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The categories of «labour» and «labour process» in information economics

Abstract. Features of information product as of a product created practically without involvement of the usual means of production are considered in the article. On this basis it is noted that labour turns from a production factor into independent production.

The modern labour process as a process consists of several elements: reproduction of information, its increment, generation, broadcasting, redistribution and control of information streams. The economic essence of the specified elements is characterized. The author's structural and graphic model of information labour process is offered.

The causes of the crisis of analytical calculation methods (models) in the commodity economy under modern conditions are described. Attention is drawn to the increasing role of social information labour in view of the accruing domination of information product which exists in the form of the good things having character of individual value without getting a material form.

From a position of the distributive relations, basic changes are stated regarding the nature of distribution of added value. It is noted that attempts of fixing of the existing relations lead to violation of the basic structure of the capital and accelerate crisis processes in macroeconomic systems in a need consequence for expanded reproduction all of less considerable level of investments.

Author's vision of information work is a modern form of productive (labour, social) activity. Such work is understood as a work or activity which materializes in certain social practices and exists in information space. The price of such work, being formed in the course of social interaction, is essentially flexible. Such flexibility is caused by fluctuations of the price which do not submit to classical economic laws, and are in the plane of social actions and requirements. It is offered to consider information labour process as a socially oriented activity for the purpose of achievement of own (personal) interests relevant to social relations.

The model of information relations, which consists of a number of elements presented by different information streams (types of information), is offered. Indicators for definition of quantitative (economical and analytical) results of the information relations in the course of work are offered.

Keywords: Labour Process; Work; Information; Information process; Value; Distribution; Result

JEL Classification: E29; J21; L86

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Категорія «праця» та «трудоий процес» в інформаційній економіці

Анотація. У статті розглядається необхідність системного переосмислення категорій «праця» і «трудоий процес» в умовах формування інформаційної економіки. Пропонується авторське бачення даних категорій в умовах нематеріального характеру праці. Пропонується розглядати інформаційну працю як відносини, що виникають у процесі цілеспрямованих інформаційних дій учасників економічних відносин.

Ключові слова: трудоий процес; праця; інформація; інформаційний процес; ціна; цінність; результат.

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Категория «труд» и «трудоий процесс» в информационной экономике

Аннотация. В статье рассматривается необходимость системного переосмысления категорий «труд» и «трудоий процесс» в условиях информационной экономики. Предлагается авторское видение данных категорий в условиях нематериального характера труда. Предлагается рассматривать информационный труд как отношения, возникающие в процессе целенаправленных информационных действий участников экономических отношений.

Ключевые слова: трудовой процесс; труд; информация; информационный процесс; цена; ценность; результат.

1. Introduction. The informational transformations of the modern economy have changed not only the labour process as such, but also the very category of «labour» as an economic one. Due to the appearance of a product, created with little or no involvement of the usual means of production, the labour itself is transformed from a factor of production into an independent manufacturing process. For an adequate understanding of the nature of information labour in the modern economy, the solution of a number of problems is crucial. Some of these problems are the establishment of the boundaries of the labour process, the definition of the criteria of its measurability and a number of others. Regarding the modern labour process which consists of individual elements, such as the reproduction of information, its augmentation, generation and transmission, the redistribution and control of streams of information, it should be said that at present the science of economics does not give an adequate response to the demand for the measurability of information as an exchange category. At the same time, the absence of objective measurement parameters for information and information flow does not allow us to go over to measuring the equivalence of information exchange, as well as to establishing the parameters of the information labour process (information labour productivity, etc.).

2. Brief literature review. It should be noted that the problem of working in the information society is not new. This question was studied by the founders of the theory of the information society, particularly Daniel Bell (2004) [1]. The first among the Russian authors who researched this problem was S. Fabrichnov (2000) [2].

