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Master-Slave Dialectic and Russian Way of Industrial-Postindustrial Transition

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Abstract In social sciences, the modeling of industrial-postindustrial transition preserves its topical character. In this context, Russian society demonstrates the transition of industrial society into postindustrial or knowledge-based society, which allowed constructing innovative economy. The essence of processes within development of knowledge-based society and innovative economy depends on so-called Master-Slave dialectic. In Europe, Master-Slave dialectic caused the leading role of scientists. In Russia, scientists depended on Government and played the secondary role in economy. As a result, an author discussed the social forms, which caused the modern social progress, for instance, the future of European democracy in interpretation by William Outhwaite

Keywords Social development - Knowledge - Anxiety - Russia - Economy.

JEL Classification O3

Introduction

The relations between Lordship and Bondage in the context of so-called Master-Slave dialectic can elucidate a very special case of the knowledge-based society as a kind of modern capitalistic society. The Russian society demonstrates the case of transition of industrial society into the postindustrial or knowledge-based society, which allowed constructing the innovative economy. Therefore, this article tests one of the sociological paradigms, because it is the primary task of Russian social thought. For instance, Kulikov (2014) has shown that discretization of the social space as the situations concerning isolated development of small groups, which move as the elements of non-equilibrium processes, causes polyparadigmatic character of the modern sociology. In sociology, however, there are theoretical foundations for understanding of the social phenomena, which reveal the base of new variant of determinism that is technocratic by nature.

This article discusses at least two aspects of general social theory. Firstly, it is the causation of social progress by types of social order, for instance, the causation by principles of democracy. I presuppose that democracy is the best form of innovative development. Democracy allows building the relations on the base of the business attitudes. However, I doubt that the future of

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European democracy can be only same as in Outhwaite (2014). Secondly, I follow Fuchs (2013) and discuss a theoretical contradiction between capitalism and information society. I cannot fully agree that present-day structure of society exclude the possibility of own description as by theory of capitalism so by theory of information society.

The explication of Master-Slave dialectic regarding the knowledge-based society presupposed the debating of three fundamental moments of the economy growth and the society development. I concerned the origin of the knowledge-based society at the first section. Then, I described the effects of the social transformations at the second section. Finally, I discussed the basic features of the knowledge-based society in Russia at the third section.

Short History of Knowledge-Based Society

Knowledge-based society, knowledgeable society or simply knowledge society are the concepts from the area of political sciences (Innerarity 2013), which received special interpretation in the field of the economic researches. For instance, Robert Lane (1966) believed that knowledgeable society coincided with creation of power structures in the field of technologies influence. The concepts of knowledgeable society, knowledge society and knowledge-based society were initially applied to the theoretical description of the relations between domination and submission, that was, Master-Slave dialectic, in Hegelian terminology (Hegel 1807/1977). These concepts were included into economics as the parts of methodological arsenal according to the description of dominating role of equipment and technologies at economic activity (Drucker 1969).

Master-Slave dialectic was an explication of the relations between Lordship and Bondage since Antiquity. Almost all ancient authors supposed that slavery was a normal situation. Criticizing some forms of this phenomenon, they did not criticize slavery as itself. For instance, Aristotle has noted:

But is there any one thus intended by nature to be a slave, and for whom such a condition is expedient and right, or rather is not all slavery a violation of nature? There is no difficulty in answering this question, on grounds both of reason and of fact. For that some should rule and others be ruled is a thing not only necessary, but expedient; from the hour of their birth, some are marked out for subjection, others for rule (Aristotle 350BC/2015).

Smith (1983), Heath (2008) and some other authors have shown the development of theory of natural slavery by Aristotle. Heath (2008) has illustrated Aristotle's theory by analysis of the statement that natural slaves did not reach the eudemonia, which was the main purpose of human life. Such negative ability was an essential character of each non-Greek. Each of them was almost non-human being. Non-Greeks at all were the natural slaves.

