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**POSITION ON METHODOLOGICAL-THEORETICAL
DIMENSION OF THE CONCEPT OF CAPITAL IN THE LATEST ECONOMICS**

Academic paper

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1. During the last 25-30 years the concept of science has been undergoing changes, both among the academics as well as - maybe not to such a significant extent - outside of the academia. As a result of the transformation, we have a more realistic opinion on what the science is, how it develops, and what it can and cannot achieve.
2. The cognitive theory assumes that our thinking is able to reflect and understand the reality around us, yet such understanding may not be made in one cognitive act. A human being who is not an eyewitness of the essence of phenomena, is still able to reach the core of such phenomena. The ontological premise of our cognition has been created by practice, which is the touchstone of the accuracy of cognition.
3. Francis Bacon (1561-1626) in his *The New Organon, Or True Directions Concerning the Interpretation of Nature* (1620) pointed out that a pure empiricist was like ants, who used only what they were able to collect, a rationalist was similar to a spider who produced a net on its own, while a true scientist should - by virtue of his work - remind one of the bees who both collect and process the result of their work.

4. The course of cognitive processes taking place in human brain still awaits its detailed decoding. A human being can only separate in his mind features from essence, form from content, relations and activities from objects.
5. The social-economic phenomena and processes are theoretically reflected in the science categories and rules. Scientific categories and rules are abstractions of real relationships. They are true as long as such relationships exist. While using the scientific categories and rules, science needs to use the principles of logical deduction. The assumptions on which such deduction is based must be true [Struve 1903, p. 10.].
6. In methodology there are attempts at significant recreation of epistemology, its subject scope, tasks, aims, basic categories, and even its status. It is suggested to abandon the epistemological process of cognition as a representation of reality and to introduce another cognitive concept in that place.
7. The intention for a radical change of the concept of cognition will cause the change of the sense of basic cognitive values (objectivity, rationality, truthfulness) and the sense of attributes and cognitive categories (intrasubjectivity, experience of subjectivity).
8. The outlined attempts present certain lack of cohesion. Being in favour of anti-representationism on one hand, and advocating the description of social/ economic reality on the other as one of the aims of theory - those two views contradict each other. One cannot be anti-representationist and at the same time claim that a theory describes some reality.
9. Anti-representationism as such excludes the descriptive function of theory also when the notion or representation and description is understood liberally. The offered conceptual matrix inspired by dispersed ideals present in methodology / philosophy of science of the last 25 years is worth consideration, yet without following uncritically the latest (methodological) trends.
10. The subject of economics as understood by the Lausanne school. The Lausanne school arouses interest among certain scientists and objection among the others. It is based on the assumptions defined below.

In his book *Éléments d'économie politique pure; ou, Théorie de la richesse social* (1874) Léon Walras distinguishes three branches of economic conduct, namely:

- industry (production),
- exchange,
- institutions.

According to Walras industry does not belong to the subject of economics as science, because it represents art, e.g. in the form of the practice of management.

Institutions do not belong to the subject of economics, as e.g. while creating law one needs to consider the ethical questions.

Exchange is the subject of economics, as its functioning is based on the model of perfect competition. The operation of stock exchange in Paris, Walras claims, is an example of such structure. According to Walras, economics is similar to physics or mathematics which describe the functioning of mechanism with simplifying assumption of lack of friction. The functioning of economics is explained by a mathematical model of general balance.

Auguste and Léon Walras: VIII. *Éléments d'économie politique pure; ou, Théorie de la richesse sociale* (1988). The whole economic activity of August and Léon Walras is published by Economica, under the auspices of the Centre of August and Léon Walras (Lyon).

