



International Conference on Research Paradigms Transformation in Social Sciences 2014

## The nature of knowledge power in communicative information society

Alla A. Kornienko<sup>\*</sup>, Anatoly V. Kornienko, Oleg B. Fofanov, Maxim P. Chubik

*National Research Tomsk Polytechnic University, Lenin Avenue, 30, Tomsk, 634050, Russian federation*

### Abstract

Development of communicative information society is described as a process of spreading the applied scientific knowledge converted into information all over the fields of sociality. The idea of "power shift" in the process of development of communicative information sociality is important conceptually. This idea includes disintegration of the existing power structures and rising the new ones, drastic change in the balance of social forces in the power structure, redistribution of power. Development of communicative information sociality is shown to be connected with transformation of knowledge: knowledge converted into information (applied knowledge) gets the ability to transform the socio-cultural ontology. It becomes the most important power resource, transforming the structure of power relations. The key feature of the proposed approach is the intent to study the phenomenon of knowledge transformation under social and philosophical context of society, where the knowledge converted into information gets ontological status of the phenomenon that changes the system of power relations within the framework of communicative sociality also. The positive feedback is shown to be formed during the functioning of such a society: the need for spreading the knowledge stimulates the development of communication system, which in its turn opens the new ways to distribute the knowledge. As a result this society operates as a self-developing system, where communications manifest themselves as the ontology of culture. Communication development acts as a culture-forming factor, generating processes of social and cultural transformations.

© 2015 Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/3.0/>).

Peer-review under responsibility of Tomsk Polytechnic University.

*Keywords:* Information, transformation, knowledge, status, authority, applied knowledge, communication, sociality, ontology.

### 1. Introduction

Development of information society affects and transforms the sphere of power relations. Destructivism in culture questioned the power of truth. The understanding of power as a centralized authority is replaced by its interpretation as the sprayed authorities filling up the peripheral structure of sociality. The process of spreading

<sup>\*</sup> Alla A. Kornienko. Tel.: +7-3822- 563-526  
E-mail address: [allaphil@mail.ru](mailto:allaphil@mail.ru)

the information, that replaces knowledge, can be presented as the process of forming new interpersonal relationships. The conceptual model itself of the very society evolves towards theoretical constructs, which are developed considering socio-cultural traditions also. "Anatomy" of power is influenced seriously by the socio-cultural context; power is gained through the owning of knowledge, while the knowledge itself is getting the status of strategic resource of power and control.

The fact that knowledge got the status of power resource and spreading its application sphere all over the social structures allows to conclude that knowledge through information becomes powerful and managing resources. Converted into information, it transforms the socio-cultural ontology, as well as the structure of power relations.

## **2. Subject and Methods**

Communications become the critical factor for existence of society and its culture, their development turns society into a communicative and informative one. The positive feedback is formed during the functioning of such a society: the need for spreading the knowledge stimulates the development of communication system, which in its turn opens the new ways to distribute the knowledge. As a result this society operates as a self-developing system, where communications manifest themselves as the ontology of culture. Communications become the critical factor for culture development, initiating the processes of socio-cultural transformations. This society can reasonably be qualified as a communicative one.

The aim of the study is to explain the phenomenon of "power shift" by transformation of the nature of power. As a result of this shifting the traditional power of force and richness loses its ground to the power of knowledge, opening new ways to gain wealth through knowledge under conditions of "knowledge economy" environment.

To achieve this aim the authors used the method of system analysis as well as potential of socio-cultural, complex methods and prognostic approach.

## **3. Obtained results**

Advantage of the proposed in this paper the research approach is to consider the phenomenon of both conversion of knowledge and information of power in the socio-philosophical context of the very society, in which knowledge, converted into information, finds the ontological status of the phenomenon, which converts also the system of power relations within the framework of communicative sociality. In this regard, the researcher faces a number of questions: development of communicative information society; status of information power in the horizon of communicative information sociality; structuring the communicative information society; constructing the political reality and the virtualization of political process etc.

