

University and the Capitalization of Knowledge in the Modern Era

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Abstract: The main objective of this study is to study the task points of the development of modern university (especially research and innovation one) in terms of identifying favorable conditions and institutional bases for the production of new scientific knowledge and its translation into the educational process and regional cultural space in the perspective of international cultural communications.

Key words: Culture, education, university, innovations, knowledge, neo-industrialism

INTRODUCTION

We have already stressed in our previous papers the paradoxical combination of scientific creative innovations (radical, paradigmatic scientific discoveries) and reproductive innovations (corrective scientific discoveries, disciplinary and interdisciplinary, “puzzles” and their technological applications and products) in the depths of an industrial civilization and up to the present day (Bondarenko *at al.*, 2014a, b). Socio-cultural conflict and the breaks generated by this innovative dynamics as the energy core of industrial civilization are constantly reproduced both on the level of vertical hierarchies of socio-cultural systems and in the anthropological horizon of everyday human being which is an internal force for industrialism, the main factor of instability and hypermobility of our society and culture which are based on innovation and technological economy. Does this mean that we should abandon the scientific and technological development and related innovations as some fundamental conservatives and romantic anti-globalists think?

An attempt to resolve this socio-cultural conflict and eliminate all existential paradoxes and antinomies of human being under industrial civilization leads right not to some “third way” but to a global totalitarian project which in the 20th century laid claim to a new cultural and civilizational line of humanity. Totalitarianism as another “dislocation” in the cultural ontology of mankind originated in the depths of industrial civilization as a result of the deepening global crisis after world war I as an attempt to solve it. Both artificial combination of all previous social technologies upon the dominance of scientific and automatic ones and eclectic synthesis of all previous foundations of human being on anti-systemic principle have led to the implementation of the totalitarian

project. The entire civilization basis has undergone fantastic transformations. There is no doubt that the totalitarian countries, especially the USSR, obtained the unprecedented scientific and technological innovations (outer space exploration and nuclear power) but they unfortunately were related primarily to the military-industrial complex and the arms race.

Finally, at the turn of 20 and 21st centuries, there formed the type of global cultural and civilizational systems which is defined in the terms “post industrialism”, “information-oriented society”, “third wave”, “knowledge society”, “post-modernism”, “globalization” etc. which indicates only projectivity nature of these systems (systems in particular). The possible implementation of such cultural and civilizational projects will determine in the near future the global cultural and historical shifts (or failures and gaps?).

Thus, we can see that the principle of innovativeness, creative-artistic and creative-reproductive human activity included in the mechanisms of coupling of “culture” and “civilization” has been present throughout the cultural ontology of the humanity and associated with human reproduction in all cultural and historical types of education and training of intellectual staff. However, our mobile world is the one where the innovation theory becomes an existential prerequisite to the preservation of a human himself, the reform of the entire training system of the teaching staff and more generally, intellectual and cultural staff. In the era of post-industrialism (hyper industrialism?) not only the nature of the social and scientific innovations, the mechanisms of their introduction in the industrial innovations and the social and intellectual technologies undergo changes but also a reform of all the training institutions for scientific and pedagogical staff in terms of new social and cultural dynamics is placed on the agenda.

INNOVATIONS AND POST-INDUSTRIALISM

When speaking about post-industrialism we pay our attention primarily on innovative discoveries and technologies available both in the production sphere and in everyday human life. Alvin Toffler wrote about this issue, arguing the need for “combination of new technologies such as computers, electronics, new materials from the outer space and the depths of the ocean with the genetics and all this in turn with a new energy base. The combination of these elements together will release the flow of innovation looking like nothing seen before in the history of humanity. We are creating a dramatically new technosphere for the third wave of civilization.” However, cultural, scientific and technological innovations of the developed industrialism generate also a specific anthropological range of problems that must be considered in the application of various technologies within the innovative paradigm of a “new world”. There has already been talk about the possible emergence of “convergent technologies” (nano and biotechnologies, information and communication and intellectual and cognitive technologies, etc.) and about the future scientific and technological triumph of “transhumanism” (Borisov and Rimskii, 2013). The combination of social innovations based on new post-industrial technologies may produce a synergetic effect which in the near future can replace an “indust-reality” with some “cyber-reality” or “nano-reality”.

