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Sergey D. Bodrunov

S.Y. Witte Institute for New Industrial Development (Saint Petersburg, Russia)

TRANSFORMATIONS OF THE 21ST CENTURY – HUMAN, SOCIETY, VALUES, NOONOMY: MATERIAL VS IDEAL, “PHYSICS” VS “LYRICISM”¹

Abstract: The article raises a conceptual problem that has both philosophical and socio-economic content: the nature of the interaction of material and spiritual principles in the context of the increasing role of knowledge and cultural values as factors of modern socio-economic development. The author shows that the process of searching for new knowledge has rapidly begun to play a predominant role in relation to the material foundations of production, since now it determines the very nature of these material foundations. But such a revolution in the relations of the material and the ideal in the production process itself rests on the transition to knowledge-intensive material production technologies and to the creation of a knowledge-intensive product. This change also leads to qualitative changes in property relations and in the nature of a human. Property relations are gradually eroding, which in the future may lead to their exhaustion, and a person, in order to ensure the development of society in the conditions of the modern technological revolution, must break through the narrow shell of an economic person, and become a truly reasonable person, a noohuman, who relies on the cultural imperatives of human development.

Keywords: material, ideal, technology, human, cognition, noonomy, culture, values, noohuman.

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博德鲁诺夫S. D.

维捷新兴工业发展研究所(俄罗斯, 圣彼得堡)

二十一世纪的转型与人、社会、产品、智慧经济——物质VS思想、“物理学家” VS “抒情诗人”

摘要:文章提出了一个具有哲学和社会经济内容的总体性问题,即,现阶段作为现代社会经济发展要素的知识和文化产品的作用日益增强,在此背景下,物质原则和精神原则之间相互作用的性质问题。作者指出,探索新知识的过程对生产的物质基础开始发挥越来越大的主导作用,因为现在它决定着这些物质基础的性质。生产过程中物质与思想之间关系的这种转变的基础是向知识密集化物质生产

¹ The article is based on the report of the 35th session of the International Theoretical Seminar of the S. Y. Witte Institute for New Industrial Development (INID) “Global transformations of the 21st century: the future of humanity, market and capital”.

技术的过渡和知识密集型产品的创造。这种转变正在导致财产关系和人类自身素质的质变。财产关系逐渐变模糊，将来可能导致财产关系的逐渐消失，如果人想要在现代技术革命中保证社会的发展，那么人就必须冲破“经济人”的狭隘外壳，成为一个真正理性的人，即一个以人类发展的文化需要为准则的“智慧人”。

关键词：物质、思想、技术、人、认知、智慧经济、文化、产品、智慧人。

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Introduction

This article is devoted to *reflections on problems* that, in our opinion, deserve special attention. These are the problems of the *transformation of our civilization* and the prospects that await us in connection therewith.

The main *transformation*, no matter what sphere it covers (technology, economic relations, politics), is the transformation of **human**. The driving *motive* here is the *need to satisfy growing human needs* – to satisfy them as and when they are *recognized* and depending on *objective* and *subjective prerequisites and possibilities*.

Let us emphasize two important things: 1 – understanding of one’s needs, their *recognition*; 2 – recognition of *true* needs.

Why are these things especially important? Because God endowed humans with mind so that they could: a) self-discover (a human has such an *opportunity*) and thus – multiply needs; b) develop the *need for knowledge*. This is what allows them to develop, to create tools to satisfy material and spiritual needs that arise as the need for knowledge and spiritual development progresses.

Satisfaction of needs leads to the emergence of certain constructs – technical, economic, social and political. These constructs reflecting contradictory interests are also contradictory. In society, too, *contradictions* arise: on the one hand, there are the particular needs of individuals, which are objectively in *conflict* with each other to a greater or lesser degree (from zero to complete antagonism), and on the other hand, there are single, common, *unifying* interests of this or that community, more or less recognized by distinct individuals. Within the framework of the resolution of this contradiction (well-known from classical philosophy) in the course of social development, institutions of harmonization of interests *objectively* arise. This is a well-known approach to understanding the historical path of society development.