We believe that nowadays the information economy itself is being actively developed by using analytical and computational methods (models) of the conventional (commodity) economy. Consequently, there is a scientific problem that is associated with the adaptation of the modern methodology of accounting and analysis of labour in the context of these systemic changes in the types of economies. At the same time, the categories of «labour» and «labour process» are the key factors of forming these differences, which actually puts forward the scientific problem of economic understanding of these categories under the conditions of the transformation of socio-economic models.

3. Purpose. To offer a structural and graphic model of information labour process.

4. Results. Since the information labour process constitutes a set of individual (or of all) above-mentioned elements, it becomes possible to describe the structure and the content of the specific information labour process. Undoubtedly, the

specifics of the information that serves as the immediate object of labour, allows us to state the existence of varieties of the information labour that condition different approaches to its measurement. It is our belief that such measurability is ensured by the character of relations arising in the process of information exchange (similar to the exchange of products of social activity). In this case, the information exchange does represent a modern information labour process. The creation and the augmentation of information, in this case, are viewed by analogy with prospecting activity in the mining industries because, until the moment of exchange, they are devoid of immediate economic basis. Generally, the model of information exchange can be represented as a chart (see Figure).

At the same time, the value and, subsequently, the price of the information product are formed as a separate result of the informational activities (aimed at sharing, transmitting, copying information). The virtual nature of the pricing in today's society supports and George A. Akerlof (1970) [3]. Considering the model shown in Figure, it should be taken into account that, depending on the type of information labour, the impact of that labour on social life will differ. Accordingly, it will condition the development (the appearance) of relationships of a certain kind. It is the value of the information product (and its price) as such that we consider a result of these relationships. It should be noted that the relationships in the course of the information labour can be considered both as internal (within the labour process) and external (relationships with the social environment, such as customers, suppliers, etc.).

Speaking about the specifics of the analysis in the information economy, we cannot overlook the fact that the «time – space compression», marked by David Harvey (1989), takes place in that economy (op. cit. [4]). In this case, we are talking about the transition model of the economy, in which information substantially affects the nature of the commodity production. However, as the processes in the information economy deepen, the process specified by D. Harvey, will only intensify. Thus, according to the author, the said compression has a very ambiguous impact on the participants of the information exchange process. On the one hand, there is a reduction of the working time by an individual employee, and on the other, a shortage of labour emerges (if labour is considered as a resource for the existence of households, there is a resource constraint for their development). In parallel, there is a growth (accumulation) of fatigue, which is connected, in our opinion, with the increasing intensity of labour, as evidenced, in particular, by the analytical data provided by R. Nizhegorodtsev (2002) [5].

In his work *The information age: economy, society and culture*, M. Castells (2000) says that the network (information) society is characterized by a decrease both in biological and in social eurhythm, associated with the concept of the life cycle [3]. However, the researcher draws his conclusions rather based on the opinion of R. Breeden (1979) that «one and the same capital moves between economies over a period of several hours, minutes, and sometimes seconds» (op. cit. [3]). However, the information labour process can be integrated into the cycle theory, as it is connected with the system of social relationships, which, in one way or another, are repeated in the life of certain social groups. At the same time, we agree that the current crisis, which is observed in the social and labour sphere, is largely due to a decrease in the overall eurhythm of the cycles of economic systems' development. This eurhythm is decreased owing to irregularities in the classic cycle of social reproduction in the process of creating an information product. At the same time, the cyclical character of the development of the social (social-and-labour) system was preserved, which resulted in the development phases' mismatch. It increases the risk of this phenomenon, which wrote Bews Neville (2002) [6].