NANO-REALITY AND NANO-TECHNOLOGY SCIENCES

This sphere of “nano-reality” or “nano-technology science” (V.I. Arshinov) is one in our view where the process of transformation and a human and the scientific and innovation culture is going on: in the West as well as in the “progressive” East, successfully developing business, science and innovations as opposed to us, the high-tech companies and “clever companies” have been mushrooming for a long time” (A. Toffler), based on the principles of creative generation and use of the research and innovation and managerial diversity. This is primarily due to the production and storage conditions of new knowledge, information and innovative technologies as the prerequisites for the creation of non-hierarchical communication networks.

Following this line of reasoning, A. Toffler introduces the concept of “flexible firm” which characterizes in the best way the enterprises of the “third wave” of post-industrialism, using in their activities not

only new scientific knowledge and technologies but also innovative, creative forms of management in their positioning in the market, in cooperation with partners and in house management culture. According to Toffler, these firms are built on the use of “new information paradigm” requiring the traditional management to create new forms of antibureaucratic management and organization in the future firms. It gives a range of the organizational and management forms such as family firms (by the way in the Russian science and education area there have been young people often staying and continuing their “dynastic tradition”), pulsing and two-faced organizations, chessboard organizations, self-emerging teams, commissar organizations, etc.

But all these concept metaphors, grasping a categorically poorly expressible reality of a new civilization, anyway, fit into an innovative network paradigm of managing the business and science (in fact, the information paradigm), education and other social institutions and structures.

In our opinion, managing the new innovative companies and organizations including industrial and corporate research institutes, institutions of RAS and universities should be based on the principle of both vertical and above all, horizontal network structure which involves the development in terms of system-synergetic methodology of the mobile hierarchy principle, the most suitable to the categorization of innovative and creative paradigms of the modern world.

The universities play an important role in the development of new civilization paradigms, based as we think not so much on the innovation in the culture as on the reproduced innovation in technology and scientific knowledge within the established “normal scientific paradigms” (Kuhn). This reflects that globalization process of science, education and convergence of technological and social bases of countries with different political-legal, political-ideological and cultural systems which in due time was for the first time reflected in our country within the dissident paradigm of the convergence theory.

We should commonly note that the convergence theory which some sovietologists had been developing in the West and the dissidents in the Soviet Union (A.D. Sakharov) had reasonable bases as time has shown that we have developed (and developing!) within one and the same industrial, modernizing paradigms. The 90s along with the collapse of the Soviet economy and our own “civilization of knowledge” simply confirmed this.

However, we were not the only who had de modernization and de-industrialization as a result of socio-political transformation, ill-conceived and

spontaneous as always after the Russian manner. It was also in the West where both the de-modernization and de-industrialization were caused by the factors such as the political-ideological liberal illusions of “post-industrialism” and “globalization”: “global parasitism” of the “golden billion” states (now it comes to about “half a billion”!) by virtue of the USSR collapse and resources of the middle East resulted just in converted, imaginary forms of “post-industrialism” and “society of knowledge”. Even the USA started thinking about the need for re-industrialization, conservation and even revival of their own industry but using already a new technological basis.

Now, it is obvious that the so-called “post industrialism” (hyper-industrialism?) has manifested itself not as much in the form of domination in the economy of the developed countries of the research and innovation sector and “knowledge production” sector as in the form of “economy of consumption” as well as due to the disproportionate, unjustified lending of demand of public and even entire countries. The global financial crisis at the end of zero years of the 21st century and hitherto lukewarm crisis and stagnation of the eurozone constitute a proof thereof.

This led to the fact that the problems in the education in the West turned out to be typologically similar to those of the education crisis in post-Soviet Russia. It is important to summarize now both our own experience of surviving under “post-industrialism” and de-modernization crisis and the experience of Western (USA and Europe) and Eastern (China, India, Japan) world-systems.

PATHS OF UNIVERSITY DEVELOPMENT

In the era of the break with industrialism, not only the nature of the cultural and scientific innovations, the mechanisms of their introduction in the industrial innovations, social, creative and intellectual technologies undergo changes but also a reform of all the training institutions for scientific and pedagogical staff in terms of new social and cultural dynamics and demands of the “society of knowledge” economy is placed on the agenda.

By the end of the 20th century all universities in the world faced the instable development in the modern industrial world. There are two main views on the future of universities.