Classical Antiquity formed the propositional attitudes, which served as a norm of thinking until modern period. It meant that, in society, one group always had the domination over other groups. However, historical forms of Master-Slave dialectic changed. In Postclassical (medieval) period, Master-Slave dialectic presented relations between Señor and Serf. Forms of relations between these groups of medieval society depended on the cultural features of communities, which occupied the particular territories. For instance, Jonathan Lyon (2008) has shown the sort of the Lordship of the twelfth-century German empire. He illustrated that the authority could issue variety of heritable rights and properties, which provided each noble family to keep the lordship in a unique manner. Jeffrey Fynn-Paul (2008) has described the forms of slavery in medieval Spain. For instance, he mentioned the specific of Spanish women as the slave owners. In modernistic period, Master-Slave dialectic had the character of general conflict between two types of self-consciousness (Kain 2005). The opportunity to risk the own life was the constant

essence of this conflict. Each real master should risk his life, but each real slave consciousness was afraid to do this, so, the fear was the essence of slavery. Everyone who was not afraid to fight for freedom could be free, even if freedom had the life as the cost. Everyone who put the value of his/her life above freedom was compelled to remain a slave. That was why, the passion but not the rationality alone was laid in the base of master's activity. In addition, the slave consciousness was the state of mind, which coincided for its owner with the neediness to be servant. The owner of such consciousness had the intention to be near from the master who made all decisions instead of his/her servants. The will of freedom was the matter of relation between Lordship and Bondage.

Nowadays status of Lordship does not surely mean the real ownership but exactly means the intention to be a leader. Therefore, Master-Slave dialectic can find an applying in the context of the modern processes of innovative production. From that point of view, knowledge-based society is the concept that described special type of power relations, namely the authorities of science and technique in society and in economy. Present-day hi-tech productions and the global telecommunication are born in the global networks, created by the science-technique interaction. In economic attitude, modern society is not guided by the classical industries but oriented to the production of information (Hornidge 2007).

A key moment of present-day scientific and technical progress is the production of scientific information. Such production allows treating modern science as techno-science. Techno-science, or technoscience is the concept, entered by Hottois (1984) and originally interpreted by Bruno Latour (1987). Techno-science means the unity of science and technologies (or emergent technologies in Freeman (1982)), which provides the high level of life comfort on the base of commercial applying of scientific knowledge. That is why modern representation of science places emphasis on technological effectiveness and efficiency of the results reached in it. Moreover, the indication of a special role of equipment and technologies is the characteristic of knowledge-based society. Therefore, the understanding of science as a production of scientific information allows explaining nature of the general influence on the society of scientific and technical progress as well as feature of its modern forms.

Contemporary studies of knowledge-based society distinguished two main meanings for implementation of knowledge into the social practice. Firstly, knowledge provided the possibilities of innovative development for administration, especially for business administration. Kaplan and Vakili have shown that process of innovative development should base on the diverse knowledge, because they supposed that narrow domain might lead to myopia (Kaplan and Vakili 2015). Nevertheless, there was a question about meaning of diversity regarding business administration. No doubt, strategic management was required for building of holistic pictures of each situation. Such approach might guarantee the effectiveness of decision-making. However, responsible administrators should also see the details of the picture to avoid the risks. Therefore, these administrators ought to be competent using the specialized knowledge, which could not be widely diverse. Secondly, the knowledge provided the socialization accompany the personal progress for inclusion in present-day social processes. However, it was only the one aspect. Another aspect concerned so-called smart environment presupposing special kind of learning technologies (Giovannella 2014). In addition, last aspect, which needed special attention in the context of research, oriented to the role of Lordship and Bondage in knowledge-based society. Carlo Giovannella (2014) supposed that the problem of the making of smart environment coincided not only with the task to gather some high-skilled people into the one territory. The solving of such task had the historical precedents (Glaeser and Berry 2006). But not only the high-skilled people themselves made smart environment in some place. The territory where

high-skilled people lived ought to have the smart infrastructure to support the beginnings of such people. Besides, Galser and Berry (2006) have shown that any high-skilled group should have the leaders like Bill Gates or, perhaps, Steve Jobs, who might reveal the purposes for led persons to motivate them.

The knowledge-based society as a civilization of high-skilled people who lead other groups with slave's consciousness, in Hegelian terminology, is close by the understanding of modern civilization in a view of risk society (Beck 1992; Giddens 1999). However, I ought to explain this analogy, because it is not quite intuitive. In knowledge-based society, the leaders and the led people who are technically the slaves have identical volume of knowledge. But then, leaders try to apply their knowledge for search of the ways to purposes, which has put by themselves for the led people. The situation of anxiety is born, which demand administration of the risks for their measurement. Beck (1992) has shown that administration of risks can lead to the positive action, while any other acts bring the dangers. Beck notes as follows:

What corresponds to the political subject of class society – the proletariat – in risk society is only the victimization of all by more or less tangible massive dangers. … In classical industrial society, everyone is engaged in the struggle for his job. … But can intangible, universal afflictions be organized politically at all? Is 'everyone' capable of being a political subject? Is this not jumping much too casually from the global nature of the dangers to the commonality of political will and action? Is not globalized and universal victimization a reason not to take notice of problem situations or to do so only indirectly, to shift them onto others? Are not these the roots that lead to the creation of scapegoats? (Beck 1992, 49)

It is not hard to see that, in society, only the decisions of leaders can lead to the way out of the problem situations. Mass subject cannot make such decisions. On the other hand, these decisions can lead into the blind alley. Anyway, the knowledge as a foundation of social behavior is connected with the risks, which can be the base of leadership or Lordship, in Hegelian terminology. One more explanation could be realized concerning the symbolization of the knowledge-based society as the risk society that was caused by Master-Slave dialectic. The extreme sport, especially some kinds of adventure tourism might demonstrate modern society from this side. Contemporary investigations have shown that risk become a good, which brought big profit for some groups of modern society (Palmer 2002; Higgins- Desbiolles 2006; Buckley 2012). The extreme sport helped to exploit the passions of ones for the profit of others.

The knowledge-based society constituted innovative economy, which led to the new forms of relations among people and to the new business opportunities. It presupposed friendly environment for high-motivated people with general purposes, set by the leaders. The led people and the leaders in the context of relations between Lordship and Bondage could reveal the relations between slavery and mastering. Discussion of the features of the knowledge-based society and the innovative economy concerning Russia presupposed the demonstrations who were the real masters, or lords as well as the slaves there.

Knowledge-Based Society as a Challenge for Russian Scientists

In modern Russia, national kind of realization of the global techno-science phenomenon discloses the possibility of the building of knowledge-based society as the effect of production of scientific information. This procedure might realize on the base of new mechanisms of scientific-technologies interaction, which pull together the concept of knowledge-based society and concept of risk society. In Russia, risk society is the turn into other party as per development according to the worldwide standards. Worldwide tendency correlates with the transformation of risks from social danger to the profitable good. In Russia, the point of view that judgments like

the "intersubjective ingredient of political measurements" (Schedler 2012) must be rationalized is not supported. Leaders of knowledge-based society presuppose that business initiative is a moving force of social progress. The calculated risk itself allow creating successful undertaking, which can lead to the founding the big corporations. Almost each present-day corporation, for instance Apple Inc., is the result of such risk-oriented actions. The risk is the essence of modern relations in society. Leaders of Russian society prefer to avoid the risks, except the sphere of international policy where they can apply the foreign elaborations of contemporary social-humanitarian technologies. I can suppose that scientists and engineers have to become the masters of society reorganization in Russia. The assessment of noted opportunity assumes clearing of two moments. The union of science and technologies allowed executing a radical transformation of the world around. Then, danger to fall into illusions and to start overestimating the forces became quite real for humanity. Strict control over fruits of scientific and technical development was necessary. In Russia, such approach revealed new opportunities for judgment about priorities of social and economic development. It demonstrated some weakness, namely the literally risk forgetting about problems of the real person behind so- called big purposes.

In addition, returning to the discussing of knowledge-based society in Russia I have to note the following. There is a question about possibility of Russian scientists to forget society problems and problems of the real person when they make the scientific researches. Historically, the main purpose of science is providing of social benefit. Sciencia est potentia, that is, knowledge is power. Fundamental science elaborates technologies, which offers many ways to make the life more comfortable. For instance, the medicine presents the technologies that allow prolonging the timeline of human life. Only one vaccination of children against smallpox and poliomyelitis has saved millions of lives for the moment. However, I must mention one fact, which accompanies the applying of medical technologies in modern society. Some representatives of modern society do not have full picture about consequences of refusing vaccines, and they think that avoiding of the vaccination is quite harmless (Largent 2012). Moreover, a part of researchers, namely sociologists, in fact, acts as the opponents of vaccination. For instance, in Davies at al. (2002) have shown the coverage width of anti- vaccination movement. In these investigations, authors make a study of the internet sites, which distribute the anti-vaccination representations. More than 40% of sites reveal the anti- vaccination, oriented on propaganda against physicians. In addition, communications, focused on conspiracy of Government and business elites, as the facts of harm denote the activity of physicians. Physicians interpret this state of affairs as the situation of war. They suppose that people do deadly choice when avoid vaccination (Offit 2011). By the way, such discussion in itself, especially from the side of anti-vaccination supporters, testifies the role of initiative persons, called masters in Hegel (1807/1977), because they ready to risk by own lives for personal beliefs. Knowledge-based society presents all opportunities for these people.