Strengthening of the role of an information product as a result of information labour is related, among other things, to the increasing role of the information rewards (the increased attention to the non-financial motivation, we believe, is a case in

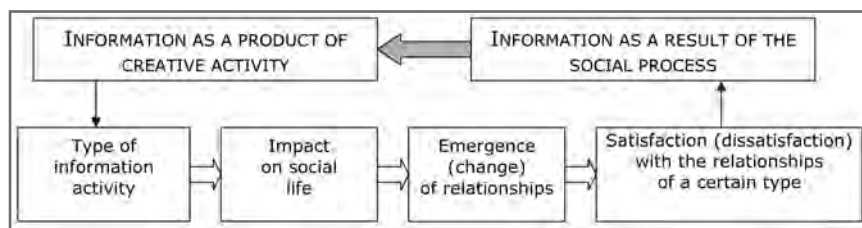


Figure: The model of information labour process

Source: Author's own composition

point). In fact, an interaction of certain items of labour (including material ones) takes place in the information space for the purpose of obtaining a result of the virtual labour. This result is consumed as a product that does not contain a material basis, but it is a source of satisfaction of informational (virtual) needs of consumers. Such a product can be designed both for its consumption in terms of expanded reproduction (information as a means of information production) and for consumption in terms of this product's end use.

The information labour is therefore the basic component of the analysis of the information economy. Moreover, the information labour and the information economy, acting in a logical unity with modern social demands (needs), are the fundamental elements of the development of the modern society, in which these relationships actually take place [7].

Turning to the classification of the structure of the information economy as a medium of the information labour's existence, we can use the classification proposed by L. Garifova (2011) [8]. This classification, according to its author, includes the following main components: the production of means of information technology, means of communication and data transmission; the production of information products and information resources; the provision of informational services to users. Agreeing with this classification on the whole, we consider it improper to use the category of «production» for products devoid of tangible basis. However, given the fact that purposefully generated streams of information provide nowadays the functioning of the elements of the classic (commodity) economy, the separation of the two types of economy is impossible in principle, and the interpenetration of the thesaurus is therefore justified.

In our opinion, the level of changes accumulated in the current economic processes (including labour ones), related to social reproduction, leads to the realization that the modern labour is assuming increasingly more social importance. Thus, there is a need to adapt to changes [9]. We associate the increase in the social role of such labour with the growing domination of the information product, which, without assuming a tangible form, exists as a benefit that has the nature of an individual value. Such a value can serve as a benefit exclusively in the framework of an exchange (social interactions) between a particular buyer and a particular seller. Undoubtedly, there is an attempt at standardization (massification) of benefits, but the attempt itself also has a virtual nature, and exists as transmission of certain values in order to form some collective demands. Consequently, the labour aimed at creating an individualized benefit, is significantly different from the labour used in commodity reproduction, and cannot therefore be studied on the basis of either classic economic approaches or existing approaches to quantitative measurements.

Approaching the information labour from the position of distribution relationships, it can also be stated that in this case the nature of the formation and distribution of the added value will have significant differences. The said differences change the relationship between the players of the social reproduction process (primarily in the context of the redistribution of such a value). Consolidation (or attempts at consolidation) of existing relationships leads (lead) to a fundamental breach of the capital structure and causes (cause) the acceleration of the crisis processes in the macro-economy due to the allocation of less and less significant level of investment for the expanded reproduction. This, in fact, leads to an increase of the added value in the hands of the organizers of the labour process (in the com-

modity economy, the owners of the means of production acted in this capacity investing heavily in the expanded reproduction).

When substantiating the changes that have taken place, the description of the information labour as a modern form of the production (labour, social) activity deserves a particular attention. By such labour, we suggest to understand the labour that materializes in certain social practices and exists in the information space. Such labour has no (or almost no) material or materialized result, which makes it impossible to be quantitatively measured as a classic object of the economic analysis. The price of such labour, being formed in the process of social interaction, is a fundamentally flexible value. Such flexibility is conditioned by the fact that price fluctuations do not obey the classic laws of economics, but are on the plane of social values and needs. The information labour does not primarily require highly specialized and costly means of production, which fundamentally changes the whole nature of the class (according to K. Marx) relationships in the modern society. To date, the nature and mechanisms of redistribution of the added value are therefore almost casual.