The first one which can be described as skeptically stoic is most fully represented in the book by Bill Ridings with the symbolic name “university in ruins” (we have referred thereto above) (Ridings, 2010). Skepticism and stoicism are not only the two epistemological and ethical

strategy books but also the general abstract and philosophical position of the author. B. Ridings relies upon the easily diagnosed fact that the Humboldt-type scientific university (although he more often and rightly speaks of the “German model”, given by the classical German idealism) fell into oblivion in a global world. A “humboldt-type university” with its attitude to the development of horizontal links “professor-student”, “scientific research-teaching”, “production (critical and creative) of new knowledge-translation of new knowledge to students as the subjects of civil society” and thus, further to a culture of mature modernity where it serves as a “grand narrative” of ideology that legitimizes the state-type nation and forms the national culture has died in a globalizing world.

He was replaced by “university of excellence” where the emphasis is not on “new knowledge” but on its perfection formal technification and reproduction where an administrator became “first among equals professors” instead of a rector at the top of the hierarchy of the new academic management. The horizontal structure of a classic university turned into vertical one where students and professors have taken the bottom of the pyramid and the “academic management” is involved in the reproduction of epistemological and technological efficiency, estimated at PR-indicators and market ratings, allowing the university to enter the global market of innovation and educational services and earn money.

The university has become a transnational business corporation no longer interested in national culture and national state but merely in some abstract “values” produced actually for its own use. He writes that “in other words, an appeal to the excellence means that there is no longer any idea of the University or rather, this idea has lost all its substance. Being a non-referential unit of value that entirely functions within the system, the perfection represents only a moment of technology self-reflection. The university today is exactly the same parasitic wart on the resources, like an exchange or insurance companies are warts on the industrial production. Similar to the exchange, the university is a place of self-actualization of the capital; it allows the capital not just to manage risks or diversity but to remove surplus value from such managerial process. In the case of the university this extraction result from the speculation on the margin of the information”. We will not argue about the nature of “globalization” and the future of the “state-type nation”, however we should note that in spite of the attractiveness of some of the conclusions made by B. Ridings, his position itself is characterized by an abstract positioning of the university which he for some reason nominates all the time with a capital letter. There is no “university at all” as well as no an unalloyed “Humboldt Model”.

In this regard, we better tend to another point of view, presented in the studies by Burton Clark an American expert in the sociology and philosophy of education in which he ostensibly described similar trends in science and university education by using the method of analyzing individual situations with specific universities (case study) in different cultural and civilizational habitats and countries but drew a different conclusion. This is both optimistic and realistic view of the future of modern universities. That is right-in the plural and with a lower-case letter.

Away back in the 80s of the 20th century when noting some stability and conservatism in the academic structure of the universities, he recorded the emerging changes and transformations in the direction of a strengthening administrative component and independence (and consistency) in the financial sphere. However, he pointed out just the diversity of the transformations happening with universities in the modern world. Firstly, there was not and could not be any single unifying “university model”: there is as many universities as there are ways of development and so the futures.

Secondly, the “Humboldt-type university” itself has undergone a certain historic transformation during 200 years (here we will add some our thoughts); it retained its “horizontal structure” of the knowledge production and the management, even under totalitarianism; only after World War II (the beginning of the STR) when public funding became dominant not only in the socialist countries but also in the West, the management took hierarchical form which caused both the explosion of student revolutions in the universities against the system and the relevant humanitarian and philosophical discourse (the concept of “power-knowledge” by Foucault). However, not so much the student revolts as the global economic crisis and the new computer technology revolution (“information paradigm”) followed by the reduced public funding of universities in all regions of the world have made universities shift firstly from the “scientific model” to the “innovation one” and then to the openly “entrepreneurial”.

B. Clark described the situation in the West in the 1980s the first half of the 1990s as follows: “as we were facing more and more difficulties in the last quarter of the 20th century, the higher education was losing any stability which it probably never had (emphasis added-auth). Since, the demands are unlikely ever to decline it is impossible to return to some steady state... The governments expect that the universities will help more the community in addressing social and economic problems but at the same time they hesitate

over financial support and become unreliable partners. And the most important is that the research base of the academic world creates at a great rate new knowledge and methods, increasing consistently the number of specialties and expanding the range of disciplinary and interdisciplinary areas... having fallen into traps of knowledge production, even the richest educational institutions are unable to accommodate the whole range of old and new areas.” At the same time, according to B. Clark (we agree on much with it) the “Humboldt Model” and the related cultural missions of production of national-cultural “grand narratives” are unlikely to die. Some universities will prefer institutional stagnation (this is true of many of our regional universities) and the others will develop some hybrid forms (which is mainly written to our most progressive universities). And only several of them will prefer the future of “sustainable changes” and production of innovations in universities: epistemological, axiological, managerial, communicative, financial, etc.

