

“Ideal University” in Future in the Context of a Modern Education

Look From Epoch of “The Stone Internet”

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Abstract—This article considers the project of an "ideal university» through a prism of the authors' concept of four historical epochs: "The Stone Internet" (a modern epoch), "The Copper Internet", "The Silver Internet" and "the Gold Internet". Authors believe that the society will gradually evolve from "The Stone Internet" to "The Gold Internet". The ideal university by the epoch of "The Gold Internet" will become a flexible and dynamic structure, geographically mobile, democratic and "opened". Financial independence from the state of the "ideal university" will increase, and it will turn to economically independent institutes in regards to information and knowledge.

Keywords—*university; “The Stone Internet”; future*

I. INTRODUCTION: POSITIVE AND NEGATIVE FUTUROLOGY

All of us live in the present and simultaneously we wish to know the future. There is a whole science (to be exact, interdisciplinary scientific area of research) which is engaged in studying (more precisely, a scientific prediction and forecasting) the future and it is named “futurology” (in Latin *futurum* – future). Futurology can be successful if its predictions and future forecasting coincides with the real course of history, or unsuccessful if the results of predictions disperse from coming events. The result is the main criteria of the validity of this or that concrete futurological forecast.

In our opinion, all futurology can be divided on positive and negative. The first and most essential sign of positive futurology is the use of futurological forecasts of special logic and a gnoseological method – extrapolations, or more precisely, a special kind of extrapolation – prognostic extrapolations, which consists in carrying to the future the knowledge about the present¹.

The extrapolation method (similar to an analogy method) appeals to the uniformity of the world. The researcher initially assumes that in inaccessible or unstudied sphere of reality, the world will be based approximately on the same principles as in area known to him. In some aspects, the

1. prognostic extrapolation is extrapolation which postpones already known knowledge of the present to the not yet learnt future

model here works for the learning subject of "advancing reflexing" – he in advance tries to expect that he does not know yet he "trusts" that the future reality will be based under laws already known to him.

The negative futurology, as a counterbalance to positive futurology, refuses extrapolation as a basic method of knowledge regarding the future. From the point of view of negative futurology, it is impossible to learn the future by tools of extant knowledge. The future essentially is not learned from the point of view of the present, – however, with this position it is necessary to declare not as agnosticism, but as skepticism in future knowledge. The negative futurology doubts not that the future is learned basically but only that the future is learned by present tools; in this point there lays the division of negative and positive futurology.

The negative futurology has an old story. For example, as we believe, German philosopher I. Kant² was one of the first representatives of "negative futurology". He constantly underlined that empirical human experience never gives a full idea about history's ultimate goal, and "world-wide-civil status" to which, as I. Kant assumed the history goes, time exists while only in rudimentary, unknown form. Any logical extrapolation as a way to knowledge of the future was also categorically unacceptable to Kant, i.e. Kant did not try to transfer directly knowledge of the present to knowledge of the future; therefore I. Kant can quite be considered as a "negative futurologist".

In particular, in his book "Idea of General History in the World-Wide-Civil Plan" the German thinker argued about "the secret plan of the nature" the purpose of which is to realize "a perfect state condition" in which "all inclinations of mankind" will be completely realized:

"The mankind history as a whole can be considered as performance of *the secret plan of the nature* – to carry out

2. aturally, a futurology in XVIII century as a science could not exist. It was replaced with a spectrum of the diversified prognostics: pseudo-scientific, including an astrology, chiromancy, etc. For example, the astrological forecasts rather popular in the Middle Ages, were in demand during the age of Enlightenment, despite sharply critical relation to them of scientists and philosophers.

internal and for this purpose also outwardly perfect state condition in which it can develop completely all inclinations enclosed by it in mankind" [1. P.18-19].

What is "the secret plan of the nature" about which I. Kant argued? If to reject any mysticism or direct theology, it is necessary to assume that the German thinker meant that *all merits* should be applied directly to the person as a natural and social being. The *potential of the person* as a creative and moral subject, basically, is extraordinarily highly estimated by I. Kant. However, in what degree has the subject opened all positive qualities during the Kant epoch in the end of the XVIII century? What does the life experience during the age of Enlightenment (the I. Kant's epoch) reveal?

