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THEORY OF NOONOMY AS AN INTERDISCIPLINARY THEORETICAL PLATFORM¹

Abstract: the article examines the possibilities of the theory of noonomy as a theoretical and methodological basis for conducting complex interdisciplinary research. These opportunities are created by the nature of the theory itself, as interdisciplinary, based on the interaction of solving research problems in different fields, and research in one area forms the basis for research in other areas. It shows a number of directions of this kind of research in technological, economic, axiological, cultural, etc., spheres, as well as the interdependence of conclusions, which is formed by relying on the theory of noonomy. This provides the theory of noonomy with both a serious prognostic potential in relation to the prospects for the development of human civilization, and the possibility of developing practical recommendations on the basis of the received scientific basis to overcome dead ends and forks of the threatening civilizational crisis.

Keywords: noonomy, interdisciplinary research, technology, knowledge, culture, economics, creativity, solidarity.

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智慧经济理论是跨学科的理论纲领

摘要: 文章研究了智慧经济学作为跨学科综合研究的理论基础和方法论基础的可行性问题。这种可行性源于该理论本身的跨学科特点。跨学科特点形成的基础是不同领域的研究课题的相互影响, 并且一个领域的研究成果可以作为另一个领域研究的基础。文章揭示了存在大量这类研究的一系列领域, 诸如经济学、价值论、文化及其它领域, 以及研究结论之间的基于智慧经济学理论的相互联系。这使智慧经济理论具备了对人类文明发展前景的重要预报以及在科学研究基础上给出实践导向的作用, 能够帮助人们克服人类文明发展面临的进入死胡同或错误岔路的危机。

关键词: 智慧经济学、跨学科研究、技术、知识、文化、经济、创造、团结主义。

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Introduction

The theory of noonomy is one of the currently extremely rare theoretical concepts, which, firstly, are of a historical nature (i.e., they address the development of their subject in historical terms by highlighting its specifics at various historical stages). It involves application of the method of materialistic understanding of history to the contemporary era, demonstrating the emerging civilizational forks. Secondly, the theory of noonomy not only has a prognostic potential, but also, in its content, is aimed at generating deep forecasts for the development of civilization. Thirdly, it is interdisciplinary in nature, starting from the study of technological development patterns and the substance of human activity, through the study of social and economic relations determined by this development, the evolution of forms of ownership, human wants, the role of knowledge and culture, the social structure, the role and functions of the state, up to socio-philosophical and ideological findings. It is this last feature of the theory of noonomy that will primarily be the field of special focus in this article.

All three distinctive features of the theory of noonomy as specified above make it possible to define it also as a methodological basis for conducting application-specific research in various areas. Another task of the article is to show the potential of noonomy in this capacity.

Materials and Methods

The theory of noonomy is based on the study of development trends of productive forces in the society, including the physical environment of production and the structure of human activity. This represents its materialistic nature, while we should keep in mind that the opposition of the material and the ideal is absolute/unconditioned only as part of the fundamental philosophical question. Therefore, material and non-material production are closely intertwined and mutually penetrate each other, while retaining, however, the paramount importance of material production. As Cheng Enfu rightly noted, “all non-material labor involves the transformation of the material to a certain extent and is an activity to create an objective world” [Cheng Enfu, Gao Siyang, 2021, p. 194].

But at the same time, the conclusions reached by the theory of noonomy in themselves have a prognostic potential regarding the prospects for the development of human productive forces. They allow us to understand the objective trends in the evolution of processes and technology (including possible groundbreaking leaps in their development) and at the same time provide guidelines for the conscious choice of development dimension – a kind of «social contract» for improving processes and technology and for the appropriate education of a person.

The man-made world of the technosphere has not only improved our lives, but also created numerous risks and hazards associated with the abuse or irrational utilization of the power of modern technology. The risks associated with the destruction of the natural habitat as a result of human activities have been under the closest attention for decades. It was not until fairly recently that the humanity faced new technological hazards, one of which has been the use of artificial intelligence (AI).

A number of experts are sounding the alarm in this regard, up to proposals to ban any use of AI. Like any technology, AI can be dangerous if used in violation of certain regulations. Thus, the danger lies not in the AI technologies themselves, but in their misuse. But the risks are not at all in the “rebellion of machines”, but in something completely different. The independence of AI is extremely exaggerated and as viewed by the experts it acts as an outsized response to the rules and standards for the use of AI that have not yet been developed.