However, there is one very important aspect. *Today, the problem of harmonizing private and public interests is particularly relevant* due to the aggravation of both global and national problems. Let us reflect on the possibilities of its solution in the context of a more fundamental and profound examination. This is the question of to *what extent* and *how* goes the process of transition from the “*economic*” human, maximizing the utilitarian needs, to the “*cultural*” human (such a term is used by A. V. Buzgalin [Buzgalin, Kolganov, 2018, p. 229]), to the noohuman (this is our term), who develops a spiritual world. From a human maximizing private economic benefit as a priority of existence, to a human aimed at creating a world where other values prevail, a world of a different, more humanistic culture. This is how we pose the question. Why?

Materials and methods

Today this problem has ceased to be exclusively a subject of theoretical, abstract thinking. It has turned into a problem of *a practical choice*, and not only the moral, but also economic and political – and namely in practical terms: who to work as? where and for what to live? to orient one's life, the lives of relatives and friends to the goals of development of the human community as a whole, or to limit oneself exclusively to personal interests – accumulation of wealth, power, etc.?

One could argue: all people are egoistic; they always act in their personal interests. And they agree with this. But a person, having an “ego”-focused need for the immeasurable acquisition of material wealth and not being burdened with morality, is meant to be a robber. The other hypothetical person, on the contrary, gives, satisfying the “ego”, but does so following the need to sow “reasonable, good, eternal” [Nekrasov, 1982, p.180]). One kills, the other defends, and not only oneself and family. In the language of political economy this distinction is formulated as a *contradiction and unity of private and public interests*; in the language of noonomy it is explained as a contradiction exclusively of *interpersonal* nature, since any “ego”-interest is still the interest of the “ego”; the other thing is *what* is behind this “ego”. And this depends on the individual's awareness and acceptance of the norms of the *noovalue criterion base of existence*. In addition, here we should deeply analyze to what extent the interests of the “ego” (individual for a particular person) can reflect the “ego”-interests of other individuals, for only from *some point* and *in some unknown proportion* can they become “common” – public from the point of view of political economy discourse.

Here we move to the language of socio-economic theory. Indeed, today, in the *space of the economy*, a human lives and acts in the world of the *market*, is an actor of the capitalist system: a hired worker, a freelancer, a capital owner, or first, second and third at the same time.

Changes in the essence of the human in a society that remains predominantly *economic* are closely linked to *changes in the market and capital*. But before turning to this topic, let us clarify a number of points.

First. There is a long dispute in the scientific community about whether the market is primarily a socially neutral mechanism of exchange, an objectively necessary tool that ensures the progress of social division of labor, technology, etc., or whether the market is a form of special social relations that generate alienation of people, fetishization of goods and money, inequality, turning some people into hired workers and others into owners of capital. This is the question of whether the market brings people various “evils” – social phenomena with an obvious negative connotation. Professor Alexander Buzgalin belongs to the second group of researchers and constantly criticizes the market [Buzgalin, 2018]. We are closer to the first position, which more accurately reflects the real relations.

If we agree with the most reasonable view of the market as a *relatively* (relatively!) socially neutral mechanism, then the main problem of the future can be emphasized, on the one hand, the future of *human* and, on the other hand, of *capital*, considering the market as a certain tool, which at some stage is necessary, and at some other stage will probably cease to be necessary – at least in its present form.

Taking this approach, we can conclude that the market will remain not the only, but an important way of connecting people and firms in the economy, that it has served and will continue to serve as a connecting block, an element, a space *between human and capital*, but the changes in

the relations denoted by the category “capital” will indeed take place. And they have been already taking place, these profound changes.

However (and this is the **second point**), in order to understand their nature, we must address transformations in the basics of the basics – in technology.