The idea of "power shift" during in the process of development of communicative information sociality is conceptually important for answering the above questions. This idea includes: disintegration of the existing power structures and rising the new ones; radical shifts in the balance of social forces in power structure; redistribution of power. In other words, the transformation affects not only the power structure, but also its bases: if before the transformation the main factors of social power were "violence and wealth", in the XXI century the list of power factors includes such a factor as knowledge. Moreover, today we have not only changes in the list of social power factors, but also the force balance of these power sources shifted to knowledge in environment of communicative information society: now the knowledge is a tool for getting both force and wealth, and power as well. Information technique in a unity of its material (hardware) and intellectual (software) components is considered as a tool for realizing the information power. This unity expresses to some extent the existential and intellectual nature of man and greatly increases our ability to perceive and process the information.

Development of communicative information sociality demonstrates harmonious relation with transformation of knowledge: knowledge converted into information (applied knowledge), acquires the ability to transform the socio-cultural ontology, and becomes a major power resource transforming the structure of power relations. This explains the cultural state on the turn of XX–XXI centuries, which was described by postmodern analysts (M. Foucault, J.-F. Lyotard, K. Held, P. Bachrach, M. Barats, W. Brown, P. Klotz, V. Furs) as a state of ongoing

dynamics, marginal crossings and "flickering meanings". Deconstructive processes in philosophy and culture, caused by conversion of (theoretical) knowledge into information (applied knowledge), – resulted in transformation of status of true (fundamental) knowledge through initiating the genesis of ideas of contextuality, situationality, lingvisticity of proving the truth, which is quite adequate, in our view, to applied nature of the information. Thus, the gnoseological domination of truth, being the basic principle of classical philosophy (focused on a united "foundation"), was transformed into a variety of specific ideas of truth, inherent to applied use of knowledge in its information form.

Deconstructive processes in metaphysics were accompanied by cultural resonance: the world of culture began to be accepted as "rhizome" (G. Deleuze), "life-world" (E. Husserl), "everydayness" (M. Heidegger, B. Waldenfels), poly-culture. Transformation also touched ontology of sociality and culture. New directions arise, within which the researchers (J. Habermas, K. Held, V. Furs) focused on specificity of communicative ontology as inherently related to the nature of information society. Analyzing the relations between communicative sociality and information society, the researchers (Yu. Podguretsky, J. Baudrillard, J. Habermas, J. Derrida, P. Bourdieu) found out that the information fills up the social spheres and gives them continuing movement and change, transforming all aspects of society. Daniel Bell (1973) and Alvin Toffler turned to studying the transformation of status of economic factor, and M. Baratts, P. Klotz, P. Bachrach – to studying the power of knowledge in information society. Such ideas as "power shift" appear in the field of interest as well as their socio-cultural consequences: origin of meritocracy (M. Young), formation of new class structure (D. Bell, A. Touraine, F. Machlup), new nature of bureaucracy and premises to overcome its effects (W. Brown, A. Martel, A. Honor, B. Gubliya, H. Marcuse, A. Inglegard).

The above studies and findings confirm our point that development of communicative information society is essentially a process of converting the knowledge into information (applied knowledge) and its distribution through communication channels all over social spheres, initiating their transformation. This intense interest to the listed problems is caused by real change in the status of knowledge in and communicative information sociality, in which the power of truth (served as a fundamental principle for generating scientific knowledge), was transformed into social and cultural power of information in post-industrial society. This transformation of power relations stated a number of the most important problems of philosophical and socio-cultural analysis:

- to identify the mechanism of converting the knowledge into information;
- to define the balance of gnosiological and socio-cultural power of knowledge in information society;
- to identify socio-cultural connections of power relations in information society;
- to investigate philosophical foundations and conditions for developing new social structures in information society.

The new sociality stated new imported problems to study:

1. How (under the influence of processes of converting the knowledge into information) is the social structure changed, the axis of social differentiation turned, the formation of new social groups come about, taking into account that an axis of social differentiation is now not vertical, but horizontal (depending on the level of education and knowledge).
2. How does the "overstrat" appear of intellectuals, who hold control functions in economics and politics due to the fact that they have knowledge.