When talking about the information labour in the information economy, attention should be drawn to another feature (rather an advantage) of the information labour and that is reducing the time for the implementation of a particular economic interest (demand) by means of increasing the rate of the information flow. In our opinion, the increase in the intensity of the information flow steps up the use of other types of resources and therefore causes the increase in the productivity of labour. However, the low demand of such labour for resources does not make this advantage obvious. Also, the information labour, being devoid of a tangible result, increases the variability of consumption forms and practices of the products of such labour.

The definition of fullness (systematicity) of the information flow constituting the labour process, also poses a scientific problem. In this case, by analogy with the classic system of labour standards, the fullness of the information flow will characterize the intensity of labour; the variability (the number of variants for information deviations) will condition the production yield, and the directionality of the information flow will determine the type of a labour standard. The proposed analogies are relevant only until the accumulation of an empirical base sufficient to form one's own methodology of the information labour. However, the fact of standardization in the information economy in modern literature is considered as well [10].

Conclusions. In the process of the theoretical understanding, it can be stated that in the modern labour process, the role of two categories, «self-interest» and «relationships», grows infinitely. Interpreting the information labour process in a different way, we can regard it as a socially oriented activity for the purpose of gaining one's own (personal) interest. The said activity is differentiated by social relationships.

Considering the modern labour process, it can be stated that it is distinguished by the following. Since it is represented by the labour relationships, most (if not all) possible assessment parameters of such labour, regarded in the modern economic discourse, cannot be practicably measured. Consequently, this process cannot be described in economic terms nowadays. The problem of striking a balance between the economic indicators and the information, serving as the object and the result of the labour process, arises. In our opinion, striking a balance of interests between the players of the reproduction relationships might be the key indicator in this regard.

Assuming that grading relationships is possible (proceeding from the logic that the social relationship is a system of standardized interaction between the players regarding what they have in common), the quantitative assessment based on the information relationship model suggested by us also becomes possible. This model of information relationships (exchange) consists of several elements: 1. Information as a direct product of the activity. 2. Information as a result of the activity. 3. Information as an intermediate result (product) of the activity. 4. Information as a reward for the results of labour (including the case, where electronic (virtual) money is regarded as information about its availability with a particular individual). 5. Infor-

mation (in the form of knowledge) as a prerequisite for a further expansion of the labour process and an increase in the individual productivity.

As a quantitative (economic and analytical) result of the information relationships (exchange), we consider:

- Increase (decrease) in the intensity or amount of the economic (social) actions of a certain type;
- Renunciation of economic (social) actions (or their commencement);
- Undertaking some elements of economic (social) actions, measured by the time of their progress.

Consequently, the categories of «labour» and «labour process» acquire in the information economy fundamental differences as compared to the similar categories considered in the framework of the commodity economy. Information, acting as a peculiar intangible product (commodity), transforms these economic categories essentially, thereby imparting more social (behavioural) character to them. Under these conditions, the existing methodological approaches to the nature of the distribution of the added value, created as a result of the information labour, should be regarded in a fundamentally new way. From the economic point of view, it is difficult to determine the results of labour both on the micro level and on the macro one. There is a need to continue a scientific debate on the definition of the information labour productivity, taking into account the fact that the energy approaches in relation to this labour process also seem to us little adaptable [11]. The important point is the end of the era of the Taylor school of the scientific organization of production, the provisions of which cannot be put into practice due to the lack of inter-operational (cross-functional) division of labour in the information economy.