Results and discussion

In social sciences, there is a widespread view that the driver of transformations of human and society is the development of technology, technological progress, scientific-technical progress (we will not argue about the wording). Indeed, STP is what the progress of mankind stands on. And that of human! We are sometimes accused of technological determinism, but we do not render absolute the role of technology at all. It is important to realize that technology, in the language of classical philosophy, is just a *reflection*. Of what? Reflection of *knowledge* – to the extent that human: a) comprehends it and b) learns to apply it to satisfy the needs *through social production*. Technology is *knowledge implemented in the process of social production*. Consequently, it is *knowledge, and not scientific-technical progress as such*, that is the deep driver of human, society and civilization development. And the tool for the progress of knowledge is “cognition” (let us recall our thesis about the role of need in the recognition of needs).

Creating new technology with the help of a counting machine, microscope, we are always “improving” the main tool of cognition – our own brain. Here it is very important to realize that *technology* is also a *tool*. So, on the one hand, it is a way, a tool to satisfy needs, and not only material ones; on the other hand, it is an implementation of the knowledge obtained in the process of cognition. And, at the same time, a *tool for cognition*. This is the trick of the technological process and that of technology.

We often, willingly or unwillingly, assume that there is a basic influence of the material on the process of awareness – on the ideal. And rightly so: “existence” to a certain extent “determines consciousness”. Let us not refute K. Marx, we will only note that we added “to a certain extent” for some reason. Let us explain why. We should not forget that there is a *reverse influence*. Everything in the world is dual. Using *ideal*, new knowledge, we implement it in technology or somewhere else and get new *material* phenomena. This is fundamentally substantiated by a professor from Canada A. Freeman in his works on “mental objects” [Freeman, 2015].

It is clear to us, but we go further. The theory of noonomy shows that from a certain moment *knowledge rather than material* becomes the *main factor of production* (creation of material objects!). “The role of the main resource and the main source of development goes to *knowledge*, to scientific cognition of the surrounding world by human” [Bodrunov, 2019, p. 9]. Hence – an extremely important fundamental conclusion: *the further scientific and technological progress advances, the more the reverse influence of the ideal on the material grows*.

This is an important point, perhaps crucial to understanding the fate of civilization! This is where, in particular, all the catastrophic predictions about the threats posed by artificial intelligence, the atomic bomb, viruses, etc., come from. Material things invented by us in the mental, ideal world and realized through technology can so transform this world that not a stone would be left standing.

Further, the process of reverse influence of the ideal on the material is constantly *intensifying*. Why? Because there is more and more knowledge discovered by mankind, and its application becomes more and more diverse. The reason is the very process of cognition, its nature, as well

as the nature of knowledge. Increasing and expanding, with expanding our consciousness, the process of cognition generates new needs in cognition and implementation of the results of this cognition in new technologies. It lures us somewhere further, and that may lead to both positive and negative consequences. Under what conditions? How can it happen? Our answer: If we don't put this process under "noo"-control. How do we do that?

Let's take a closer look at the details. If there is such a process, the question arises: yesterday, conditionally speaking, the material influenced the ideal, say, in the proportion of 70 to 30, and today, on the contrary, the ideal influences the material more strongly. And at what point did a certain "balance" (50/50) arise? This is an important question.

And there is an answer to it: during the period of the economy's transition to noonomy. This answer was given by us at seminars, in our books and articles published in many languages of the world. So, this conclusion is justified and tested.

The *coincidence* of the transition to noonomy, a qualitatively new way of satisfying human needs, on the one hand, and the achievement of a state when the material influences the ideal as powerfully as the ideal (in particular, knowledge) influences the material, is not *accidental*.

It is especially important that by this point the society has utilized for its development some institutions that do not operate *spontaneously* and within the framework of the "zoo" paradigm of rigid proneness to conflict and competition [Bodrunov, 2018], as under the domination of market fundamentalism, but *consciously* and *in solidarity*, realizing the true needs of a person who has moved from the "zoo-ego" to the "noo-ego" and the society in which *noo-values prevail*.

In this way, we come close to more specific issues of *transformation of economic relations* – and thus *of human*. Technological progress becomes the material basis of these transformations. As it deploys, humanity reaches a stage in its development when the conscious impact of human on production, economy, social and other material processes become at least equal to the basic impact of social existence on social consciousness. This state arises when the progress of knowledge implemented in technology becomes so powerful that it determines further development by at least 50 %. In this case, technology first of all accelerates the process of discovery of new knowledge – the process of cognition.