I. Kant answered this question as follows:

"A question only is whether experience opens something about such execution of the purpose of the nature. I answer: the little because this circulation demands, apparently, for the end so much time that because of small way which the mankind has passed in this direction itself can't make quite surely idea of all way" [1. P.19]

In his answer, the German philosopher is extremely clear: *mankind has passed too small part of a way, and from positions of this small piece still it is impossible to judge all ways*. Differently, our knowledge of an existing trajectory of the development of human civilization is too poor, and they cannot be extrapolated entirely.

As one of the original representatives of *modern negative futurology* it is possible to consider, for example, the American economist Nasir Taleb with his best seller "Black Swan" [5].

N. Taleb discusses a question about the so-called "the black swan" under which he understands any unpredicted negative social phenomenon falling upon our modern society (economic crisis, ecological accident, etc.)³. The main signs of "the black swan" are its unexpectedness, unpredictability, and catastrophic nature. All attempts to predict "the black swan" based on the extrapolation of already known events are unacceptable: concerning this phenomenon our *ignorance* is more important than our *knowledge*;

"The logic of the black swan does what you do not know much more important than that you know. If to ponder, many *Black swans* were in the world and have shaken it just because *nobody waited for them*" [5. P.12]

Further N. Taleb draws the following important conclusion:

3. Taleb underlines concerning the nature of "the black swan": "it is not enough for event to be rare or any outstanding to find the status of the *black swan*, it should be unexpected, beyond our idea about a set of probabilities. Concerning it, you should be stupid. Many rare events possess a certain set of the components nevertheless accessible to studying: uneasy to calculate probability of sensational incident, but it is possible to receive general idea about possibility to face that. That is we can transform, so to say, these *Black swans* in *Grey swans*, soften dramatic nature of unpleasant unexpectedness. The person ready to possibility of similar events, passes in a category «not-stupid" [5. P.344]

"The modern world entirely depends from rare, extremely rare, events. In it the *Black swan* can appear after thousands and thousands *White*. Therefore we should abstain from judgments much longer, than it is peculiar to us" [5. P.115]

We would slightly correct and add this conclusion: the knowledge we received within the limits of a modern epoch, does not give us the possibility to predict all possible events in the future; therefore, we should abstain from a prediction of the future from present positions. The difference between positive and negative futurology lies in how one uses such a concept as the "forecasting horizon" and "the forecast scenario".

For positive futurology, this concept is quite concrete and perceived: the forecasting horizon specifies the greatest possible time one can forecast, after which the given forecast loses any meaning. The forecast scenario is the concrete trajectory of the future historical development within the limits of a certain social theory or concept. As a rule, any forecast within the limits of positive futurology assumes the presence of, first, a forecast horizon (for example, 30, 40, 50 years, etc.) and some (two, three or more) development scenarios (forecast scenarios).

Negative futurology approaches these concepts differently. The horizon of forecasting is a negative number but not completely positive as is the case with positive futurology.

The horizon of forecasting for negative futurology is the time horizon by which any forecast starts to gain rather than lose meaning and to increase the probability of any event.

Let us give an example: I predict the approach of "the black swan" as a world economic crisis in 2024; i.e. forecasting horizon is 10 years. According to positive futurology if the world economic crisis in 2024 has not come, the forecast has lost any meaning. However, the opinion of the negative futurologist should be essentially other: if crisis has not come, the probability of its approach next year (2025) only increases. The forecasting horizon in this case should be expressed as the probability of an approach of any event; the increase in this probability shows "saturation"-- "overcast" of the horizon of forecasting.

The same approach is supposed towards "the forecast scenario": it is designed on the guideline of "what cannot be, but that, nevertheless, can occur at any moment". The scenario of the forecast for negative futurology is programmed in the future by exclusively rare and even absolutely improbable events (or even their chains), first of all, not taking place in the past or in general unknown to us.

Naturally, to program such events or their chain is not simple task: after all, here we cannot lean against knowledge already known from historical events or us: we should assume the approach of something earlier us unprecedented or unknown. Probably, in this case the scientific forecast should get, for example, "an art", "literary" cover and even should take some ideas from science fiction.

Let's sum up the comparative analysis of positive and negative futurology in "Table I".

