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ON CAPITALISATION OF THE CONCEPT OF WORK IN ECONOMIC THEORY

The following paper discusses capitalisation of the concept of work within economics. While representatives of the classical political economy considered labour both as a technical factor of production and as a social relation of production, the neoclassical economic theorists seem to systematically neglect the latter aspect on behalf of the former. The concept of work initially included elements such as: ownership of labour-force, effort, duration in time-units, professional skills, social competences and creative component, all stemming from innate abilities, practical experience and formal education. Capitalisation, on the other hand, implied taking the above mentioned components one by one and building consecutive human, social, and creative capital theories. Although, this operation can be undertaken in order to quantify various previously immeasurable or difficult-to-measure components of the standard concept of labour-power, one has to pay attention to the possible misuses and abuses of capitalisation.

Keywords: *work, labour input, human capital, social capital, creative capital, measurement, economic methodology.*

The following paper* discusses the so-called capitalisation of the concept of work in the field of economics. While representatives of the classical political economy considered work (labour)¹ both as a technical factor of production and as a social relation of production, neoclassical economic theorists seem to systematically neglect the latter aspect on behalf of the

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¹In this paper “work” and “labour” are not given the ontological interpretation that can be found, for example, in Hannah Arendt’s *Human condition*. Instead, these concepts may denote the same activity, but “work” sheds light on its qualitative dimension, while “labour” on quantitative one.

former. This means that they abstract from the specific social character of productive factors involved. Apart from this difference, both traditions assumed that labour could be seen as a homogenous input. The concept of work initially included inherent elements such as: ownership of labour-force, effort, duration in time-units, professional (technical) skills, social competences and creative component, all stemming from innate abilities, practical experience and formal education. The analytical expression of this internal heterogeneity of labour is the concept of labour composition². Capitalisation, on the other hand, implied taking the above mentioned components one by one and developing consecutive capital theories. These capital conceptions also had to deal with problems arising from capital composition.

It is possible to consider formal and material capitalisation of the concept of work, and in this paper only the former is discussed. This being said, the paper will not tackle the so-called material capitalisation of labour-power (or labour-force) in an economy, capitalisation which means either advancing process of automation of the workplace or growing tendency of spreading flexible forms of employment at the expense of traditional employment contracts fully regulated by the labour law. The use of the term "capitalisation" here is also not equivalent to the use of this term in the field of finance and standard economic analysis where capitalisation is understood as a method of market valuation of various tangible and intangible assets (for example, goodwill). Instead, it is employed here in a similar way as the concept of capital is often used by economists in their efforts to translate many economic issues into capital-like formulas. The important thing is that this process took place within the framework of methodological individualism, according to which any social, economic, or political phenomenon can be explained in terms of individual mental states that motivate attitude, decision and action of that individual agent.

In the first stage of formal capitalisation of the concept of work, work defined as a simple and unpleasant, bothersome physical effort (labour), was reduced to spending labour-power. The latter, on the other hand, was simultaneously measured in the input of time-unit or man-hours worked. All this made it possible to treat the labour-time input partly as another example of physical-like capital. This is why, George Akerlof point-

²Zoghi Cindy, *Measuring Labor Composition: A Comparison of Alternate Methodologies*, in: Abraham Katharine G., Spletzer James R., and Harper Michael (ed.), *Labor in the New Economy*, National Bureau of Economic Research, 2010.

ed out that “[e]conomists usually assume that labour is hired as a factor of production and is put to work like [physical] capital”³ (section I). In the second stage, the concept of work was brought down to technical skills which, in turn, were treated not only as innate and inherited abilities but mostly as produced means of production. It was therefore possible to represent labour input partly as a human capital input and measure it in terms of various types of rates-of-returns-from-investments. This can be seen as “the shift toward treating the worker more precisely as a capital good”⁴ (section II). The third stage can be characterized as paying attention to the social competences component of the concept of work. It turned out that it is relatively easy to reduce work-related social competences to produced relations of production. It was therefore possible to interpret labour input partly as a social capital input, which includes all “person’s social characteristics (...) which enables him to reap market and non-market return from interactions with others”⁵ (section III). In the fourth stage of capitalisation of the concept of work, it is possible to distinguish the so-called creative capital turn, which can be seen in terms of a reducing component of work (immeasurable by its nature and allegedly responsible for the competitive advantages of some individuals on the labour market) to the unique talent and innovative economic behaviour⁶ (section IV). In the following paper we will not only reconstruct the four stages but also tackle the issue of limits of capitalisation of the concept of work in the economic theory by presenting several peculiarities of work (concluding remarks).

Before we move to discussing the elements enumerated above, a few more introductory remarks have to be made. Capitalisation, in the sense used in this paper, means a way of applying formal capital theory devices to daily human behaviour on the labour market in a manner stated in the following formulas: (i) “as if” he or she possessed [in]tangible assets; (ii) “as if” he or she made investment-like decisions enhancing its magnitude;

³Akerlof George A., *Labor Contracts as Partial Gift Exchange*, The Quarterly Journal of Economics, 4/1982, p. 545.