What are the actual risks associated with the use of AI?

The risk is the transfer of decision-making functions to self-learning bots. For example, even now bots are being delegated the functions of making decisions on issuing loans to bank customers or rejecting loans. However, such risks are only realized if the developers deliberately excluded the transparency of the procedures and algorithms applied for such decision-making, and did not provide for an appeal procedure in case of errors. The hazard is multiplied if bots are delegated with decision-making that can have irreversible effects. But in some cases it is rather a boon – say, for computer-aided supervision over production processes, where a person is not able to quickly follow everything.

State-of-the-art bots are able to provide search, selection, classification and processing of information, up to primary inferencing on this basis. These functions can also be dangerous if the bot's algorithm is a "black box". What information does the bot rely on and what information is excluded? Self-learning procedures do not provide a guarantee against errors, but only reduce their likelihood, depending on the qualifications of technicians who adjust the bot's self-learning process. As for transferring the inferencing function to bots based on the information they collect, then the "black box" principle is the most dangerous here. In this case, there are no guarantees against the substitution of the information analysis with just a "correct" selection of ready-made logical judgments already contained in the information being collected, based on the self-learning rules of the bot. The notorious case where the ChatGPT bot was used to prepare the graduation thesis is a vivid example.

In the most general terms, the hazard of AI bots lies in the temptation of a person to refuse the creative processing of information, relying only on the function of its selection and systematization delegated to the bot. Probably, the bot can discover the simplest relations between the collected data, for example, through the generation of a correlation model. But it is not able to independently define the initial conditions for such a model, nor can it interpret the results obtained. AI cannot use fuzzy logic procedures or the logic of contradictions (dialectics) – not every human is able to master these intelligent technologies since they are not algorithm-based.

Therefore, excessive reliance on the power of AI is similar to the rejection of independent walking in favor of movement in a wheelchair – a kind of voluntary «intellectual inactivation». This misuse of AI will narrow our cognitive abilities instead of expanding them. This is where the real hazard lies, but it lies in ourselves, not in AI technology. Consequently, the response to risks and threats must be sought, first of all, in the correct adjustment of our interests and wants. It is this direction of the search for responses to technological challenges that the theory of noonomy makes focus on. Just as the threats of disturbance of natural environment due to unrestrained consumption of natural resources in pursuit of economic (market) results can only be stopped by reconfiguring our wants and refusing to focus primarily on making profit, from the standpoint of the theory of noonomy, so the risks of using AI require us to think about why and for what purpose we use it.

The theory of noonomy allows us to correctly navigate not only technological trends and related risks, but also changes in the economic system of society under the influence of technological development. First of all, these changes are associated with the growing contradictions in the current model of the capitalist economy, which is most clearly manifested in the role of financial capital. Financial capital has long ceased to be just one of the isolated functional forms of capital; in a certain sense it has become a self-contained factor that has a huge and often destabilizing

effect on the entire capitalist economy. The focus on financial results that are not related to real-world production entails far from harmless consequences: diversion of investments and skilled labor resources from the real economy to the financial sector; generation of distorted economic signals for decision making in the real sector; erosion of any and all criteria for making economic decisions in favor of the pursuit of financial success. "...Growing financialization contributes to the accelerated movement of civilization towards a global crisis," concludes S. Bodrunov et al. [Bodrunov, Desai, Freeman, 2022, p. 166]. A way out in the short term can be found: by changing the priorities of decision-making towards achieving the results of real-world production and meeting real wants; by establishing control over the financial sector in order to turn it into a mechanism that renders services to production, and does not play a self-contained role. But it should be kept in mind that current financial capital is an objective product of the natural-historical evolution of the capitalist economy. Therefore, in the long run, the final solution lies in the plane of transition of production activity away from its subordination to economic criteria in general.

This tendency, noticed and formulated in the theory of noonomy – the tendency to liberate production activity from subordination to its economic goals – also manifests itself in the evolution of ownership relations. Such a phenomenon as ownership and use without a full set of ownership rights is making its way and is embodied in the sharing economy, the proportion of which is growing. Indeed, why should one burden oneself with property if one can satisfy one's wants even without this burden? Jeremy Rifkin noted the emergence of this trend quite a while ago in his book "The Age of Access" [Rifkin, 2000]. At the same time, the author of the work warns about the commercialization of all and every manifestation of human life: yes, people and companies are freed from property, but along with this, they have to pay for every step, for every vital function.