TABLE I. THE COMPARATIVE ANALYSIS OF POSITIVE AND NEGATIVE FUTUROLOGY

Criterion of Comparison/ Futurology Type	Positive Futurology	Negative Futurology
The relation to extrapolation	is positive: extrapolation can be the tool of knowledge of the future	is negative: extrapolation cannot be used as the tool of knowledge of the future
Forecasting Horizon	is perceived, concrete and positive, expressed in certain number of years	is expressed in probability of approach of any event; the increase in this probability shows "saturation", i.e. the horizon of forecasting becoming "overcast"
The Forecast Scenario	The concrete trajectory of the future historical development developed within the limits of the certain social theory or the concept	Programming in the future of exclusively rare and even absolutely improbable events, - first of all, the unknowns which were not taking place in the past or hitherto occurring.

II. "THE STONE INTERNET"

Now we will try to formulate a position of negative futurology concerning a modern and prospective periodization of a world history which is presented by various types of classifications: on socioeconomic structures, historical epoch, etc.

Most known of these classifications are the allocation of the development of a society into three "society stages"⁴: preindustrial (traditional), industrial and postindustrial (information). More often this approach is characterized as the concept of "a postindustrial (information) society".

The concept of "a postindustrial society", nowadays, perhaps, is the most popular concept among all social scientists. The postindustrial society can be defined as a future society in which knowledge and the information will play the role of the basic economic resource. The market system in a postindustrial society includes science as well. As the Japanese researcher J. Masuda remarked, limits of knowledge and market limits are combined among themselves, *"the border learnt becomes the potential market"*, and the knowledge and the information become the basic goods intended for an exchange in a market system.

What, categorically, prevents the arrangement of negative futurology into these concepts so popular among scientists and philosophers? *Does not arrange, first, that our modern society appears here with a prefix "post-": we are "after something", we are "the higher stage of something",*

and we are "peak" and "top" of something (in this case "industrialism").

As the main criterion of such a classification, we suggest taking the world's global web - the Internet- and designating our epoch as an epoch of «The stone Internet», and three subsequent epoch as epoch of "The Copper Internet", "The Silver Internet» and The Gold Internet».

In order to classify all four future eras by the "Internet", the general picture of essentially new historical and futurological periodization in general can look approximately as in "Table II".

Alas, as we did not try to take into account future "Black swans", our picture of the future social reality also has turned out too pink and optimistically. But in this case it is important that we declare our modern epoch as an epoch "before-" something and "Golden Age" which many thinkers and scientists connect with "a postindustrial society" or "a postmodern society", has appeared will removed far forward during an epoch of "the Gold Internet". Finally, names of the subsequent epoch it only tracing-papers, the *wrappers* not necessarily directly connected with that or other metal...

To summarize, using tools and methods of negative futurology, we have tried to prove that our modern epoch should be considered only as the first step of movement towards a certain hypothetical future to an epoch of "The Gold Internet», and it should not be called any mystical "postindustrial" or "information" society, or an epoch of *The Stone Internet* with all logical consequences most likely following from there.

Mankind at the present stage is only *Neanderthal men* (or, perhaps, *kromanyonets*), manufacturing primitive *stone tools* (some type of Microsoft Office or Apple) and with them consistently and gradually pushing society into a new "copper century", an epoch of *The Copper Internet* (whether or not that "copper" in general is still found?). Nevertheless, when an epoch will come, and when it will replace our epoch of "the Stone Internet", is impossible to forecast.

So, we will discuss not simply modern education but consider these discourses as the ascension of our epoch of "the Stone Internet" forward by an era of three subsequent "Internets" - in that case as it seems to us, our discourses will accept the necessary form and will find the necessary maintenance.

4. According to our approach, they can be most precisely named «economic epoch» as they proceed basically from economic characteristics: see in detail [2]

TABLE II. THE NEW HISTORICAL AND FUTUROLOGICAL PERIODIZATION

Epoch type/ Parameter	The state	Social Structure	Money, Finance	People, a Family	Culture
"The stone Internet" (First half of XXI century)	Division into "First" and "The Third World", local confrontations	Division on rich and poor, classes, class struggle	Cash, credit cards	Monogamous family	Mass culture
"The copper Internet" (second half of XXI century?)	Rapprochement of the "First" and "Third" world, liquidation of wars	Rapprochement of classes and striations, gradual alignment of incomes	The termination of the circulation of cash, the transfer via electronic "money"	Stagnation of a monogamous family, development of new forms of a family (a gay family, virtual families, etc.)	Mass culture transition to the virtual worlds
"The Silver Internet" (?)	"The Electronic state", liquidation of interstate borders	Middle class domination	Money as fiction	Disintegration of a traditional family	Mass culture real and virtual
"The gold Internet" (?)	"The world electronic state"	"Communism", unlimited access of each individual to material resources in reasonable limits, main resources are an intellectual resources	Total disappearance of money	Total disappearance of traditional families	Individual culture in the real and virtual worlds, individual creation of the social world

