number of modern works [2, 3, 4]. The authors of this article suppose that the application of philosophical methodology allows defining the most common features of information security that, in its turn, allows approaching to the essence of the phenomenon of its performance.

However, the research of information security requires preliminary definition which can be specified subsequently. In general the information security represents a complex of the ideas, measures and procedures directed to data protection from external invasion and to ensuring their correct functioning within communication of the participants which have the access to these data.

## **2. Overview of the research issue**

Nowadays the information security as the concept of philosophical research acts mainly in the focus of information ethics which is formed within the frameworks of information society [4, 5]. The ethical or ethic and legal aspect of the concept of information security proves the practice of its application. At the same time information ethics are in the initial stage, it is in need of development.

Nevertheless, the idea of the need of information security gives an opportunity for wider (not only in the sphere of ethics) philosophical consideration. This opportunity is connected with a paradox: the information security conceptually assumes the observance and protection of information “borders” (that is restriction of access to information), but the emergence of this idea is inseparably linked with information society, with an era of globalization which is characterized by the elimination of borders [6]. There is a kind of contradiction in the idea of information security. As the first approximation we will define this contradiction as the conflict of esoteric and exoteric component.

Proceeding from the assumption of existence of this conflict, its source can be considered to the dialectics of openness/closeness of information. However the tendencies of judgment of information phenomenon during historical and philosophical process do not reveal such dialectics: views on the essence of information are grouped differently. The most widespread division of the theories of information on qualitative and quantitative aspect [7]; and also the classification of approaches to information including substantive (information as independent essence), attributive (information as property of a matter) and functional (information as attribute of self-organized difficult systems) approaches [8]. Historically information was understood as a way of measurement of human knowledge [7] accordingly the sources of modern philosophy of information lie in philosophy of mathematics [8].

Despite the fact that directly the openness and closeness of information did not present the subject of philosophical analysis, the exoteric and the esoteric components play crucial role in Ancient Greek philosophical doctrines. Possibly, the dialectics of openness/closeness of information becomes significant in post-industrial society because in such society information acquires the status of a factor of production and in this status is preserved against possible invasions. In this case the connection of information with the idea of information security becomes undeniable.

## **3. The transformation of the status of informational communication in the context of globalized world**

It is known that the information security was of the particular importance during an era of prevalence of machine communication. The generation, transfer and reception of messages by the automated structures in the semiological concept of Humberto Eco appear as belonging to the world of a signs, that is machine communication operates with information as discrete units. The sense, that is the relation between a sign and its value in their dynamic aspect, is characteristic feature of human communication, the world of sense [9]. The procedural significance of value within the world of sense defines impossibility of final comprehension of information, revealing infinite richness of interpretive potential of any message. In other words, the dynamic aspect of a

sign (the process of attributing of value) in human communication comes to the forefront and as a result limits the possibility of cognitive assignment of information and manipulations with it. For example, the general sense of a conversation of two longtime friends, however additional lexicodes which interlocutors have developed in the course of long communication can be clear to the passerby or had before acquaintance owing to belonging to one social community, will make shades and additional meanings of exchange of messages unclear. Formation of new codes, including idiolects, happens constantly [9], and it creates too plurality of values in which only some approach to information, but its full finding is not possible. It is possible to note that misunderstanding of content of communicative process by the detached onlooker in the example given by us shows that in the world of sense the condition of partial or full “information security” can be naturally reached. Information security in this case is immanent information.

Machine communication is deprived of such advantage. Different enciphering by the transferred and stored cars of information acts as an artificial analog of a lexicode, it also creates border between actors of this communication and external (in relation to the chosen act of data exchange) the world.

However it should be noted that the required condition of security of data which people seek to reach by means of measures of information security, assumes a certain understanding of information. This understanding is implemented by the attributive concept which provides information as reflection of some external processes, objects and phenomena. Therefore data protection consists in a protection of these processes, objects and the phenomena from manipulations from the outside.

On the other hand, violation of information security is possible also in other key not only as manipulation with what is meant by information but also as intervention, throw-in in a communicative data flow, not having real-life meant. This strategy has received the name the “post-truth”. The concept which was widely adopted in 2016 in English describes a situation in which the objectivity of data passes into the background, and more significant (and even the corresponding emotional frame of information [10] becomes meaningful). The concept of the post-truth is related to the idea of a simulacrum that is the copy without original which functions in general, continuous and nothing the meaning symbolical exchange [11]. The post-truth represents realization of the opportunity given by a simulacrum.

It is obvious that the similar state of affairs in certain spheres of life of society can purposefully be created, and the information security in the broadest sense can work also against the strategy of planting of the post-truth.

The information security, thus, reveals its duality. On the one hand, it preserves functioning of information as values, including economic, and in this sense it is supposed that data shouldn't leave the framework outlined for them. In this aspect attributive approach to information is implemented. On the other hand, the information security is impossible without protection of functioning of data against addition and distortion of data. There is a fight against simulation of information that is against distortion which is allowed by the post-truth.

So, the duality of a concept of information security has been at first sight presented by the conflict esoteric and exoteric in the studied concept. However the subsequent analysis has revealed insolvency of an initial hypothesis. The contrast of features of application of measures of information security (concealment of data, protection of access to them) and circumstances in which this application is carried out (global society with open borders) is a consequence of two ways of functioning of information in the modern world. On the one hand, information is at the same time the value and a factor of production, in this quality information finds the value thanks to the fact that it is perceived as reflection of a material world. On the other hand, information

appears as character set which can't have the real reviewer that is information can function in simulation.

#### 4. Conclusion

Thus, in the concept of information security the subject of care (information) is understood in two ways. This idea is a significant question of philosophy of information as asks about whether the information security is uniform. The social and philosophical analysis of information protection practices which can be the content of a separate research is necessary for permission of this issue.

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