Simultaneously, and for quite some time now, other trends have also made their way: towards dilution of the bundle of ownership rights (diffusion of ownership), towards the transition from individual and narrow-group to collective forms of ownership. Finally, a rather broad segment of free access has emerged in the area of intellectual products, which has been causing debates about the balance between free access and protection of intellectual property rights for more than a decade [Lindberg, 2008; Vetter, 2009].

The role of market relations is also changing with the changing layout of present-day production. The principle of unrestricted competition and the entrepreneurial spirit supported by it, which made it possible to ensure the tremendous progress of the productive forces during the 19th and 20th centuries, no longer cope with the forces created by them. Not only the range of global problems (environmental crisis, militarism and weapons of mass destruction, moral degradation, etc.), but also the very interests of capitalist economy existence – the far it goes, the messier it gets – require the adjustment of market relations by non-market mechanisms, among which a prominent place is occupied by planning. The trend towards the use of planning in a market economy has been developing for more than two centuries, and especially significant experience in this area has been accumulated in the second half of the 20th century in Europe [Rosser J., Rosser M., 2004; Estrin, 1983], Japan [Moriguchi, 1980; Khlynov, 1997], and in newly industrialized countries [Kuznets, 1990; Balassa, 1990].

Another important trend at the confluence of technological trends and economic relations is the development of so-called trust technologies. The higher the level of trust in production, the lower the transaction costs associated with protection from the opportunistic behavior of

counterparties. In the long run, an increase in the level of trust and its consolidation in the form of a strong tradition will make it possible to eliminate such transaction costs in full. Obviously, technologies alone (like blockchain) are not sufficient for this purpose; it is also necessary to weaken that self-centered motivation created by the market economy that provokes opportunistic behavior.

Along with the evolution of technology, changes in the structure of labor and the nature of economic relations, the social structure of society is also evolving. Not only the composition and proportion of social classes and social groups are changing, but the criteria for social class division are also changing. Along with the growing role of knowledge in the production process and the growing share of creative functions in human activity, the importance of education and qualification factors as principles of social stratification is increasing. However, at the same time, the old dividing lines related to property ownership, capital accumulation and income level retain their significance – the hundreds of millions of substantially disadvantaged population prevent us from ignoring the relevance of this division. All the more urgent is the issue of overcoming such fault lines in human society, because failure to do this will raise difficulties in opening the path of development for each person, and the old class conflicts will be a drag on humanity. Clearly, intellectualization of labor and gradual replacement of man from the direct production process as a whole will raise the issue of interaction between society and the sphere of production in a different way. But with that goal in mind we must first overcome the problem of poverty and backwardness.

The development of modern technologies inspires fear for the future of not only the natural habitat, but also for the nature of man himself. Various forms of intervention in human nature (genetic engineering, gender correction, cyborgization, etc.) are ultimately dictated by individualistic egoistic motives – both among those who are thoughtlessly ready to undergo such intervention, and among those who turn it into business. No less dangerous than interference with the inherent nature of humans is the impact on their social nature. Here are both the technologies of political and ideological manipulation, and the manipulation of human wants, and the imposition of false, simulative wants – from focusing on a reckless increase in consumption to tricking people with the illusion of achieving “personal growth” without any of their own efforts and widespread emergence of various sects based on sophisticated psychological abuse.

The theory of noonomy emphasizes that at present civil society is at one of the most important crossroads in its development, and the future of human civilization depends on the chosen path at this fork.

Continuously added complexity of technologies that can only be developed with reliance on deep fundamental and applied research, and can only be applied with a high level of personnel qualification, determines the increasing role of knowledge in material production. Sometimes this proposition is overemphasized, taking it to the point of absurdity (by some supporters of the concepts of “post-industrial society”) and putting forward the idea that knowledge sidelines the material factors of production and almost replaces them. However, modern knowledge-intensive technologies cannot exist without those physical production assets in which human knowledge is implemented.

