

SIGNIFICANT STUDY ON INFORMATION AND INFORMATION APPROACH IN ECONOMIC THEORY

The new monograph *Information (Information Approach in Economic Theory)* by Prof. Dr. Ec. Scs. Ivan Nikolov has appeared relatively recently after the publication of his previous book dedicated to the world globalization¹. These two books, as well as his other publications and their high level prove that the author retains notable creativity which could serve as an example for the writers in the field of the economic science. It is more important that in the study on information and information approach in the lights of the new realities, he develops further his absolutely original and very fruitful concepts about the economic information (and information in general) raised in the 1960s² and he has suggested to readers delicately but explicitly, that there are in fact methodological gaps in contemporary economic studies.³

As Prof Nikolov himself points out, one of the task of his new book, "is to present a different thesis about the essence of information, its definition and to defend the idea that information is the essence and the factor of development, of evolution since the beginning of the world up to now" (p. 9). The second task is to examine the role of the information approach in the economical theory and practice. By summarizing his four decades of research efforts in the field, he seeks answers to two main questions in this book: if there is some definite common essence between the social, biologic and *inorganic* world and if there is some common driving force of development of society, which passes from the natural to the economic and after that - towards the post-economic relations. Thus, it is possible to discover the basis of a new economic paradigm. The author is confident (and he has proven it) that, "revealing the problems of our present and formation of a new economic paradigm is hidden in the information" (p. 10) and that this is an issue not only for the economic science but it

* *Иван Николов*. Информацията (Информационен подход в икономическата теория). (*I. Nikolov*. Information (Information approach in economic theory). Sofia: УИ "Стопанство", 2007, 324 p.

¹ *Николов, Ив*. Глобалната икономка. Теория и реалност. (*Nikolov, I*. Global economics. Theory and Reality). Sofia: "Сиела", 2003, 384 p.

² See *Николов, Ив*. Производството – взаимодействие на вещи, трудови и икономически отношения. (*Nikolov, I*. Production – interaction of real, labor and production relations). Sofia: "Наука и изкуство", 1965; *Николов, Ив*. Кибернетика и икономика. Sofia: "Наука и изкуство", 1968 (*Nikolov, I*. Cybernetics and economics); *Николов, Ив*. Кибернетика и икономика. Второ издание. Sofia: "Наука и изкуство", 1971. (*Nikolov, I*. Cybernetics and economics. Second edition).

³ Concerning my opinion on the methodological insufficiency in contemporary economic science and the necessity to renew studies in the field of economic cybernetics see *Миркович, К*. Утвърждаване на системния подход в икономическата теория (*Mirkovich, K*. Strengthening the systematic approach in economic theory). – Икономическа мисъл, 2006, N 5, p. 63-72; *Миркович, К*. Проблеми на икономическата синергетика (*Mirkovich, K*. Issues of economic synergetics). – Икономическа мисъл, 2006, N 1, p. 3-32.

is a common scientific problem, because the information is a phenomenon which penetrates all forms of motion of matter.

The book has four parts. *The first part* is dedicated to the theory of information. The author's main thesis is that the information is reflective orderliness. As such, it has two main characteristics which are of two opposite forms of manifestation. As reflection, it carries a message about the reflecting object, and as orderliness, it is saving of energy. Mainly within this framework the author discusses the issue about the relation between the theory of reflection and the theory of information. He has analyzed in detail the dependence between entropy, anti-entropy and information by supposing that entropy is a degree of non-order and anti-entropy, and so information, is a degree of orderliness of inter-element relationships in the structure of a system. "In contrast to anti-entropy, the information is not an attributive characteristic of the matter, it is acquired, it is a result, a consequence of a certain interaction between material systems" (p. 25). It is a new level of orderliness, it is a new increase in orderliness over the existing in the system anti-entropy, as a result of the relationship mentioned, and that is why, it is a source of frugality.

The author profoundly discusses the problems of information (incl. its role as a factor of development and self-development) in inorganic nature, as well as the biological and social forms of motion. His formulations about social information deserve special attention. The most specific about this information is that the reflected in it exists as an image, as a symbol and not as a material structure, defined and resulting from the interrelation. Prof. Nikolov examines utility, value and ownership as an economic expression of three sources of information. On the one hand, the product of labour is consumer value as a subject necessity. The human being forms his/ her subjective attitude to it, which is the utility. On the other hand, the relationship between production factors leads to economy, which is manifested in the product as value, which is an expression of wealth. The created wealth leads to economic interest in its appropriation, which is the ownership as a social relation. (p. 83).