We may note that those painful, criticism-drawing reforms of education in our country (especially, the higher one associated with the preparation of the new-generation teaching staff) took place around the world, perhaps, being just a little ahead of our institutional transformations in education and culture.

The thing is that no matter how advanced the USA and the EU countries were in the industrial terms, one can hardly say with certainty that they have “completed” their post-industrial modernization and, accordingly, the reform of science and education. There occur similar processes of transformation of the “old”, “classic” and “scientific and educational” universities into the new-generation ones such as research and innovation (entrepreneurial) universities. The similar process in our country was slowed down by “perestroika” (means “restructuring”), “democratic reforms” of the 80/90s of the last century and the forming up of the “vertical of power” at the beginning of this century. But we face the same tasks within the post-industrial modernization (cultural, social, industrial and intellectual), involving the reformation of the entire system of training (and continuous training!) of the teaching staff.

The 20 years prior to the development of our university, there developed a management practices based on interaction of the old “academic stronghold” and the new “innovation (entrepreneurial) culture” in the universities of the world which lies in natural agreement of the managerial efforts of the academic administration with the democratic and creative efforts of the authoritative teachers and scientists of all research areas including both scientific and engineering and

social and humanitarian. This is associated also with interdisciplinary studies, expert institutions, development of commercial structures and initiatives at all levels of the “academic stronghold” including even the most “humanitarian” ones which are originally supported by “cross” compensatory financing. Establishing the “national research universities” in our country in recent years is fairly consistent with the needs of the cultural and civilizational development of the worldwide-desirable post-industrialism.

B. Clark identifies in addition to the traditional basic academic stronghold of the classic intellectual production (these are the traditional chairs, branches, departments and laboratories operating at the level of the standard education programs and producing and translating new knowledge and technology “competences”) the five systemically structural, institutional bases (elements) required for the transformation of the old “classic” (modernist) university into a new type of knowledge production such as innovative (entrepreneurial) university.

An enhanced guiding core consisting of a strong management and central management teams which approves new management values with traditional academic ones (especially by the engagement of authoritative scholars and teachers in the “control group” and coordination of the new management with the academic self-government).

An advanced periphery of development that involves the growth of structural-institutional units able to enter the outer environment, primarily, industrial one for the purpose of creating new scientific and innovative products and the new continuing education system (the main “money-making” area under a new set of conditions).

A diversified funding base which develops due to structures that implement the interaction with the state and public funds responsible for grants and contracts, the central and local authorities, charitable foundations and donators and population and commercial-industrial companies using the research-innovative and educational services.

The stimulating academic structures which arise on the basis of both institutions and disciplinary programs of the academic stronghold (chairs, faculties) and the reformatted academic field (primarily, the development of interdisciplinary, cluster formations that gained momentum in Russia in so-called education and scientific innovation complexes (“UNIK”-eng. “ESIC”), allowing even the traditionally oriented teachers, structures and programs, including social-humanitarian ones to produce the innovative research and educational products (and generate new revenues!).

An integrated entrepreneurial culture that involves the development and availability of both clear development strategy (institutional perspective) in the university, coupled with the formation of institutional identity (a myth that develops the mission-aimed idea) and a special reputation and corporate axiology which implies a whole system of PR-technologies and the formation of a positive image of the university.

Most European universities have “faculties” remaining as a tribute to the age-old tradition, although, they perform for example in the UK, a different function (master and doctor training programs).

Secondly, both post-industrial society and scientific and innovative economy in terms of management require no “vertical hierarchy” and “a single management algorithm for all” but the “horizontal relationship”, self-reliance and support for the creative initiative. This is especially important for scientific-innovative entrepreneurial university.