The latter is clearly substantiated by the fact that the production efficiency and the level of labor productivity, with an approximately equal quality of work force, depend to a critical extent on the capital-labor ratio of production. The Russian economy may be said to bump into this prob-

lem. The low level of capital-labor ratio and low rates of technical modernization of production result in inability of existing good intellectual potential and creative abilities of the persons engaged to compensate for weakness in terms of material production factors. The Russian economy needs a wide-scale replacement of obsolete and non-competitive equipment. At the same time, it is necessary to raise the capital-labor ratio in Russian industry at least three to four times¹, since this leads to a significant gap in labor productivity when compared with the economies of developed countries [Zaitsev, 2016, p. 84-86]. Moreover, knowledge implementation in the production assets in Russia dramatically lags behind its state in Western countries: investments in the production assets are ahead of our investments in research and development by 28.6 times, and in developed countries – no more than 6 times. As a result, the share of industrial value added in Russia's GDP is more than two times behind its value in the United States, Germany, and France, and the share of high-tech exports in GDP is 7–12 times lower [Gasarov, 2014]. Whereby, there are 4.7 workers per machine tool in Russian mechanical engineering, and 0.8 in the EU countries, and labor productivity is six times lower than in the EU².

However, the theory of noonomy does not reduce the progress of human activity solely to technological knowledge, both learned by man and implemented in the production assets. Along with changes in technology, the structure of human activity and the growth of labor productivity based thereon and the enhancement of opportunities to meet human wants, the problem of sustainable consumption criteria arises. The scale of human production activity has become such that, as noted above, it entails the depletion of resources of our planet and the progressive destruction of the habitat. Therefore, an unlimited increase in consumption becomes disastrous for the very existence of mankind, especially if the consumption race is spurred on by manipulating the consumer for the sake of increased sales through the formation of delusive, simulative wants.

But how do we put this race to an end? Historical experience has shown that introduction of external coercive restrictions will not be successful. This means that these restrictions must be internal in nature and act as reasonable self-imposed limitations. What can encourage a person to voluntarily change the structure and scope of their wants? One of these factors is knowledge. A person who not only possesses knowledge, but also considers knowledge as a value essential for usual day-to-day activities, organizes its consumption in a different way. Consumption ceases to be the goal and reason for existence. This shift in a person's consciousness, in turn, depends on the cultural practices and values the person has learned.

The wants and consumption patterns of a person engaged in creative activities are changing. The amount of consumption, the race to meet even more sophisticated wants imposed by the market, cease to be an end in itself for such person. On the contrary, consumption acts as a means of providing conditions for creative activity.

The growing role and importance of creative activity in the modern economy resulted in the creation of the “creative class” concept. However, the focus of attention of sociologists engaged in this topic has often turned out to be clearly shifted in the wrong direction. Well-known studies

¹ Digitalization and IoT will Allow Mechanical Engineering to Make a Breakthrough (2018). Corporate Information Systems, Industrial Automation, TOP News. August 20, 2018. URL: <https://www.connect-wit.ru/j-son-partners-consulting-ekonomicheskie-effekty-ot-tsifrovizatsii-i-vnedreniya-iot-v-mashinostroenii-v-rossii.html> (Accessed: January 20, 2022).

² Economic Effects of Digitalization and the Introduction of IoT in Mechanical Engineering in Russia (2018). Analytical Report, by J'son & Partners Consulting, August 17, 2018. URL: https://json.tv/ict_telecom_analytics_view/ekonomicheskie-effekty-ot-tsifrovizatsii-i-vnedreniya-iot-v-mashinostroenii-v-rossii-20180817013305 (Accessed: January 3, 2021).

by Richard Florida offer some criteria for affiliation with creative class that are very vague and far from the essence of the studied phenomenon: lifestyle, hobbies and other casual behavioral attributes [Florida, 2002; 2005].

For Richard Florida and many of his followers, the creative class predominantly consists of representatives of professions that primarily serve the interests of speculative financial capital, ensure the production of simulative goods and the manipulation of public opinion. This was noted even by his teacher, Peter Marcuse [Marcuse, 2003, p. 40-41; Peck, 2005].

This use of the potential of creative labor – often not for development purposes, but to market illusive goods, simulacrums only intended to draw money from the pockets of consumers – is a real problem for the modern economy. When a significant part of the creative potential is spent on such activities that contribute little to the development of real production and the satisfaction of rational wants, and sometimes cause harm to people, then this implies a de facto deduction from our actual production potentialities and a waste of human potential. Should we proudly look at the achievements in providing profiteering in the financial market [Buzgalin, Kolganov, 2019, p. 21-23]?

It is only possible to get rid of such a counterproductive orientation of human potential by refusing to subordinate creative activity to the criteria of economic rationality. Only this can be the basis for transformation of a “homo economicus” into a “homo culturalis”. And this, in turn, requires a transition from economy to noonomy [Bodrunov, 2018, p. 249-250].

