

THE TRANSFORMATION OF THE NATURE OF KNOWLEDGE IN POST-INDUSTRIAL SOCIETY: TOWARD THE NEW PARADIGM OF EDUCATION?

Sergiy Kurbatov

*Institute of Higher Education, National Academy of Pedagogical Sciences of Ukraine
(UKRAINE)*

sergiy.kurbatov@gmail.com

Abstract

I start from the famous scheme of historical development of our civilization by American sociologist Daniel Bell. He identified 3 main stages of such development: 1) agrarian society; 2) industrial society; 3) post-industrial society. What is the nature of knowledge at each of these stages?

In agrarian society knowledge is a kind of sacred access to creation, “participation mystique” in creative activities of god or gods. If we would analyse human nature at this stage, it would be a kind of shift from “biological” to “social” nature. Or, with certain simplification, a “construction of social”. In typical industrial society this shift is successfully completed. Knowledge here is an opportunity to create and to expand a new world, which is relevant to social nature of human beings.

In post-industrial society knowledge is a kind of access to “creation of creation”(or, if we use the popular term of Jean Baudrillard, creation of “simulacrum of simulation”). At this stage we have a kind of shift from “social” to “virtual” nature of human beings. This shift is enforced by expanding of Internet and modern (or postmodern) information and communication technologies. We could also call this knowledge “incomplete knowledge”, because in contemporary civilization future has a kind of ontological priority over the past and, even, over the present. The numerous literature on innovations and their crucial role in contemporary world helps to support this argument.

And here we come to the necessity of creation of new paradigm of education, which would reflect these changes of nature of knowledge and human nature together with the other important attributes of nowadays reality (for example, the phenomenon of “overcoming the national” and “origin of the global” is specially interesting for me). I want to identify the main features of this new paradigm of education in my presentation.

Keywords: knowledge, post-industrial society, new paradigm of education.

1 INTRODUCTION

Knowledge is a kind of essential attribute of human being. Even our biological identification, *homo sapiens*, reflects this fact. In Ancient Greece the aphorism “Know Thyself”(“Gnothi Seauton”) from The Temple of Apollo at Delphi became a kind of philosophical motto and was used by Chilon of Sparta, Heraclitus, Pythagoras, Thales of Miletus, Solon and Socrates. The intention to know and the origin of knowledge (as a knowing of good and evil) is the start point of human history according to Christian tradition. Human being always wants to know something, but the content or, maybe, paradigm of this knowledge depends on time, historical content, cultural context. If we take the development of European civilization in a linear perspective, we would see that intention to know Absolute in the Middle Ages dramatically differs from the intention to know the main laws of nature at the beginning of New Times. Does it mean that phenomenological structure of “pure knowledge” changed or this is only the issue of the object of knowledge? What is the comparative role of human intellect, intuition, mystical feelings in the paradigms of knowledge in different historical epochs? Why human being has this eternal intention – to know? Perhaps all these questions are too much complicated, but at the same time they mark the certain field, in which the thought about knowledge in contemporary time could grow and we as the representatives of academic audience would benefit from (and inside) this process.

Any theoretical construction is a kind of simplification, which is mentally acceptable for other people. Different historical epochs have different standards of what is more or less acceptable during this

concrete time framework. The most acceptable concepts become popular (or fashionable as we usually call this effect today). The concept of historical development of society by American sociologist Daniel Bell[1] is among such concepts. His “simplification” of the history of European civilization was based on the idea that we could identify the main stages of historical development with the help of the dominated technologies, which provide the background for economic existence. So, he identified three main stages of historical development of society according to technological revolutions, which were happened in European history: 1) agrarian society; 2) industrial society; 3) post industrial society. I would follow this historical scheme by Daniel Bell in my further contemplations and try to identify the specific features or nature of knowledge at each of these stages. Without any doubts the most interesting issue for me would be the nature of knowledge at the third stage, post industrial society, inside and from the main perspective of which I formulate this vision of historical development of European knowledge.

2 THE NATURE OF KNOWLEDGE IN AGRARIAN AND INDUSTRIAL SOCIETIES

We plan to start our paper with the contemplation about nature of knowledge at the early stages of development of European civilization. A question, which arises here, is the origin of knowledge as a specific result of human activities. The issue of origin of knowledge is strongly connected with the origin of human culture as the algorithm of specific human existence in the world. The Neolithic revolution or the first agrarian revolution and the transition from hunting and gathering communities to agriculture and settlement established the background for a kind of “cognitive revolution” as a process for searching of knowledge.