In the 90s of the last century a range of higher educational institutions of our country having previously the status of “institutions” (these are both educational and engineering and technological institutes) followed the path of integration and transformation into “universities”, enlarged and strengthened scientific-educational and scientific-innovative centers, often earning the status of “classic universities”. This was common to the late 80s and early 90s of the last century and in the West.

As an example, we can mention the establishment of Tula State University and Yaroslav the Wise Novgorod State University which were arising by merging several higher educational institutions. We can see in the next few years how natural this way was however both of mentioned universities have not made any special breakthroughs yet.

Most other higher educational universities have chosen an easy scenario. They simply renamed themselves as “universities”, classic or technological. This is true for Kursk State University (former pedagogical institute), South-West State University (former Kursk State Technical University) and V.G. Shukhov Belgorod State Technological University that used to train a unique staff for the construction industry of our country. Unlike the latter institute, having benefited from the “passionate potential” of its new symbolic status (a symbolic capital in the new “innovative economy”), the Kursk institutes have little to show.

At the beginning of the new century, the Russian reformers being concerned about the survival of our system of higher education in the global world of scientific innovation and the development of the global education market, choose the creation of enormous “Federal Universities”. Using Southern Federal University

as an example which was one of the most dynamic institutions of scientific advanced training and education of academic personnel since the mid-70s of the last century, when the rector Yu.A. Zhdanov created around new and traditional faculties and an “academic stronghold” a massive scientific and industrial complex in the form of the system of applied research institutes which have successfully integrated the fundamental studies of the “academic stronghold” into the applied technologies. Now we can see that Southern Federal University, strengthened with Taganrog Radio Engineering Institute has lost its soviet potential of the classic scientific university rather than made a breakthrough in the science and innovation and scientific and educational domestic markets. The new team of “effective managers”, having trained at the Ministry of Education and Science of the Russian Federation, tries only building its own internal “vertical power structure”.

Finally, as we noted above, Russia has taken the tack of creating the “research universities” which similar to “federal” ones have gained both high-status and financial capitalization. Some of them changed hardly nothing in their structural and institutional status as they were ready for transition to innovative path of development (for example, the former Tomsk Polytechnic University and Tomsk State University which have received the status of “research” universities).

A breakthrough of the National Research University “BSU” has become one of the most interesting phenomena of the innovative development in the research and education market system. Once ordinary Pedagogical University, just as many universities at that time in the West, spontaneously but before many of the rest in our country in the early 90's of the last century followed the tack of dynamic, accelerated innovative breakthrough. We may also note that the administration of the Pedagogical Institute together with the “academic stronghold” started with the managerial and structural experiment. The teachers of the chair of philosophy established jointly with BSPI a non-state university, one of the first both in the region and in Russia which subject to the absence of the regulatory framework, started training the staff in such previously outlandish programs such as “marketing” and “management” which were unknown at that time to the other universities (a combination of administrative innovations with enhanced development periphery and Clark's differentiated funding base). In theory it had to (and did at first) give additional financial support to the academic teachers and generate profit to the institute itself. Unfortunately, the experiment took the wrong tack, contrary to the establishers' plan but the experience itself which was further used by other Belgorod and Russian

universities has shown that the focus on non-state, fully commercial education in Russia is out of the running.

The government of the Belgorod Region, the rector of then Belgorod State Pedagogical Institute N.V. Kamyshanchenko and some representatives of the “academic stronghold” started both the transformation of the Pedagogical Institute in Pedagogical University and then in the “classic” one, through the creation of a diversified funding base (primarily, the BSU Development Fund). This allowed expanding by the beginning of the 2000s the proposal on new knowledge production programs popular with employers and population, made it possible in those hard times not only to preserve the academic staff but also to attract young people by increasing by times the academic teachers' salaries in contrast with other regional and Russian universities. In that period, BSU created a powerful material and technical base, supplemented by a reputational “symbolic capital”. Right in the late 90's of 20th century, Russia faced the “phenomenon of Belgorod University”.

These were real achievements such as engagement of non-resident staff and upbringing of own brainpower, the rapid development of logistical and scientific-technological base, the radical update of educational programs and the correspondence of research work to the level of the best classic universities of the national education system. This breakthrough happened by the end of the 90s of the last century.