In social life, despite debatable character of the role of scientific-technologies interactions the remembering the problems of an ordinary person is not the problem for European and American scientists. Moreover, it is quite rhetorical question for them, because they work under support of independent funds and public associations. The final consumer of their works is different communities and only after that – the Government. In Russia, the main customer of scientific activity is the Government supporting the scientists through the system of state-sponsored agents. That is why Russian scientists solve the tasks mainly that put by Government, and only then, they solve the tasks that put by communities. In addition, it is rather curiously, but, in general, even just the hypothetic priority of so-called small problems of the person but not all humanity problems or Government problems open the great opportunities for innovative development in Russia. For instance, it is necessary to continue the investigations of human genome. These

investigations might give new knowledge in the field of medicine, and they could give the new goods in the global market of pharmacy. The unique technologies could help to develop a ways of successful fight against hereditary diseases. Moreover, it was quite amazing that some Russian researches could not agree with this statement. They presupposed that purposes of classical science, for instance, the search of truth, could be coordinated with standards of techno-science (Chernikova and Chernikova 2014). I believed that it was a big mistake; I proved my thesis at the next section.

I came to conclusion that, in Russia, the modern model of scientific-technology interaction had the one-sided interpretation, and it was not the version of techno-science, which corresponded to the worldwide standards. In Russia, the formation of knowledge-based society demanded radical change of the approaches to the representation of social-economic role of science. Because of that, I ought to make the conclusion that scientists were the slaves of this situation.

Russian Features of Knowledge-Based Society

In Russia, coincidence of development vectors of worldwide economy within production of scientific information gave a chance for inclusion of the Russian economy into the global processes of society evolution, based on techno-science. But raw material exporting economy complicates growth of innovative sectors, and it was historically current situation, which had some fundamental reasons.

The science demonstrates the process of production of reliable knowledge par excellence. It is quite clear image of science, which developed during the Age of Enlightenment (see Knight [2009]). In contemporary situation, such image ceases to meet the requirements of society and economy. Ensuring reliability activates difficult system of checks. Work of this system demands the additional financing, and, in general, it reduces profitability of production. Only very profitable business is able to afford such expenses complicating interaction of science and business. It is understandable that measure of profit is rather relative. For instance, Marxist point of view can comprehend profit as follows. By selling, therefore, the commodity at its value, that is, as the crystallization of the total quantity of labor bestowed upon it, the capitalist must necessarily sell it at a profit. He sells not only what has cost him an equivalent, but he sells also what has cost him nothing, although it has cost his workman labor. The cost of the commodity to the capitalist and its real cost are different things. I repeat, therefore, that normal and average profits are made by selling commodities not above, but at their real values (Marx 1898/1995/2009).

It is not hard to see that profit, in Marxism, is the capital that capitalists can get via selling of products with value, which appears as a crystallized labor. Engaging of scientific technologies into the production process can decrease the volume of the spent efforts. The volume of labor and thereby value of products decreases. On the other hand, I can comprehend profit as the disparity between the spent and the got capital. Profit is the capital that one gets, having received resources more, than he/she spent (see Meek [1954], for discussion). First strategy leads to the deficit of products, because labor-oriented producer requires the saving of spent efforts, or such producer must get very productive technologies. Second strategy leads to the increasing of production volume for decreasing of costs. One of the ways of decreasing of costs is the applying of cheap but effective technologies.

In addition, in Russia, the traditionalism in understanding of social roles of science and technique discloses the specific structure of scientists' printing activity. The works of Russian scientists entering the international references indexes, for example at Scopus, solve mainly the physical and technical problems. At that moment, works of European and American scientists at same bases are generally works on medicine and biology and after that – on physics and

chemistry. Russian scientists secure direct orders from the state institutions. In Russia, the science poorly depends on the mass consumer market, that is, on the needs of ordinary citizens. Works of Russian scientists are not oriented on getting the cheap but effective technologies for decreasing of production costs.

Then, in Russia, opportunity to continue production of scientific information within traditional attitudes specifically characterizes Russian economy. It shows the low level of the competition. It is necessary to create special social and economic conditions that would support as individual so groups of people who combat each other for resources. In this fight, scientific knowledge and hi-tech production might become necessary. However, there is many resources in Russia, and it is not necessary to conduct for them fierce fight. External pressure that demonstrates high level of a lack of necessary hi-tech resources can replace the sharpness of the internal fight. I can see it nowadays in Russia, which got under sanctions from United States of America (USA) and European Union (EU).