The ontology of sociality is closely linked to the role, which the information plays within sociality. This fact is essential for solving the above problems. Information plays a destabilizing role: classical knowledge stands the truth as the center; but when turning into a modern form of knowledge, information loses this center and its systematic unity, "disintegrates" and "scattered". As a result we have the forming ontology, the purpose of which is to "catch" the "scattered" sociality – according to the viewpoint of advocates of communicative ontology. From our viewpoint it seems to be unreasonable absolutization regarding to scientific knowledge. Each theoretical knowledge gets many interpretations in different subject areas. It is supplemented by assumptions and

laws, which are inherent only in these subject areas, but does not completely lose its relation to the base theory. Perhaps this absolutization matches quite enough the reality in the field of media.

The idea of "scattered" power of knowledge seems to be more productive when applied to socio-cultural sphere. The process of development of information society affects socio-cultural aspects of power relations also. Earlier the truth was understood as realization of its power over knowledge and culture, but in XX century destructivism in culture questioned this interpretation of the power of truth. As a result the understanding of power as a centralized one was replaced by the idea "scattered" power penetrated into peripheral structure of society. Thus, the process of propagation of info, replacing knowledge – becomes a process of forming new interpersonal relations and ideas of ideas about the nature and purpose of power in information sociality. Conceptual model of post-industrial society is evolving towards theoretical constructs within socio-cultural paradigm. This obviously requires an analysis of a wide variety of social and cultural phenomena (political, organizational, mass communications, etc.). Thus, according to J. Galbraith, who investigated the "anatomy" of power, socio-cultural context has a significant impact on its character:

- in traditional society the power is "deserved";
- in an industrial society the power is "compensating" (private property and compensation);
- in the post-industrial society the power is reached through the mastery of knowledge; this formed "invisible community of people with enlightened understanding of the future".

Knowledge, thereby is becoming the most important strategic resource of power and control.

Analysts S. Nora, A. Minc, M. Poster, P. Drucker and M. Castells (2007) performed a large-scale analysis of the trends in development of information society. M. Castells in his monograph "The Information Age" considered the this era as the time of globalization because the owning, acquisition, analysis and transfer of the information become the sources of growing the efficiency and power (Castells M., 2009).

Knowledge got the status of power source through information. This is realized in expanding the scope of knowledge in its applied form for control purpose. Scientific foundation of the control spreads from the sphere of politics and governance to all social structures. Thus, knowledge got through information the status of resource for power and control in the very socio-cultural field. Spread of knowledge in the form of information transforms culture dramatically, while the information obtains its cultural value: D. Bell describes the distributed knowledge as paid "intellectual property" and "an integral part of social investments". R. Ackoff formulates his understanding of the role of knowledge in culture as a model of the process of development of the status of knowledge in culture: data – information – understanding – wisdom. P. Drucker believes that the knowledge circulated in the form of information is the basis for any sphere of contemporary socio-cultural activities.

The aforesaid impact of knowledge in the form of information on the socio-cultural processes draws attention not only to the applied nature of the information as the form of knowledge, but also to other aspects of the content of this concept. The word "information" (from the Latin *informatio*) was introduced in the twentieth century by Claude Shannon into communication theory and coding, then got the name of "information theory". There is no precise definition of "information" still there and its meaning varies in different fields: in everyday life it is any information about the world obtained by person; in technology it is any messages transmitted by signals or symbols; in information theory, according to C. Shannon, it is the data which reduce uncertainty (entropy). Can these points of view be united and generalized? Let us try to do this by highlighting the main aspects of this phenomenon.

First of all, the information - the content of the message transmitted from one entity (the sender) to another (recipient) who must be able to perceive and understand it. However, not every such message carries information to the recipient. Message have information for the recipient, if the content:

- a) corresponds to reality, reflects the real situation (otherwise, it is disinformation);
- b) brings new knowledge to the recipient (otherwise it is of no interest to the recipient);
- c) is useful for the recipient, since it contributes to solving some important problems for him (otherwise the message is also not of concern).

Thus, the content of the message has the information for recipient, if it is objective, new and useful knowledge to the recipient.