We are facing not just the acceleration of STP, but "acceleration of acceleration", a kind of second derivative of this process. Knowledge is transforming more and more intensively (also mediated by the progress of technology) into new knowledge and thus generating "acceleration of acceleration". The transition to a new quality of technological development is underway – let us call it *the seventh technological mode*. Let us recall that the theory of technological modes of Russian academician S. Y. Glaziev proposes the gradation of technologies into six modes [Glaziev, 2018] of different types, in terms of the theory of noonomy – they have different degree of depth of *knowledge intensity*. We are talking about a new, qualitatively different, VII technological mode [Bodrunov, Glaziev, 2023, p. 200-207], the basis of which is "acceleration of STP acceleration", while knowledge becomes the *basic factor of production* and *the main component of the product* in the industrial product of *knowledge-intensive production* of this mode, and we call the product itself *knowledge-intensive* [Bodrunov, 2018, p. 70]. Conventionally speaking, knowledge becomes the prevailing component in the social product! And it is here that the "border of equilibrium" passes, it is at this stage that the *bifurcation* of civilizational development occurs: either progressive *transformation of human and economic relations*, in which the latter give way to the *post-economic way of needs satisfaction*, or catastrophic consequences on global scale.

Before talking about the first, I would like to note that we understand the global nature of transformations not as a continuation (with some modernization) of the neoliberal model of TNCs' dominance of the countries of the "center" over the periphery, as indicated in the world-system analysis made by I. Wallerstein, D. Arrighi, A. G. Frank and S. Amin [Amin, 1973; Arrighi, 1994; Frank, 1979; Wallerstein, 1982]. This type of globalization is in deep crisis [Simonyan, 2018]. "...the West (for example, in the form of the transatlantic community) can no longer dictate its system of perceptions and values as universal. That is why we are talking about the *crisis of West-centric globalization*" [Kazantsev, Sergeev, 2020, p. 55].

It is about *other things*: about *the unity of humanity as a whole and the objective conjugacy of all changes in time and space*. This is not a formal "sameness", but a *profound coincidence, interconnectedness of technological, economic, social and cultural transformations*.

Let us first consider the changes in *economic* relations caused by the progress of technology. It has been emphasized above: if the *market*, which links people in the process of exchange, *remains a relative invariant, then human and capital change fundamentally*.

So, capital is *property*, and property is the basic, fundamental characteristic of the *economic system*. And it is here that we can state the beginning of profound changes in the economy.

We have already noted [Bodrunov, 2021] that in recent decades the process of *property diffusion* not only continues, but also sharply *accelerates* ("in parallel" to the acceleration of STP), acquires new forms associated with the withdrawal from individual private property and the development of various forms of its *joint use in the processes of production and consumption*. These are various forms of co-working, co-living, sharing (the most famous example is carsharing), etc. [Laurenti, Singh, Cotrim et al, 2019; Mosmann 2019; Torrent-Sellens, 2020].

There are other manifestations of property diffusion, such as the process of *ownership splitting*. Known since the last century and widely researched by scholars of the new institutional direction, bundle set of property rights is becoming more and more diverse: property rights are split into more and more fractional economic-legal "ingredients". The latter, in turn, are also fragmented, distributed among various private economic actors (natural and legal persons, foundations, etc.)¹.

While mono-ownership used to be typical, today there is a process of blurring of mono-rights between persons who have different elements of ownership of the same object. For example, one actor uses the object in the process of production or consumption (for example, renting an apartment), possessing some "branches" of the property right associated with this use (in many cases, the tenant of an apartment in a private house cannot be evicted even if they do not pay for the housing). The second actor manages. The third actor receives some part of the income, for example, as a landlord; however, even here it is possible to split ownership rights in cases of sub-rent, full or partial transfer of income rights, etc. The fourth actor (the borrower who gave the owner a loan to buy the house against its collateral) – receives income and has additional rights associated with the collateral. Another bundle of rights to the same house and its operation belongs to the state. And – to society as a whole, which is represented by the state. And so on. Thus, there is a *diffusion*, splitting, "blurring" of property, and all this has both economic and legal aspects, and (more importantly) a value aspect, because property relations are also in the sphere of human *values*. As a result, many different interests of different actors of economic society emerge. And the process is growing...