Findings and Discussion

Thus, how can we summarize the solution to the problem of sustainable use of the achievements of new technological wave, and any new technologies that have already emerged or are destined to emerge in the future (including AI technologies covered by the author in more detail)? The theory of noonomy sees a way out in abandoning economic rationality in resolving the problems in the development of production and consumption. The new rationality, which, in contrast to growth of financial performance, ensures the solution of real problems of human life and development, requires new criteria.

These criteria are not selected recklessly, they are not imposed on society arbitrarily, and do not represent some kind of moralizing like “for all the good things, and against all the bad things.” The theory of noonomy focuses on the objectively increased role of cognition and knowledge in the production process, on the trend to transform “homo industrialis” into “homo eruditus”. And this knowledge makes it possible to form a new rationality, that is, a rationality based on knowledge, on understanding the desired results and consequences of decisions made in the area of production and consumption. But knowledge by itself is still not sufficient to establish a new rationality, since the human mind can use its ability to comprehend reality not necessarily for good. While the focus on good intentions and results is achieved through a shift from economic interests to cultural values. It is the level of culture that becomes a key factor for the power of knowledge, combined with cultural imperatives, to form the desired new rationality, and for “homo economicus” to be replaced by “homo eruditus” and “homo culturalis”.

Thus, there will be a transition from an economic society to a post-economic one, where the place of economy will be taken by noonomy (“the sphere of reasonable order”, as translated from Greek). According to Bodrunov’s definition, “... noonomy is a way to meet the wants in a society

where there is an “insight”; where there is no relation to production or production relations; where there is no relation to property and ownership relations; where there is no economy and the economy is impossible” [Bodrunov, 2019, p. 16].

Along with this transition, the structure of society also changes. The growing role of knowledge in material production is developing along with the gradual abandonment of man’s direct participation in the production process. Thus, human society is separated from the sphere of production (as well as from the technosphere in general, which becomes the sphere of autonomous technical entities), and social relations, for the most part, cease to be relations of production. Society and production are becoming relatively isolated spheres of civilizational existence, but human society retains the functions of control and governance of production development. “At the noophase, nooproduction, being separated from a person and from society, remains subordinate to society in terms of its goals and objectives,” is emphasized in “Noonomy” [Bodrunov, 2018, p. 180].

Cultural evolution also corresponds to this development. Moral imperatives and the ideological envelope in which they are enclosed are changing. Since the structure of human wants is undergoing a change and the pursuit of accumulation of material wealth recedes into insignificance, the goals of human development associated with the growing importance of creative activity come to the fore. This, in turn, leads to the formation of new ideological paradigms. The “war of all against all” based on the competition for resources that ensure the increase in consumption, is being replaced by the ideology of cooperation and solidarity in the joint efforts to address specific tasks to ensure decent life and human development. The ideology of solidarism, which once acted as wishful thinking or even a hypocritical disguise for social class strife, thus acquires an objective basis for its spread and consolidation.

A man is transformed, first of all, into a creative person, and not “human capital”, not into a self-investment project for the sake of better self-commercialization. The “creative class”, today mostly focused on serving the interests of financial tycoons – both directly in the financial market, and in the area of bureaucratic management, and in the area of manipulating the market and people’s wants, and in the area of ideological manipulation – will become fully a class of creative individuals serving the shared cause and the common good.

Summary

The article gives only a cursory outline of those areas of research which can rely on the interdisciplinary potential of the theory of noonomy. But even this brief description shows the enormous possibilities that noonomy opens up as a complex, comprehensive theory that includes interaction and entwinement of various levels and subjects of study, so that the study of one subject creates the basis for understanding the patterns of another. Being a strictly materialistic theory, noonomy nevertheless shows the relation between the development of material surroundings of human life and the development of spiritual life, which, in turn, has a huge impact on purely material processes. Noonomy reveals actual contradictions and impasses that threaten the existence of human civilization, and in the search for ways out of these contradictions is not limited to slogans and wishful thinking, but reveals the options for moving forward towards a better future in the objective trends of the present. At the same time, noonomy opens up the horizons of the future, making a comprehensive forecast for the development of human civilization.