References

1. Bell, D. (2004). *The coming post-industrial society: the experience of social forecasting*. Trans. from English. V. Inozemtsev (Ed.). Moscow: Academia (in Russ.).
2. Fabricichov, S. (2000). *Information work: Theory, methodology and efficiency* (Doctoral dissertation thesis). Voronezh (in Russ.).
3. Akerlof, G. A. (1970, August). The Market for «Lemons»: Quality Uncertainty and the Market Mechanism. *The Quarterly Journal of Economics*, 84, 3, 488-500. Retrieved from <http://links.jstor.org/sici?sici=0033-5533%28197008%2984%3A3%3C488%3ATMF%22QU%3E2.0.CO%3B2-6>
4. Kastels, M. *Information era: Economy, society and culture*. Moscow: SUSSE (in Russ.).
5. Nizhegorodtsev, R. M. (2002). *Information economy, Book 3. A look in the World behind the looking-glass: Technical and economic dynamics of crisis economy of Russia* Moscow – Kostroma.
6. Bews, N. (2002). An evaluation of the facilitators of trustworthiness, Neville Bews, *SA Journal of Industrial Psychology*, 28(4), 14–19.
7. Muntiyann, V. I. (2011). *Bases of the theory of information model of economy*. Kiev: KVITs (in Russ.).
8. Garifova, L. F. (2011). *Economic interests of economic entities in information economy*. (Doctoral dissertation thesis). KFI, Kazan. (in Russ.).
9. Kincsei, A. (2008). *Technology and society in the information age*. In: *Information Society From Theory to Political Practice Coursebook*. Budapest: Gondolat – Uj Mandatum.
10. Karvalics, L. Z. (2008). *Information Society – what is it exactly? (The meaning, history and conceptual framework of an expression)*. In: *Information Society From Theory to Political Practice Coursebook*. Budapest: Gondolat – Uj Mandatum.
11. Grigorev, O. V. (2014). *Growth era Lectures on a neo-economics. Blossoming and decline of world economic system*. Moscow: Karera Press.

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References (in language original)

1. Белл, Даниел. Грядущее постиндустриальное общество: опыт социального прогнозирования / Даниел Белл ; Пер. с англ. под ред. В. Л. Иноземцева. – Москва : Академия, 2004 (ОАО Можайский полигр. комб.). – 783 с.
2. Фабрично, С. А. Информационный труд: теория, методология и эффективность : дисс. ... доктора экономических наук : 08.00.01. – Воронеж, 2000. – 325 с.
3. Akerlof G. A. The Market for «Lemons»: Quality Uncertainty and the Market Mechanism / G. A. Akerlof // *The Quarterly Journal of Economics*, Vol. 84, No. 3. (Aug., 1970), pp. 488–500. – Accessed mode : <http://links.jstor.org/sici?sici=0033-5533%28197008%2984%3A3%3C488%3ATMF%22QU%3E2.0.CO%3B2-6>
4. Кастельс, Мануэль. Информационная эпоха: Экономика, общество и культура / Мануэль Кастельс ; Пер. с англ. под науч. ред. О.И. Шкаратана ; Гос. ун-т. Высш. шк. экономики. – Москва, 2000. – 606 с.
5. Нижегородцев Р. М. Информационная экономика. Книга 3. Взгляд в Зеркальце: Техничко-экономическая динамика кризисной экономики России. Москва – Кострома, 2002. – 170 с. – С. 90.
6. Bews Neville / An evaluation of the facilitators of trustworthiness / Neville Bews / *SA Journal of Industrial Psychology*, 2002, 28 (4), P. 14–19.
7. Мунтиян В.И. Основы теории информационной модели экономики. – Киев : издательство «КВИЦ» – 368 с.
8. Гарифова, Лилия Фуатовна. Экономические интересы хозяйствующих субъектов в информационной экономике : дис. ... кандидата экономических наук: 08.00.01 / Гарифова Лилия Фуатовна. – Казань, 2011. – 24 с., С. 10.
9. Kincsei Attila. *Technology and society in the information age* / Attila Kincsei // *Information Society From Theory to Political Practice Coursebook* // Gondolat – Uj Mandatum, Budapest, 2008, 245 p., – P. 49–61.
10. Karvalics L. Z. *Information Society – what is it exactly? (The meaning, history and conceptual framework of an expression)* / *Information Society From Theory to Political Practice Coursebook* / L. Z. Karvalics. – Budapest, 2008, 245 p., – P. 29–46.
11. Григорьев О. В. Эпоха роста. Лекции по неэкономике. Расцвет и упадок мировой экономической системы. / Олег Григорьев. – М. : Карьера Пресс, 2014. – 448 с.

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