III. "THE IDEAL UNIVERSITY": GENERAL LOOK

The university education during an epoch of "The Stone Internet" becomes some kind of "brand", which is eager to possess, if not every, then at least the majority of them⁵. Another matter is that the university and, as a whole, the higher education system is constructed today extremely inefficiently. Partly, it is a financial problem (see the following section). But raising the efficiency of education (including Russian) is possible in conditions of *rigid limits of financing*. But for this purpose it is necessary not to increase a bureaucracy of various educational structures and not to centralize them (as it has become, for example, nowadays in Russia), but consistently and gradually release education from various bureaucratic outgrowths transforming it to free and democratic institute.

For example, the "Ministry of Education in its present form is a *dinosaur* who, no doubt, should die out by an epoch of "The Gold Internet". Even in a modern form it is necessary only for two reasons: first, for acquiring money in favor of education, and, secondly, for the adjustment of the international contacts so that teachers could continue training, receiving foreign grants, etc. All its other functions can be quite possible to delegate to high schools to universities.

The approximate same fate already in the nearest prospect, in our opinion, is prepared to such strange and unclear structures as the "administration" and the "dean's office". Both the rector and the dean in the course of a constant bureaucratization of higher education began to forget definitely that they are among all faculty only *equal*,

and no more that⁶. Administrations and dean's offices have the weight of senseless and unnecessary functions, and as a whole, they became some kind of "cling-fishes" to a university education, unnecessary ballast on a higher education sailing vessel.

It is necessary for university functioning four elements: the teacher, the student, and also the tutor and the bookkeeper. All the others (not including some economic professions) are absolutely unnecessary! Therefore, possibly, both the dean's offices and the administrations by an epoch of "the Gold Internet", like the Ministry of Education, should also *die out*, and nobody will subsequently be sorry! Same concerns adjoined to them of "methodical managements", and other nurseries of bureaucratization in higher educational systems.

"The future ideal university needs full clarification from the various bureaucratic structures interfering a free and open exchange by ideas as among teacher and students." An important role in this "clarification" plays a *globalization* process – the process of rapprochement, a universalization of the countries and regions, findings of uniform parameters of development and functioning.

Globalization is the most remarkable line presently. Its nature, according to the majority of theorists (M. Kastels, E. Toffler, etc.) is information-communicative, and the most representative aspect, the absence of the "other place", involves the washing away of borders between internal and external (national and international, local and global). The *global sociality possesses the following qualities: it is pluralist, multicultural, and situationally-temporal*. Now in an education system globalization has various parameters of judgment (Bolonsky process, etc.); it promotes the

5. The university doesn't participate any more in historical project of mankind we have got in inheritance from the age of Enlightenment, - the historical project of culture" [4. P.16]

6. "The central figure of university isn't any more the professor playing simultaneously a role of the scientist and the teacher, but the rector to whom professors should report" [4. P.20]

unification of the world's higher education, its *multiculturalism* and democratization.

In practice, in education there are two absolutely opposite processes - globalization and Glocalization, and a grief to that university which in a pursuit of the first of them won't notice the second! "*Glocalisation*" starts with the opposite point of view: the higher education is always something *especial*, closely connected with cultural and civilizational specificity of the given region or the country, and the general, universal norms of higher education are in most cases inapplicable; they need to be changed for the concrete, especial norms following from cultural specificity of the given society⁷.

Higher education becomes at present more and more personal, more personified. A *mass audience* (i.e. the lecture halls filled with one hundred and more students) in due course should leave in general the educational sphere, disappearing as a relic! The audience in higher education crosses all borders, becomes mobile and flexible.

By the epoch of "the gold Internet", *the universities that will survive will be those which are geographically mobile*, but not in respect of the opening of a set of branches in various geographical points of a planet. It is a question absolutely about the *possibility of moving of teachers and students within the limits of the world geographical space*. The *History of Russia* should be taught and studied in Russia, instead of in Burkina Faso, and history of Burkina Faso in Burkina Faso, instead of in Russia; it is necessary to teach courses of economic geography of Argentina in Argentina, instead of still somewhere! As a result, only that university will win which can provide similar mobility, both teachers, and students, and the one who cannot provide it will lose.