2.1 Knowledge in agrarian societies

What was the nature of knowledge in agrarian societies? After Neolithic revolution human beings made a kind of shift to artificial world, we could observe here a creation of a kind of gap between biological existence and existence in new social reality. Human being became a creator of his or her own environment – here is the essence of this dramatic shift. We also have an interesting process of parallel construction of two worlds: internal world of human being as a cultural entity and external world of human being as a social entity. The dichotomy of material and spiritual could be also affiliated with this differentiation. The most important things for internal, cultural world were myths. Through myths people construct explanation of the origin of the world and their specific mission in it. For external reality the most important things were certain technologies of producing things (later such technologies would refer to economic reality) and communication (or cooperation) with other people, which constitutes power relations (political reality) inside each human group.

Paradoxical intersection of internal and external reality creates certain environment for understanding the nature of knowledge during this period of history. From the one hand, knowledge is affiliated with sacred nature of mythological explanation of reality, from the other – it is a practical, pragmatic thing for arranging of everyday life. The solution of this paradox at this stage is in providing of intensive mythological support of everyday life. This step helps to shape the main aspects of social reality, to introduce preliminary norms, values, belief as a kind of background of human culture. Also we could find there certain prerequisites for its expanding in future. If we would say metaphorically, naked and newborn social reality needs these colourful clothes of myths in order to legitimate (and hidden) just establishing order. An interesting opposition to this idea is the biblical story about reveal of knowledge in the First Book of Moses, Called Genesis: “And the eyes of them both were opened, and they knew that they were naked”(3,7) [2]. Do we have here a kind of nakedness of social reality this time?

So, knowledge at this stage is a kind of access to sacred process of creation, “participation mystique”(Lucien Levy-Bruhl[3]) in its continuation. Getting knowledge means a specific affiliation with supranatural forces. That is why, the context of these knowledge is stable, any additions to them are prohibited and need to be punished. We could recall here Confucius with his idea of “rectification of names” [4]. At this stage any diversification of knowledge and pluralism in its interpreting could give a possibility to destroy social reality and its just establishing context. Also, the fact of great conservatism of agrarian technologies leads to the low level of development of society and restrict the expanding of the area of knowledge. Knowledge was oriented and affiliated with the past – sacred times of Golden Age, when the paradigm of such knowledge was gifted to the people.

So, we could speak about knowledge in agrarian society as a kind of prerequisite of construction of social reality through two main dimensions: 1) inner or internal as mythological construction of human

personality and 2) outside or external as a construction of social order and creation a second, artificial nature for human existence. This is the longest period of human history, because the potential for development in such societies is extremely low. At this stage education has individual character, teaching and learning as one-to-one process.

2.2 Knowledge in industrial societies

Industrial revolution took place in European history since 18th century. At this stage social reality is entirely constructed and inside this stable context the explosion of creation of artificial becomes possible. A good illustration of this fact is the increasing of the number of discoveries and inventions. According to Pitirim Sorokin [5] in 1791-1800 there were 269 discoveries and inventions, in 1801-1810 – 362, in 1811-1820 – 456, in 1821-1830 – 631, in 1831-1840 – 763, in 1841-1850 – 899, in 1851-1860 – 1020. These numbers are especially impressive, if we compare them with only few discoveries and inventions per century in medieval Europe. As a result, economical, political and social contexts of European civilization become dynamic and oriented on future (instead of orientation on the past in agrarian societies). This change was reflected in the expanding of secularization – a process of transformation of social order with religious values and institutions toward non religious one. Metaphorically we could describe situation during this period as a kind of escaping from the past and its power. The positivistic program in the philosophy of the 19th century is an excellent illustration of this aspect. Rejection of metaphysics, which Auguste Comte mentioned as a main task of positive knowledge in reality was a kind of intellectual battle with the past and its mythology.

Here we have implementation in reality (and even in everyday life) the idea of Nicolas of Cues [6] about human being as a second God (Humanus Deus) through which the creative process received its continuation. So, knowledge here does not mean only the access to creation, but possibilities to be pure creators. The good reflection of this idea we could find in the famous aphorism of Francis Bacon: “Knowledge is power” [7]. This is, first of all, power over the nature, discovering and further using of its laws. With the help of this knowledge new technologies, which based on external sources of energy were established. The idea of progressive historical development philosophically supports this shift in the consciousness of European people. Ability to transform the natural reality became a criterion of usefulness of knowledge. Practical dimension of knowledge became more important than the speculative metaphysical systems of the previous historical epoch.