¹ *Symposium: Property: A Bundle of Rights?* (2011) *Econ Journal Watch: Scholarly Comments on Academic Economics*, Volume 8, Issue 3.

But property is the *basis* of economic society. Its diffusion as an institution shows that economic society (society with an economic way of satisfying needs) is becoming a thing of the past. At the same time, the need to satisfy needs remains! Are there other options for the satisfaction of this need? Are they visible?

Yes. And first of all – in the main component. The basic component of future production is knowledge. They will determine the type of future product and its application. But knowledge is intangible. No matter how we fix “intellectual property rights”, by its nature it “diffuses” the fastest. And this most important aspect – the *accelerating diffusion of the basic factor of production* of the knowledge-intensive product of the 7th mode – will lead to the development of a new type of satisfaction of needs – *non-economic* in its essence, since it will be based on a factor that is *not reduced to property* – the phenomenon of *knowledge*.

We are witnessing the birth of a different, *post-economic*, way of satisfying needs. The impact of this process on the economy undermines its basis – property! But this process cannot but affect the human as well. Let us return to humans, to their transformation.

Let us make a small digression. When I attended a Soviet school as a child, there was a poster “The Moral Code of the Builder of Communism” in the corridor. Being a very diligent student, I read it carefully... And next to the school there was a church which my neighbor, an old lady, visited. I was surprised when I asked her about what they were talking about there, she answered in such a way that I understood – it was about the same thing that was written in the “Moral code”.

This is an example of how true values are eternal, they are given to us as “special knowledge”. We keep coming back to them. And in the process of society’s objective “withdrawal” from the economy, human *will return to true knowledge*, to the nooessence, expanding this sphere of cognition, *influencing* both the processes of society’s *socialization* and its *noo-development*, and the *material basis* of the existence – the type and method of satisfying the needs. The “economic human” will be replaced by a “cultural human”. Let us emphasize – a person who does not “stop” STP, production, nooproduct, but gives them a *new acceleration*. We put this emphasis for some reason.

One more digression. Almost all of us have read the exciting novel “Airport” by Canadian writer Arthur Hailey [Hailey, 1971]. This is not just a sharp detective story, but a real “production novel”. It shows in great detail the production processes, the work of a complex technological firm, devices, technology, etc. We find ourselves in the buzzing atmosphere of what STP has given us. At the same time, the novel is about people, about a human immersed in the turbulent river of technological progress, about a human who has a difficult (which becomes even more difficult) life there.

It seemed like a paradox at that time: STP, designed to make our lives easier, makes them much more difficult and even puts human in front of a deadly choice. Today we already know for sure that progress can lead to many problems. Hailey’s novel literally turned my worldview upside down as a 30-year-old pure “science guy”: it became clear that the *main problems of technological development*, STP are not in the creation of new opportunities, they are “outside” the traditional formulation of the question! With the development of STP, with the transition to the stage of STR, technology becomes so powerful that it begins to destroy its fathers and owners. Let us recall Georges-Jacques Danton, one of the leaders of the French Revolution at the end of the 18th century, to whom historical tradition attributes the words spoken on the platform

of the guillotine: “the revolution devours its children.”¹ Let us add – *any* revolution, including technological revolution.

What is the conclusion to be drawn from it? They are several.

The first. It is impossible to stop technological progress, but it can and must be put under *noocontrol*. For this purpose, the human *must change*. Only the human is able to curb STP, this flow of knowledge implemented in technology, and direct it to true creation.

How? In Russia there is a saying: “One fire drives out another fire”. Or Firefighters extinguish a powerful fire – not with water, but with fire, making a “back fire”. The human must *oppose the flow of technological knowledge to the flow of knowledge from the sphere of culture*, the “culture of life” – in the broadest sense. Only by *changing consciousness* in this way can the human resolve this collision.