Auguste et Léon Walras. *uvres économiques complètes* (2005):

Auguste Walras

- I. Richesse, liberté et société
- II. La vérité sociale
- III. Cours et pièces diverses
- IV. Correspondance

Léon Walras

- V. L'économie politique et la justice
- VI. Les associations populaires coopératives
- VII. Mélanges d'économie politique et sociale
- VIII. Éléments d'économie politique pure ou théorie de la richesse sociale
- IX. Études d'économie sociale : théorie de la répartition de la richesse sociale
- X. Études d'économie politique appliquée : théorie de la production de la richesse sociale
- XI. Théorie mathématique de la richesse sociale (et autres écrits mathématiques et d'économie pure)
- XII. Cours d'économie sociale et d'économie politique appliquée
- XIII. Œuvres diverses
- XIV. Tables et index

11. It is not a coincidence that Leon Walras by using the notion of economic balance begins his deliberations with the simple commodities economy which allows him to ascribe realistic feature to his own conception. A particular role in economic deliberation is reserved for explained and equilibrium prices, yet many economists do not even bother to confront those concepts with the suggestions of Leon Walras.
12. The category of price in the latest economics as a result of changes in the balance of economic forces in international relations, it has undergone far-reaching transformation. The price became not the result of the supply and demand movements, and quite the contrary - it became the demand generating factor.
13. In the market structure typical for oligopol (in transnational corporations) the price became a subject of top-down decisions. In the contemporary economy the scope of material goods for which the manufacturer would not put pressure caused by the policy of short or long-term maximisation of profit is getting smaller and smaller.
14. Moreover, the multi directions of aims exceeding the framework of pure profit makes it more difficult to measure by means of money “(...) many facts and phenomena of economic life are not subject to a prior mathematical processing, because they are of a purely quality-like character exactly because they are not subject to measurement. (...) It is a serious mistake to suppose, that in social science one needs to use methods analogical to the ones used in physics” [Mahr, 1966, p. 17.].
15. While researching the economic reasons which are to be the starting point for our calculations (even in case of very precise evidence of the reasons) we are bound to face interpretation ambiguity. Therefore, calculation will not be the most important issue, yet the cognitive insight. Calculations are technical matters, and not cognitive ones. Even with the right interpretation of information, which can only be confirmed ex post, the difficulties are not finished. The very problem of mineralisation (as an aim of economic activity) goes beyond the framework of pure calculation of maximum and minimum functions. The notion of optimization is connected to the value judgement, the analysis of all arguments for and against from the point of view of the assumed criterion.
16. The term “capital” is a central notion in economics, in economic sciences and it is also used in humanities. For more than half a century the economic theory has been discussing what is called “the debates around capital theory.” It began with questioning the very notion of “capital” in aggregated production functions. In its very essence it is a discussion on all central concepts of economics: the theory of production, distribution and

value. Capital as a scientific category is present at all the stages of shaping the economic thought and in all its materialistic and idealistic trends.

17. In the latest economics there are views advocating that there are no internal sources of accumulating capital in economy. The invisible hand of globalisation has won with the invisible hand of the market. The transforming countries have converted the structure of their economy into the one working towards a broader system and with different functions of goals. Thomas Piketty analysed the capital in 21st century.

The sense of capital - according to Marx - is managing the work conditions in order to achieve the biggest possible profit used to multiply the capital and broaden the management over production. [C. Marx: *Capital. Critique of Political Economy*. Warsaw, 1966, p. 729.].

18. Joan Violet Robinson pointed out to the possibility of the existence of the phenomenon contradicting the marginalised view [J. Robinson 1953-1954.].

Marginal concept of capital:

marginal “capital” must be measured in units that would be at the same time independent from distribution and relative prices. Robinson questioned, if such unit could be found at all. Joan Violet Robinson suggested measuring the capital in working time units (working hours, working days or similar units), dividing capital value by the level or remuneration resulting from a given division structure. The change of share conditions causes the change of value of capital devices of each manufacturing system.

Joan Robinson offered such measurement unit of aggregated capital which would explain the interrelation between the value of capital and the net division conditions between salaries and profits. She discussed the problem of capital in numerous scientific works.

The earliest ones include:

- *The Production Function and the Theory of Capital* (1953-1954),
- *The Accumulation of Capital* (1956),
- *Accumulation and the Production Function* (1959),
- *Comment on Samuelson and Modigliani* (1966),
- *Economic Heresies: Some Old-Fashioned Questions in Economic Theory* (1971).