References

- Bodrunov S.D. (2018). *Noonomy*. Moscow, Cultural Revolution Publ., 432 p. (In Russ.).
- Bodrunov S.D. (2019). Noonomy: Ontological Theses. *Economic Revival of Russia*. No. 4 (62), pp. 6-18 (In Russ.).
- Bodrunov S.D. (2022). Formation and Resolution of the Civilizational Crisis: Noonomy. In: *Beyond the Global Crisis: Noonomy, Creativity, Geopolitical Economy*. Saint Petersburg, S.Y. Witte INID Publ., pp. 19-168. (In Russ.).
- Buzgalin A.V., Kolganov A.I. (2019). Social Structure Transformations of Late Capitalism: from Proletariat and Bourgeoisie towards Precariat and Creative Class? *Sociological Studies*. No. 1. Pp. 18-28.
- Gasanov M.A. (2014). Institutional Traps of the Welfare Economy in Russia and Prospects for New Industrialization. *Modern Problems of Science and Education*. No. 5. URL: <http://www.science-education.ru/ru/article/view?id=14611> (Accessed: January 3, 2021) (In Russ.).
- Zaitsev A. (2016). Cross-country Differences in Labor Productivity: the Role of Capital, the Level of Technology and Natural Rent. *Economic Issues*. No. 9 (In Russ.).
- Khlynov V. (1997). National Planning of a Market Economy: The Experience of Japan. *International Journal of Management Theory and Practice*. No. 2 (In Russ.).
- Digitalization and IoT will Allow Mechanical Engineering to Make a Breakthrough (2018). *Connect: Corporate Information Systems, Industrial Automation, TOP News*. August 20, 2018. URL: <https://www.connect-wit.ru/j-son-partners-consulting-ekonomicheskije-effekty-ot-tsi-frovizatsii-i-vnedreniya-iot-v-mashinostroenii-v-rossii.html> (Accessed: January 20, 2022) (In Russ.).
- Economic Effects of Digitalization and the Introduction of IoT in Mechanical Engineering in Russia (2018). Analytical Report. *J'son & Partners Consulting*, August 17, 2018. URL: https://json.tv/ict_telecom_analytics_view/ekonomicheskije-effekty-ot-tsifrovizatsii-i-vnedreniya-iot-v-mashinostroenii-v-rossii-20180817013305 (Accessed: January 3, 2021) (In Russ.).
- Cheng Enfu, Gao Enfu (2021). Intellectual Economy as a Form of Noonomy and its Socio-Economic Consequences. In: *Anthology of Noonomy: The Fourth Technological Revolution and its Economic, Social and Humanitarian Consequences*. Saint Petersburg, INID Publ., pp. 178-203 (In Russ.).
- Balassa B. (1990). Indicative planning in developing countries. *Journal of Comparative Economics*. Vol. 14, Issue 4. P. 560-574.
- Estrin S. (1983). *French Planning in Theory and Practice*. London; Boston: George Allen & Unwin. VIII, 215 p.
- Florida R. (2002). *The Rise of the Creative Class: And How It's Transforming Work, Leisure and Everyday Life*. New York: Basic Books.
- Florida R. (2005). *The Flight of the Creative Class. The New Global Competition for Talent*. New York: Harper Business, HarperCollins.
- Kuznets P. (1990). Indicative planning in Korea. *Journal of Comparative Economics*. Vol. 14, Issue 4. P. 657-676.
- Lindberg V. (2008). *Intellectual Property and Open Source: A Practical Guide to Protecting Code*. Sebastopol, CA: O'Reilly Media, Inc. 386 p.
- Marcuse, P. (2003) Review of the rise of the Creative Class by Richard Florida. *Urban Land*. Vol. 62, No. 8. Pp. 40-41.

- Moriguchi Ch. (1980). Japan's Recent Experiences of Quantitative Economic Planning. *Revue économique*. Vol. 31, No. 5 (Le VIII^{ème} plan). P. 853-856.
- Peck J. (2005). Struggling with the Creative Class. *International Journal of Urban and Regional Research*. Volume 29, Issue 4, pp. 740-770.
- Rifkin J. (2000). *The Age of Access: The New Culture of Hypercapitalism, Where All of Life is a Paid-for Experience*. New York: Jeremy P. Tarcher/Putnam. 344 p.
- Rosser J.B., Rosser M.V. (2004). Whither Indicative Planning, the Case of France. *Comparative Economics in a Transforming World Economy*. Massachusetts: The MIT Press. P. 179-201.
- Vetter G.R. (2009). Commercial Free and Open Source Software: Knowledge Production, Hybrid Appropriability, and Patents. *Fordham Law Review*. Vol. 77. P. 2087-2141.

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