The subjective aspect of this phenomenon reflects the dependence of content information value of the message for recipient on his ability to perceive the message content, needs to obtain this knowledge and current awareness. The objective aspect of this phenomenon reflects the fact that the delivered information have the more value for recipient, the more it corresponds to the actual situation (reliability, accuracy, completeness, relevance). The proposed interpretation of the information concept does not contradict the definition of information used in Shannon information theory, because the increase of awareness of recipient means corresponding reduction in the uncertainty of his state. Moreover, as it is noted by I.V. Melik-Gaykazyan, there is close relationship between diminution of entropy and increase of awareness of the system, but it is different in different situations and is of nonlinear nature (Melik-Gaykazyan I.V., 1995). Therefore, we think that qualitative assessment of information meaning of a messages is quite appropriate taking into account its limiting by subjective characteristics of recipient.

Communications become determining factor in the existence of society and culture. Their development make society communicative and informative, the operation of which produces a positive feedback: the need for knowledge distribution stimulates development of communication systems, which, in turn, opens up new opportunities for knowledge distribution. As a result this society runs as a self-developing system in which communications manifest themselves as an ontology of culture. Development of communication acts as a culture-forming factor, causing social and cultural transformation processes. This society can be quite reasonably described as communicative one.

As to the problem of transforming the knowledge power A. Toffler proposed the concept of knowledge as a resource of power and control (Toffler A., 1991). He analyzed the power transforming in the situation, when the existing power structures are going disintegrated and completely new ones are formed. A. Toffler explained the phenomenon of power shift by transformation of the nature of power, in a result of which the traditional power of force and wealth gives its dominant position to the power of knowledge, and a new type of culture opens up new ways of reaching wealth through public knowledge under "super-symbolic economy". The process of power shift means not moving it somewhere else, and but transformation of power realization, resulted in the fact that obtaining of social wealth depends on spreading the information and communicative relations.

The concept of the information society is associated with the spread of knowledge in the form of information (in our interpretation). Development of the service sector of service-oriented economy is linked naturally with development of information society (society of sharing knowledge). These services require either involvement of specialists with necessary scientific knowledge (in this case, the products of scientific knowledge are distributed significant increase in consumer awareness of scientific services), or transfer of information containing scientific knowledge necessary to solve customer's problem (in this case scientific knowledge is distributed and interpreted regarding to domain of the consumer). However, in both cases, the control of information determines the real power both in economy and in politics. At the same time, the process of distribution of scientific knowledge and its application products helps industrial production to get gradually the status of "mental production", which is usual in society, defined as knowledge based. A characteristic feature of a knowledge based society is its ability to create products that do not exist in nature, and solve problems that can be solved only on the basis of scientific knowledge (space flight, for example).

The proposed in this article interpretation of the information concept allows differentiating post-industrial period in evolution of sociality and specifying its stages of development of information and communicative knowledge-based society as specific stages in spread of scientific knowledge in society, the uniqueness of which, however, requires further investigation.

#### **4. Conclusions**

In this article thesis of the "power shift" is conceptually meaningful in the space of communicative and informational sociality. This is connected with "redistribution of power", collapse of pre-existing structures of power, and radical transformation of balance of social forces in power structure. Basics of power are transformed also: power of knowledge is one of the most important power factors. Knowledge becomes a tool for reaching the force, wealth and power.

## References

- Castells M. (2007). Communication, power and counter-power in the network society. *International Journal of Communication*, 1, 238–266.
- Castells M. (2009). The rise of the network society. The information age: Economy, society and culture (2nd ed.). Vol. 1. Wiley-Blackwell.
- Toffler A. (1980). The third wave. N.Y.: Bantam Books.
- Toffler A. (1991). Powershift: Knowledge, wealth and violence at the edge of the 21st century. N.Y.: Bantam Books.
- Melik-Gaykazyan I. V. (1995). Informaziya i samoorganizatsiya. Tomsk: TPU.
- Bell D. (1973). The coming of post-industrial society: A venture in social forecasting. N.Y.: Basic Books.