The process of education at this stage of historical development lost personal, individual features. Teaching and learning process transformed from “one-to-one” relations to “one-to many” relations. But it continues to exist in the form of direct communication between teacher and pupils, professor and students. We have the origin of mass education at this historical stage. The secondary schools and universities became much more open to public from different social groups. Moreover, universities began to play a role of national centres for recruiting future elites. They were concentrated on two main activities: teaching and research, according to model, provided for the first time in Germany by Wilhelm von Humboldt. This is a kind of reflection of the expanding of knowledge, which was typical for this historical period and the social necessity for those, who would produce and operate with this knowledge.

3 POSTINDUSTRIAL SOCIETY: TOWARD NEW PARADIGM OF EDUCATION?

In the 20th century European civilization faced with a new historical shift. According to Daniel Bell [1], the essence of this shift is in transition of manufactured based economy to the service based economy. Also, he mentioned the diffusion of national and global capital and mass privatization. Among the specific features of post-industrial society are: transition from good production to provision of services; the decline of importance of manual work and predomination of professional and technical work; instead of practical know-how theoretical knowledge become essential; assessment of the impact of new technologies and where necessary control over them; implementation of new intellectual technologies; the crucial role of universities as centres for producing experts and technologies. “The growing importance of knowledge, research, innovation and evolving perspectives on expertise are changing the social role of universities in the globalized world. One of the most popular concepts used to approach these changes is the Knowledge Society together with a number of other conceptualizations (like Knowledge Economy, Information Society, Learning Society) aiming to illuminate the nature of societal change” – these are reflections on contemporary situation from the 21st century by Jussi Valimaa and David Hoffman [8].

I think this shift in European history is also connected with the beginning of creation principally new, the third nature of human being. This is entirely specific reality, which shapes human existence in the late 20th – early 21st centuries. The third nature of human being is virtual nature, which begins to exist together with two other natures, biological and social, and becomes more and more influential now. The main feature of this third nature is the possibility of human being to emancipate from his or her body, to exist as somebody “else” or “another one” in the virtual space of Internet, to split affiliation of his or her personal creative activities. Regarding the nature of knowledge – it becomes not only a tool for being a pure creator, but gives numerous possibilities to create creators. This is principally unfinished, open knowledge, which is served as a kind of eternal prerequisite for creative process. Those, who produce such knowledge, are called by Richard Florida “creative class - a class of workers whose job is to create meaningful new forms” [9]. According to Jussi Valimaa and David Hoffman [8], the crucial new skill in a learning society is the ability to learn how to learn.

Overcoming of national boundaries in teaching and learning process is an essential component of globalization. The process of globalization establishes a global space for such new knowledge. “Globalization is not only shaping the world’s economy and culture but, without question, is influencing higher education as well. The emergence of a global knowledge system in which communication is instantaneous and research and other information are disseminated globally, the use of English, as the world’s main language for scientific communication, and the expansion of information technology are key factors”(Philip Altbach, Liz Reisberg and Laura Rumbley[10]). Knowledge becomes a main content of this global space. On the one hand, this is a very abstract, theoretical knowledge – perhaps, Jean Baudrillard [11] mentioned this aspect, when he wrote about “simulacra of simulation”. On the other hand, this abstract knowledge materializes contemporary IT products, which constitute the situation of everyday life for average European person.

Teaching and learning processes at this stage transform from the model “one-to-many”, which was typical for industrial societies, to “many-to-many”. It is easy to apply the principle of network by Manuel Castells [12] to this situation. Principally unfinished knowledge, which creates “now and here”, could not be a property of somebody. “Teacher-oriented approach” failed in this situation. The role of teacher or professor transforms from the source of knowledge to a mediator of searching for the new knowledge. Paradoxes, creative environment and intellectual provocation for all these things need to be responsible those, who wants to teach in adequate way with contemporary situation at the level of University. Innovative teaching of innovative content of knowledge – this is a formula of contemporary University as a centre of knowledge, which is opened to unfinished creativity in future. Distance education, which uses maximum advantages of modern informative and communicative technologies, is the optimal form for teaching and learning processes. We are in captivity of techniques or technique gives us unique opportunity to realize ourselves entirely for the first time in the history?

4 CONCLUSIONS

In 2006 Martin Trow identified three stages of development of higher education according to the level of access: elite, mass and universal [13]. “Universal access to knowledge” is a good formula for contemporary situation. The third, virtual nature of human beings, need knowledge as a kind of environment for unfinished creativity and openness for the future. Maybe, this virtual nature is a kind of unity of two previous natures, biological and social, at new and higher level, the level of true knowledge?

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