In the second part the author discusses the information approach and its application in economics. The meanings, the sources and the mechanisms of the information approach are scrutinized, as well as the information nature of the production as a whole, a retro view is made over its interpretation of the production as relationship between real, labour and economic relations. The information mechanism and the relationship between production forces and production relations have been interpreted. He pays special attention to creative production, where in his opinion; one cannot speak of a product but of a creation. "In the product the labour is materialized and in the creation the author is personified. In the consumption process the product is being destroyed, while being personified. Whereas, the creation in its perception by people is realized as unique information and becomes public knowledge" (p. 112). On the base of his understanding of the internal contradiction of information, the author

defines the entropy as consumption, i.e. as destruction of a part of the energy. "The contrary meaning is valid for the term production, this is the information, i.e. that part of the energy which has grown from the increased level of orderliness as a result of the interrelation". This is energy which is newly economised. The author has arrived at the thesis that production forces create, and production relations appropriate public wealth (p. 125).

Prof. Nikolov's conclusions in the *third part* "Information analyses on the information era" are quite interesting. According to him in the information society (in principle the information cannot be expropriated): Labour dies away, value comes to an end, as well as capital, private ownership, transitional hierarchic organization of production..." (p. 168). "The production becomes non-productive, and the consumption turns productive. It creates the human being, the bearer of creativity. Human consumption turns to be subordinate to the production of new ideas... The economy which is being realised by creativity and public utility will remain, without converting into economic. The science of economy will replace the science of economics" (pp. 169-170). The end of economics comes and post-economics begins. These concepts are developed by the author in the *forth part* of the book, where important issues of the economic theory are discussed.

In my opinion, Prof. Nikolov's study could have gained if he had given in the book more detailed answers to the following questions. *The first one* is what precisely means the unreflective (primary) orderliness of the information source, i.e. anti-entropy of the object (orderliness of a microstructure before the beginning of the reflection process, when the message is created). This orderliness could be some primary variation of information (which is still not a message), but objectively is contained in the object. According to me, there is not any fundamental obstacle to accept that each orderliness is information and the latter has two varieties – unreflective (primary in type of anti-entropy) and reflective (a message). All conclusions of the quantitative theory of information could be applied to the two varieties. The positive answer does not rejects the author's main formulation that in the reflection also new information is created, so in the evolution one can observe decrease in entropy and motion "from simple to complex". Besides, the primary anti-entropy came into being at certain time (when the object came into being) and surely then the reflection played an essential role. Thus, the exclusion of the primary anti-entropy from the scope of information and reducing the latter only to the range of the message, is more or less artificial formulation. Let's remind, that an important part in the theory of sets has the statement that each set is identical with itself and according to the theory of modelling each system is a model of itself (of course an isomorphic one).

The second question is what the relationship (common and different) is between the material-output and immaterial-output labour in the production. In both cases a product is produced (for example, information product is an imma-

terial product but a product of production). Only if Prof. Nikolov justifies the rejection of the latter statement, he can be more convincing in his opinion that the information society leads to post-economics. (It is true that information cannot be expropriated, but at the same time one should not forget that when trading in information products the information itself is not appropriated and expropriated, but the right to use information for a certain purpose).

The third question is about the role of mathematics in the theory. There is not a serious researcher who denies that a statement becomes a theory only when it is mathematically justified (including also economics), of course with mathematical tools relevant to the examined subject, (because in this manner the truth of a statement is proven). Thus, the conclusion is that the more mathematical tools a science applies; the more proven statements and theories it has. Of course, there are scientific studies with proven true statements deduced without mathematical tools. They have been derived through scientific intuition and common logic reasoning by experienced researches, who can allow themselves to skip some necessary steps in the research process. To much regret, these true statements remain unproven fully at the end and have not turned into a theory yet.

The most important contribution of Prof. Nikolov's monograph is that it has established conditions for the development of a new paradigm of economic theory from the viewpoint of the theory of information and in the formation of a wider historic perspective on the development of society. The concepts laid down in the book give the opportunity to go deeper in the fundamentals of economics, as well as in its essence, and to discover more fully its intrinsic driving forces. That is why, a discussion on these issues among the scientific community is more than necessary and it could be stimulated by the new interesting study by Prof. Nikolov's.

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