The pure economy demands from the Russian science the orientation to the innovative production for saturation of the mass market. In Russian society, there are no sufficient incentives for emergence of own hi-tech productions, but there is a large number of natural resources, which can be sold in the world market. The selling of the raw material resources prevailed in foreign trade, which ought to give the answer to the requirements of the market of mass consumption. Besides, the science was not stimulated with economy of Russia for transition to new understanding of scientific knowledge and technologies roles in society.

International sanctions provided external pressure, which was the chance that Russia, in economic attitude, would reorganize the production of scientific information for the response to the needs of the reduced external and inner markets. Because of that, I could not agree with statement that Russian science needs additional financing (Prytkov 2012). Russian science ought to commercialize the knowledge; consequently, most of financial problems would solve.

I have to repeat that contemporary formation of knowledge-based innovative economy caused by transition of science and society to the submission to the rules and standards of techno-science. In Russia, the realization of special set of the social factors, which can allow the coordination with worldwide standards of techno-science, may help to build the real knowledge-based society. However, how actually realization of such transition can put a big question. Contemporary scientist is more an engineer, than searcher of pure truth. Searching of truth must give the way for commercial realization of scientific knowledge in social space. That is why, in Russia, gadgets production needs to constitute the forefront regarding the production of scientific information. Compliance of production of scientific information to the standards of techno-science assumes creation of specific social circumstances. It is necessary to provide communication of scientific researches and business activity. In particular, the scientific policy of Russian Government needs some improvement.

In contemporary Russia, some state corporations create the research divisions that have a strong financial support. These centers of innovations act as a counterbalance to the traditional centers of scientific and technical development. However, they are not the kinds of competition that necessary for Russian innovative economy. Duplication of functions provides a lack of scientific personnel within separate branches of science and their surplus within other branches. As a result, the general level of innovative development decreases. The State ought to create the new centers of innovations along with support of the traditional centers of science and technology development. In addition, it is important to take measures for maintenance of balance of the general employment in separate scientific institutions. Russian Government has to define quotas for scientific development and give tax preferences to the innovative enterprises. In general,

society must be reoriented to the needs of mass consumer as well as the society has not to put an unconditional priority only for needs of the State.

In the context of Master-Slave dialectic, situation in Russia demonstrates the relations between the leaders and the led people, or technically slaves that can serve as a curve mirror for situation concerning the worldwide knowledge-based society. I can demonstrate it during discussing of the so-called triple helix model, which describes the interaction among universities, industries and governments in the frames of the production of innovations (Etzkowitz and Leydesdorff 1998). The kernel of model is the representation of horizontal attitudes of universities, industries and governments. These attitudes provide the production of innovations as the process, activated by free will of each participant. In Russia, Government seeks for leading role regarding industries and universities. Therefore, already at the beginning, the basic model undergoes the distortion.

The Russian experience of applying of triple helix model have sum up in Bychkova at al. (2015). This investigation uses the metaphor dirty dances to describe the academic- industrial interactions. Such metaphor provides the designation of the place of participants as the action in relatively closed position, which dance master defined. The analogy between innovative process and dance provide the possibility for describing of the imitation forms of interactions, which present in Russian circumstances. For instance, universities do not constitute the real private sector of innovative production that can help for the needs of industry. Universities stay by the kind of the State property continuing the state policy in all its contradictions. Because of that, representatives of industry cannot agree with such situation. In Russia, the general picture demonstrates rather the moves of dance than real building of innovative economy.

Bychkova at al. (2015) suppose that despite creating the spin-off companies at the universities, the offices of these companies work apart from industries. They execute only the decorative function supporting the realization of some Federal Laws. Expert interviews show the skeptical beliefs of interviewers concerning the perspectives of innovative development on the base of academic-industry interactions. These beliefs are born by small number of successful examples of business projection within spin-off companies, created by universities.

There are some problems regarding imperfectness of juristic basic of innovative production. For instance, in Russia, Federal Laws preserve the uncertainty of intellectual property rights on products, made on the base of universities. Uncertainty of intellectual property rights made a problem during transferring of the innovation. Condition when the State is a main owner of products complicates the process of accepting of license by third party owing to slowness of mechanisms of registration and transfer of rights to use of the final products. Because of that, representatives of industries who are interested in innovation as itself, as a result, have to refuse the offers of university spin-offs to deal with foreign partners. By the way, I can note that norms of Marxist theory of capital can reveal this situation as it is. Producers are almost aloof from products of their production. Bychkova at al. (2015) do not reveal this circumstance, perhaps, by the reason of empirical orientations of investigations.