A new round of breakthrough in the development of “the phenomenon of BSU” since 2002 was also real: research funding (grants, etc.) increased from several million rubles in 2002 to hundreds of millions in about 5-7 years, the quality and quantity of scientific publications in the top-rated journals with the prestigious citation indexes also increased tremendously. It is certainly a great merit of the regional administration headed by Governor E.S. Savchenko and the whole team which began spontaneously to follow in some respects a rational, situational logic of innovative university. At the beginning of the century, a sufficiently flexible management structure was created for the scientific and innovative work of higher educational establishment and the formation of contour of those five system-structural, institutional bases of Innovative University according to B. Clark was completed.

Since 2002, there was actually the first in the country system of economic incentives for the scientific activity of teachers (internal and external grants, assessment of the research results on a flexible scoring scale) in the BSU. However, it concerned mainly the doctors of science that raised the level of their salaries. Close links were forged with both central and regional institutions “grantees” and

the organizations including regional ones, interested in investing in education and research. There were expert groups and communities composed of proactive and influential teachers who had direct influence on the assessment of scientific activity of teachers. The so-called ESICs were established, intended for carrying out the development of interdisciplinary research in all areas, including those generating income from research activities and fee-paid educational services.

All this, actually as well as the established in the 90s material-technical and science-technical base and symbolic capitalization, allowed BSU to obtain the status of “national research university”, skipping to a certain extent over the stages of formation of corporate culture (the spirit!) of the “classic university” (which as fell in place later was not a positive moment in the development).

By 2010, the university has however faced some administrative and mental-psychological problems. What were these problems?

Firstly, it was acutely felt that the moral-psychological atmosphere began to worsen. Many teachers began openly and most of them on the backstage, discussing the fact that the university is governed by the bureaucracy with an atmosphere of non-creative and critical problem solving, rather than by academic community and academic staff as it used to be in the 90s. Experience shows that there is a similar atmosphere in the other, even the most “advanced” Russian universities. However, both B. Clark and B. Ridings wrote the same in their works about the atmosphere in the Western and other universities around the world. This is a general trend of balancing the “management effectiveness” on the verge of purposeful rationality according to Weber and of bureaucratization according to Lenin.

But most important is that majority of teachers has stayed out of economic and moral incentives to scientific innovations. Neither real nor money wage of most teachers remained actually the same over the last ten years. Not just because the federal center left universities on the fringes of its economic interests. Even in the hard 90s, the administration was able to find a way to yearly index the wage of all teaching staff in the amount of about 30% of the federal component. In the 2000s, all extra-budgetary funds were either thrown at housing construction or invested in the frozen construction of the “prestige objects” such as a hotel building on the territory of equestrian school. Along with obtaining the status of the National Research University, the university had to invest main extra-budgetary funds received from the education in the co-financing of programs (this was a term

for funding the “research universities”). This, perhaps, was the future of many European universities which finances were spent on the acquisition of equipment rather than on the development of research and training of future scientific brainpower (postgraduate and doctoral training programs) (Lipman, 2010; Radaev, 2010; O’Connor, 2010; Fediukin and Frumin, 2010). Only China turned out to be an exception (Balzer, 2010). Probably, even now, many are willing to endure for the sake of some specific moral and psychological values, corporate ideology and mission of “national research university”. Nevertheless, it is difficult to implement without reproducing the historical and axiological culture of “classic university”.

However, the main moral and psychological split occurred in the team when the establishment of the National Research Universities gave rise to so called “priority research areas”. When created, the National Research University project intended the involvement of all subdivisions of the “academic stronghold” including humanitarian ones as the priority research areas of the university, wherefore the ESICs (Education and Scientific Innovation Centers) were established. Nevertheless, the ESICs came to nothing... The entire faculties and chairs have been excluded from the process of stimulation of innovative activity including the moral and psychological stimulation process.

The priority of natural scientific and engineering areas is evident as during the years of “reform” the country took the knock precisely in this area and the modernization is out of the question without a breakthrough in both the natural sciences and engineering sciences. But both humanitarian faculties and chairs which in the 90s and the 2000s produced the bulk of publications and thesis defenses as well as a large number of grants, thereby ensuring the transformation of our university in a classic and further research one and have been involved in training of the majority of post graduate and doctoral students were actually excluded from the active innovation policy of NRU “BSU”. However, humanities which have always been a basis for a classic university are currently on the verge of moral and intellectual frustration.