19. Alexander Mahr (1896-1972), Austrian economist and professor of economics at the Vienna University is one of the important theoretician of economics. He studied Scandinavian and German philology and philosophy and economics. His post-doctoral dissertation was devoted to interest theories as understood by Eugen von Böhm-Bawerk.

He was an assistant to Hans Mayer, successor of Carl Menger and Friedrich von Wieser. In 1953 and 1954 Alexander Mahr went on research scholarships in Cambridge (United Kingdom) and Cambridge (USA). His seminal work in the context of Cambridge – Cambridge controversy related to the different understanding of capital by those academic centres include:

–*Volkswirtschaftslehre. Einführung in das Verständnis volkswirtschaftlicher Zusammenhänge.* Wien 1948 [Economics. Introduction to Understanding the Economic Relations. Vienna 1946],

–*Der unbewältigte Wohlstand. Probleme der modernen Industrie-gesellschaft.* Berlin 1964 [Unsolved Prosperity. Problems of the Contemporary Industrial Society. Berlin 1964].

It was Carl Menger (1892) teacher of Mahr, who advocated the theory that “(...) different authors have different, if not sufficiently considered, ideas of the sense of capital.” [Menger 1892, p. 1.].

20. John Maynard Keynes focused on analysing the factors assuring sufficient effective demand in the conditions of incomplete use of production means and labour force. Neither in his book *The General Theory of Employment, Interest and Money* (1936) nor in any of his later works did Keynes present his own theory of distribution, which would be an alternative to a neoclassical theory. He analysed effective demand, yet it is hard to see it as an alternative to the neoclassical theory. In his deliberations Keynes focused on consumption costs in general, and not on expenses of capitalists. He divided income into consumption and savings. The model described in Keynes’s book equals the level of investments ex ante with the level of savings exactly via changes of the level of general production and employment.

Discussion around capital held in academic circles in Cambridge, UK are the subject of book by Maria Cristina Marcuzzo (2001). Discussions on capital included in its scope also the issues of effective demand and marginalist theory of capital.

Marcuzzo Maria Cristina (Ed.) 2001: *Economists in Cambridge. The letters between Kahn, Keynes, Joan Robinson, Sraffa, Kaldor and Hayek, 1921-1946.*

21. Luigi Passinetti argued that the capital-product relationship is a decreasing function of the profit rate. Production systems in which capital devices are fully utilized can be ordered by following the principle of decreasing capital - employment relationships. Seminal work by Luigi Passinetti on theory of capital:

- L. Passinetti (1965): *A New Theoretical Approach to the Problem of Economic Growth*,
- L. Passinetti (1966): *New Results in an Old Framework. Comment on Samuelson and Modiglianii*,
- L. Passinetti (1966): *Changes in the Rate of Profit and Switches of Techniques*.

22. Harcourt Geoffrey Collin (1969) is the author of:

- Harcourt Geoffrey Collin (1972): *Some Cambridge Controversies in the Theory of Capital Theory*,
- Harcourt Geoffrey Collin (1969): *Some Cambridge controversies in the theory of capital*. “Journal of Economic Literature”, 1969, no 2, p. 369-405.

An important moment when controversies around capital were disclosed was the publication of Piero Sraffa book in 1960: *Production of Commodities by Means of Commodities: Prelude to a Critique of Economic Theory*

American academics in Cambridge was strongly represented by Paul Anthony Samuelson. His publications in which he analysed capital include:

- Samuelson Paul Anthony (1962): *Parable and Realism in Capital Theory*,
- Samuelson Paul Anthony, Modiglianii (1966): *The Passinetti Paradox in Neoclassical and More General Models*,
- Samuelson Paul Anthony, Modiglianii (1966): *A Reply to Passinetti and J. Robinson*,
- Samuelson Paul Anthony, R.M. Solow (1956): *A Complete Capital Model Involving Heterogeneous Capital Goods*.