However, in theoretical attitude, this moment is very important. In Russia, the crossing the new approaches with the norms of Marxist background of their application can show that there is no real contradiction between describing of modern society on the base of theory of capitalism or on the base of theory of information society. Because of that, I can criticize some theoretical alternatives that present-day investigations are exposed (Fuchs 2013). Russian Federal Laws presuppose different models of academic-industry interactions. One of these models, based on the Government Decree No. 218, directs the industries to develop the innovative production uniting with academic structures on the principle of co- financing. As a result, representatives of the industry make the investment but do not get the profit. In Russia, nowadays business relations

do not demand the using of efficient technologies, which decrease the costs. Investments into the innovations demonstrate the loyalty of business elites who do not pursue the profit as a basic aim.

The features of knowledge-based society that develops in Russia are the consequences of existing social system. In this system, State and Government play the leading roles, while business elites and representatives of universities have the secondary value regarding process of innovative production. However, there are the objective reasons for development of noted situation such as the character of national history, authoritarian ethos of political attitudes, and other reasons. Contemporary researchers observe the deficit of democracy in European Union (EU) (see Outhwaite [2014], for discussion). Probably, the same situation is in Russia. In EU, deficit of democracy presupposes the barriers, built by the representatives of bureaucracy. It complicates the making-decision process, because this process becomes opaque from the external side. However, I cannot fully agree with statements in Outhwaite (2014) that future of democracy depends on improvement of making-decision process. Probably, it is correct for EU but as for Russian society, there is another cultural context, which presupposes alternative behavior of the participants of political processes. In Russia, people do not seek to find the ways of influence on Government. People prefer to avoid the conflict situations and constantly ready for submission. It does not mean that, in Russia, democracy is perfect one. Of course, Russian society needs some improvement of democratic ways of decision-making. At the same moment, active action of participants of process from the side of universities and/or industries can help to avoid many problems, which concern the academic-industrial interaction. Constant pressure on State institutions provides the efficiency of decision-making. As a result, the relations between Government, industries and universities would return to the horizontal kind of view and participants could correct all basic distortions.

In Russia, the creation of knowledge-based society signifies the way of implementation of standards of techno-science. The production of commercially favorable scientific information can help to execute the real modernization of Russian society. There is essentially necessary a full support of social communications, which strengthen a public role of network community of initiative citizens uniting economic and scientific activity. Master- Slave dialectic provides the situation where one side of relationship always is a victim for another.

Conclusion

As a result, I revealed the general conditions of knowledge-based society and features of its forming in Russia. This article discussed two aspects of general social theory. Firstly, the author debated the social forms, which caused the social progress, for instance future of European democracy in interpretation of William Outhwaite. Outhwaite (2014) believed that European Union demonstrated the deficit of democracy by the reason of unelected power institutions. Because of that “the elected parliament surely has to be the main focus for questions about European democracy.” (Outhwaite 2014, 327). In Russia, a future of democracy coincided with development of civilian society. Secondly, I support the critique of theoretical contradiction between theory of capitalism and theory of information society, presented by Christian Fuchs (2013) who mentioned as follows

The notion of transnational informational capitalism sublates both lines of thinking dialectically because information and networks have both an objective and a subjective aspect, they transform the means of production and the relations of production. The notion of transnational informational capitalism grasps this subject–object dialectic, it conceptualizes contemporary capitalism based on the rise of cognitive, communicative, and co-operative labor that is interconnected with the rise of technologies and goods that objectify human

cognition, communication, and co-operation. Informational capitalism is based on the dialectical interconnection of subjective knowledge and knowledge objectified in information technologies. The reason why this approach is better grounded is that dialectics allow reality to be conceived of as complex and dynamic, which questions one-dimensional and static accounts of reality. (Fucks 2013, 419)

It was clear that the close association of techno-science and economic activity at concrete communities was the cornerstone of knowledge-based society. The scientific-technical interaction showed a special area of the economic relations for applying of knowledge. This area contained the development of commercially favorable ideas. Ideas, transferred to subsystems of society from the environment of research laboratories, gave the impulses for innovative development. However, the complex of existing problems complicated entering into the global trends for science and Russian society at all. In Russia, present-day formation of knowledge-based society is an ideal purpose. The real reaching of this purpose is a problem.

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