UNIVERSITIES OF MODERN TIMES

The analysis of information from the websites of similar “national research universities” shows similar trends with some allowance for the “specificity” which is almost invisible, since all we were graduated from the unified Soviet project of “Humboldt-type” research university.

But the most important factor, the managerial one which can cause in the near future a negative development is fraught with the fact that our universities face the loss of real innovation achievements and transformation in the PR-simulacrum. At the same time, we have no effective system of the administrative staff certification both in the universities and regions and across the country. In case of reviving this system (which was functioning even in the 80s), it shall involve the influential teachers of all institute's sub-departments rather than the "effective managers" themselves. The process of appointing to senior positions in the academic stronghold of the university must take into account the effectiveness of a particular "administrative activity" in the professional community as a scientist and teacher which was always observed at the best days of the USSR.

Both post-industrial society and scientific and innovative economy in terms of management require no "vertical hierarchy" and "a single management algorithm for all" but the "horizontal relationship", self-reliance and support for the creative initiative. By the way as soon as V.V. Putin and D.A. Medvedev mentioned the scientific and innovative modernization, the issue of "horizontal democratization" at all levels of government appeared on the agenda. This is especially important for scientific innovative entrepreneurial university.

Research and innovative industrialism focuses managing process not only on support for but also on the cultivation and design of institutional and structurally functional variety and diversity. If we want to maintain and cultivate it, then it is far-sighted and simplistic to paint all with the same brush of the enlarged chairs and "institutes". A simplification as we know, leads only to monotony, creative boredom and stagnation. In this case, we only receive the effect of multiplication of the administrative functions. We obtain just another simulation of management instead of "activation" and "breakthrough" in the "scientific innovations" (Babintsev, 2012). This is one of the most painful issues for further improvement of the moral and psychological climate in any modern Russian higher educational establishment: there is a need to develop the traditions of the academic self-administration (teachers and students) both historical and domestic. The classic university has been always based upon the rights and freedoms of teachers and students, the lack of which makes impossible to develop an atmosphere of free scientific search and cultural creativity.

If the same level of bureaucratic administration remains in higher educational establishments then no "modernization" or "innovative breakthrough" will take place in our country. If there is a focus only on the "technocrats", "effective managers", the natural and

engineering sciences and on the priests being far from the traditions of the national academic education (their authority for official is now above the authority of the professor, even in matters of science which was impossible in pre-revolutionary "orthodox" Russia!), then no infusion of money and no program for entering the "world rankings" will help us. One suppose that the current proposals for involvement of foreign staff, being under consideration of the Ministry of Education and Science of the Russian Federation will turn out to be another fail. We do not live in the time of either Peter I or Alexander I.

However, both institutional and administrative (structural and functional) transformations are critically essential. But they require to observe the balance of traditions and innovations. This in our opinion, must be achieved primarily at the level of regional socio-cultural systems. The pace of modern development of science, education, engineering and technology, the time rate of social and cultural changes actualize progressively the problems of interaction of public authorities and higher educational institutions.

SUMMARY

When shifting to the scientific and innovative model of the regional development, an important factor is the search for optimal ways of organization, planning and management of science and higher educational institutions within a uniform educational space, since they can become a source of innovation not only in industry, science and education but in the whole system of the regional culture. This unique "mesolevel" of interaction of culture, science, higher education and the government in terms of the region attains its own peculiarities which also updates the problem of managing and solving the tasks of compensation of social tension and the development of effective forms of solidarity and social partnership.

CONCLUSION

The most obvious plan for actualization of the problem is the need to align the macro-level of federal objectives and requirements facing the science and higher educational institutions (micro-level) and the mesolevel of the regional "challenges" with their own characteristics. Under rather intensive transformation of Russian society, this contradiction is invariably combined with the need to optimize both the management system of higher education in the regions and the system of interaction with public authorities. It is also clear that the affected range of issues addressing the interaction between the government and higher education cannot be solved without taking into

account the construction of the innovation infrastructure, the “knowledge economy” in a region. This fact makes high demands on the level of management in education, on the organizational structures and forms of interaction with the authorities. Therefore, the problem in question brings together a range of issues that are current in nature and characterized by interweaved “global” and regional values centered with the contradictions of the center and the periphery, the country and the region as well as globalization and preservation of regional specificity.

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