23. Also Thomas Piketty wrote monumental book: *Capital in the 21st Century*. Piketty presented two sources of knowledge on capital, namely:

- research on income dynamics and inequality of its distribution,
- research on wealth and its distribution and relation to income.

Income is composed of two parts: work income (salary, bonuses and other work income). Income from capital is rents, dividends, interests, profits, royalties and other income obtained exclusively because one owns capital.

Tax returns allow us to examine inequalities of income, inheritance declarations related to inheritance tax allow us to examine wealth inequalities.

24. Grażyna Musiał and Mirosław Lubszczyk claim that on the basis of in-depth and thorough scrutiny of the oeuvre of Thomas Piketty one can assume that during the 19th century the British accumulated such amount of assets that had never been known in the history and that record has not been broken so far. The capital invested abroad brings profit, dividends and leasing rents of the average profitability of 5%. [Musiał, Lubszczyk 2019, p. 83-98].

In the 19th century in France in view of lack of tax returns, they used the statistics on the number of doors or windows in individual departments in order to measure the high income and its share in the national income. Those numbers were the official basis of taxation. In Germany as a result of reunification there were changes in the wealth structure of that country. The industrial capital of Germany is bigger than in the two countries discussed earlier.

The research on the economic and income situation of the French population, as a part of economic thought in France, was presented by Paul Émile Cauwes (1843-1917). His book *Précis Du Cours D'économie Politique Professé À La Faculté De Droit De Paris: Contenant Avec L'exposé Des Principes L'analyse Des Questions De Législation Économique*, [Precise lecture on political economy presented at the Law Faculty in Paris, and including the analysis the economic law issues and their principles].

– Cauwes P.É. (1878, 1879): *Précis Du Cours D'économie Politique Professé À La Faculté De Droit De Paris: Contenant Avec L'exposé Des Principes L'analyse Des Questions De Législation Économique*

It is a pity that Piketty wrote nothing of Paul Émile Cauwes.

25. Further debates on capitalism were held in 1930s . They focused on the exchange of opinions between Ryszard Oskar Lange and Frank Hyneman Knight from the Chicago University. [*Scientific Work of Oskar Lange and its Significance in the Theory of Economics*. Editor-in-chief: Grażyna Musiał. Academic works. The Karol Adamiecki University of Economics in Katowice. Katowice 2004, pp.444. The difference of opinions among the academics was about the relationship between the capital and the physical factors of production.

As far as Polish academics are concerned, a significant impact to the debate on capitalism and the capitalism dynamism was offered by Michał Kalecki [*Scientific Work of Michał Kalecki and its Significance in the Theory of Economics*. Editor-in-

chief: Grażyna Musiał Academic works. The Karol Adamiecki University of Economics in Katowice. Katowice 2006, pp. 422.].

Conclusion

Finding facts about capital is a subtle skill that involves non-trivial research procedures. In economics science, even the newest one, it is far from fully recognizing these procedures.

It is certain that:

- facts may not always refute any theoretical constructions,
- they can do it only under certain methodological conditions.

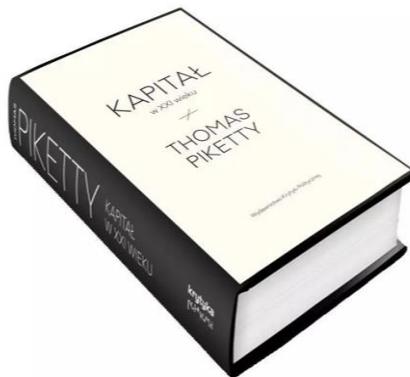
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ANNEX 1



Thomas Piketty: *Capital in the 21st Century*

Source: https://image.ceneostatic.pl/data/products/37329689/a2a91db7-9b7c-416b-8fec-47ae0ea5c85a_i-kapital-w-xxi-wieku.jpg



Dyskusje o kapitale wczoraj i dziś. Editor-in-chief: Grażyna Musiał

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