The second. It is paradoxical, but only at first glance. Only a changed human can give further impetus to *technological knowledge*. The human will not be able to endlessly drive the technological evolution of the 21st and subsequent centuries, remaining a “troglodyte” at the level of the 20th century. *To further increase of the potential to fulfill the needs through technological progress*, the human must change. The human must become different in order to work with a higher level of knowledge.

The third. It is about the *primacy of the ideal*. Only through the *comprehension of new knowledge* can a person *create*, including in the sphere of STP, culture, etc. The *ideal* knowledge acts as the *beginning* of the process culminating in the creation of *material* objects to meet growing needs. At the same time, it is impossible to “create knowledge”, it exists objectively – outside of us and independent of us; we can only discover it – quantum by quantum, step by step, “realize” it, including with the help of material objects. And for this purpose the human *should be more and more “knowledge-intensive”*, expanding consciousness – the receptacle of the ideal.

The fourth. It is about society. In the 1960s, there was a heated debate in the world – what is “more important” for the development of society: “physics” or “lyricism”? [Bogdanov, 2011]. The “physics” which prioritized technical progress won. And today the lag of “lyricism”, which is engaged in sacred knowledge (empathy, kindness, social comfort, problems of culture and spiritual development, values, social narratives, and much more), has led to the “devouring” of our existence by the “physics of STP”. It is time for the “lyricism”, our whole society, to catch up! For without alignment, *synchronization* of society’s awareness of the full range of problems of the current transition, including such seemingly opposite, but in reality, *complementary spheres of knowledge*, we run the risk of sinking the ship of our civilization.

Let us return to the *relationship between the human, the individual, and society*. Obviously, all these conclusions strictly dictate the *requirement of socialization of society*, which is both a condition and a consequence of STP and the development of property diffusion processes. It is through *diffusion of property* that one of the ways of transforming the economy into noonomy, economic society into noo-society, “economic” human into a true homo sapiens, noo homo sapiens, or, in short, into noo-homo, noo-man, is formed.

¹ In the interest of historical accuracy, it should be pointed out that these words are also attributed to the Dantonist Camille Demoulin and the Girondist Pierre Vergneau. However, documenting the first appearance of such a phrase are the notes of Joachim Villat, a former juror at the Revolutionary Tribunal of Paris, written by him in prison and published in 1794: “La révolution, comme Saturne, eut bientôt dévoré ses plus tendres enfants” (The Revolution, like Saturn, soon devoured its most tender children). This phrase is written by him in connection with the arrest of Danton and Demoulin [Vilate, 1794, p. 27].

And this is only one aspect of the *path* (let us emphasize the concept of *path*; it is not accidental – in the Chinese mentality and philosophical understanding of the world, the word *dao* is used as a synonym for a given, chosen, thought out, and then – consistently and persistently implemented *strategy*. And we have a lot to learn from China in the implementation of long-term strategies). Other components of the path to noonomy are *technological progress* (the basis of everything!), in its material aspect and the processes of *socialization* generated by it, the growing role of *solidarity* in human relations (which I would like to note the following: the progress of solidarity relations *transforms competition*, and hence the *market*, so it is not by chance that we emphasized the *relative* invariance of the market to global transformations).

The four components of the *path* to noonomy (STP, diffusion of property, socialization, solidarity) form a kind of *quadriga*, which, like Apollo's quadriga, carries us into the future [Bodrunov, 2020, p. 16]. And the fact that this future is coming is undoubted. But: what kind of future? What are its invariants? What obstacles and obstacles await us on this path?

These are the questions, the truly *global* problems within the process of *global transformation* of society, which the world scientific community faces.

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Information about the author

Sergey D. Bodrunov

Dr. Sc. (Econ.), Professor, Corresponding Member of the Russian Academy of Sciences, Director of the S.Y. Witte Institute for New Industrial Development (INID), President of the Commission of the Union of Economists, President of the Free Economic Society of Russia, (Bol'shaya Moneta Str. 16, St. Petersburg, 197101, Russia)
E-mail: inir@inir.ru