In general, the education system should be under construction in many elements such as programs like SUN, CRC and HESP⁸, for example common in Central European universities in Budapest and Fund "Open society" (Soros fund): a network of the intensive local courses *adhered* to geographical region, but thus *independent* of a concrete university. Each such course assumes a certain system of offset and set credit units, compatible offsets between the systems, and accepted by different universities.

Let's underline once again: by an epoch of "the Gold Internet" universities, as well as during an early epoch of their existence, again should become an *independent corporation of teachers*, instead of a corporation of business executives or administrative workers like they are nowadays in the "Stone Internet" period.

7. "The university should not protect and extend national culture any more as the national state henceforth is not the basic place of reproduction of the [cultural] capital" [4. P.27]

8. SUN Summer University; CRC Curriculum Resource Centre (the Center of curriculums); HESP Higher Education Support Program

IV. ECONOMIC ASPECTS

The modern university exists under the conditions of stable and reproducing itself financial crisis passing in *global economic crisis*⁹ from time to time.

In the conditions of such a permanent crisis, there is a question about the financing of higher education and prospects of this financing in communication to approach the epoch of "the Gold Internet". Opinions here are different. For example, Ridings believes that the modern university is some kind of a *financial parasite* in the structure of modern economy:

"Today the University is precisely same parasitic outgrowth on resources, as a stock exchange or the insurance companies - outgrowths on industrial production... [University mission] grows out of gamble on a difference in the information" [4. P.69].

The authors of this article have a bit of a different opinion. The modern universities, "ideal universities" of future, are not *financial parasites* on a societal body. On the contrary, expenses for education are key points for the national budget of any state. After all these expenses can be considered in several aspects: 1) as investments into the future generations; 2) as investments into the human capital of the nation; 3) as investments into the cultural capital of the state; 4) as investments into the *symbolical capital* of a society – the capital which can be easily transformed to any other kind of the capital financial, political, cultural, intellectual, bureaucratic, etc.

One of features of the Russian universities is the strong financial dependence on the state. On different sources, the state receipts in structure of modern Russian university make from 40% to 90%. Such a strong *financial dependence* of the university on the state generates a variety of serious problems: the bureaucratic pressure upon university, corruption, political lobbying, etc.

In the structure of the "ideal university" of the future, such *financial dependence* on the state should be overcome. And the decision of the problem consists not only on the university itself extracting money from private investors, and that "the ideal university" itself should become a *supranational, universal* financial institution; it should

9. "The world economic crisis which had burst in 2007-2009 became a shock first of all for the economists who have innocently believed in the absolute stability of the world economic system, and in their own infallibility and ability to predict crisis for at least a quarter of the century. In practice, not all has appeared so simply. This economic crisis, which had begun with negative shifts in the share markets of the USA, soon has fallen as a powerful hurricane for the whole world, having cast it into chaos of financial and economic shocks. To no small degree, it was promoted also by process of globalization actively going to last decades which, like a hoop, pulled together all economies of the world in a uniform and open system. We will notice also that first, it was a question only of *financial crisis*, and it seemed that it would affect industrial sphere a little. Nevertheless, in practice financial crisis has very quickly passed in a stage of a global economic crisis, and has captured itself all spheres of the economic life, all spheres of an economy. It has once again underlined a *structure-forming role* which is played by money in the conditions of a modern postindustrial society» [3. P.5-6]

become not just a national corporation of teachers and students, but rather an *international* corporation. The following various international financial and political institutes should become the main sponsor of such university: the non-governmental organizations, banks, the Multinational Corporation, etc. Pressure of various political and bureaucratic forces should be counterbalanced at the university. "The ideal university" is some kind of a point of "financial equilibrium" in the future global economy of knowledge.

V. CONCLUSION

Therefore, "the Ideal University" of the future, epoch of "the Gold Internet" is the university, which should be under construction on following parameters:

- it is a flexible and dynamic structure operated by an independent corporation of teachers.
- it is a democratic institute constructed on principles of "open society" and "open science".
- it is geographically mobile and capable of performing the work in every place on the globe.
- it is financially provided institute from all points of view; expenses for education are key for the national budget of any state.

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