⁴Bowles Samuel, Gintis Herbert, *The Problem with Human Capital Theory--A Marxian Critique*, American Economic Review, 65(2)/1975, p. 74.

⁵Glaeser Edward L., Laibson David, Sacerdote Bruce, *An economic approach to social capital*, The Economic Journal, 112/2002, p. 438.

⁶Rubenson Daniel L., Runco Mark, *The psychoeconomic approach to creativity*, New Ideas in Psychology 10(2)/1992, pp. 131-147; Zhang Li-fang, Sternberg Robert J., *Revisiting the Investment Theory of Creativity*, Creativity Research Journal, 23(3)/2011, pp. 229-238.

(iii) “as if” he or she responded only to financial incentives; (iv) “as if” he or she controlled his or her own actions undertaken on-the-job; (v) “as if” there were a coherent, fully specified and precise definition of the concept of capital; (vi) “as if” there were simple method of aggregating various types of capitals into a single measure. The advantages of using the concept of capital in the economic theory are relatively well identified⁷ and will not be recalled in this paper. What is important is that all of the cases of applying this concept have to fulfil several conditions in order to be valid⁸: (i) the requirement of empirical premise which is a sufficient condition of capital-accumulating behaviour (investment-motive’s empirical premises); (ii) the requirement of including all assumptions and presuppositions which are necessary to achieve theoretical coherence (condition of conceptual clarity and composition’s coherence); (iii) the requirement of tractability of measurement operations (operational and measurement optimism).

There exist, of course, many ways in which economists and methodologists appraise theories, models and concepts. The goal of this paper is not to recall and present the whole range of existing ways of appraising economic enterprises⁹, or the dissection of the human, social and creative capital theories¹⁰. It is sufficient here to propose one way of possible methodological critique, the one which concentrates on verifying the degree to which consecutive stages of capitalisation of the concept of work fulfil the three requirements mentioned above. That is why one must not only be aware of the proper uses of capital formula, but also of the possible misuses and abuses of this concept and limitations of its applications, especially in such a field as labour market.

Such limitations may appear in many dimensions, and may provoke such methodological problems as: (i) empirical unrepresentativeness, which occurs if empirical premises of the hypothesis in question are not fulfilled to a satisfying degree; (ii) theoretical vagueness, which aris-

⁷Schulz Theodore, *The economic importance of human capital in modernization*, Education Economics, 1(1)/1993.

⁸See also: Robinson Joan, *The Production Function and the Theory of Capital*, The Review of Economic Studies, 2/1953-1954, pp. 81-106.

⁹See: Caldwell Bruce (ed.), *Appraisal and Criticism in Economics: A Book of Readings*, Allen & Unwin, 1984.

¹⁰See: Hoywin Michele and Faricy Christopher, *It Takes a Village: A Test of the Creative Class, Social Capital and Human Capital Theories*, Urban Affairs Review, January 2009, in: <http://ssrn.com/abstract=1313563> [access: 25.06.2011].

es if necessary conditions of the hypothesis in question are not fulfilled to a satisfying degree; and (iii) measurement difficulties; if in the process of choosing a measurement unit from a wide range of dimensions (physical units, efficiency units, or value/price units), requirements of dimensional analysis are not met or if in the process of aggregation and imputation, underestimation, overestimation or omission takes place due to researcher bias. Below, we are going to reconstruct consecutive stages of capitalisation of the concept of work in economic theory and appraise them in the light of three methodological problems mentioned above.

WORK AND PHYSICAL-LIKE CAPITAL

Troubles with labour have existed as long as there has been reflection on the nature and importance of that kind of human activity¹¹. The traditional dispute dating back to the classical Greek philosophy era has never lost its relevance. Moreover, its consecutive stages have broadened and deepened our understanding of what human labour is. However, when the political economy stood out from the field of philosophy in the eighteenth century, considerations over work (labour) were gradually and systematically appropriated by the economic theory of labour, which started to identify labour almost exclusively with input of unpleasant effort. Such an approach not only has dominated academic discourse in the field of social sciences and humanities, but has also taken a privileged position in the public debate. What is more, it seems that as a consequence it has left a permanent imprint on how contemporary people think about their own work. It does not imply though that alternative approaches towards human work have been missing. Nonetheless, one has to admit that it was only with the birth of the classical political economy and with its three versions of the economic theory of value (labour theory of value, cost of production theory of value, and utility theory of value) that the dispute evolved to become a more detailed and often empirically-based investigation.

It was the classical political economy that was the ground on which various ideas of work and various procedures of measurement of economic value and labour have met. It is now clear that there is a long and well-

¹¹ See: Arendt Hannah, *Kondycja ludzka*, Fundacja Aletheia, Warszawa 2000.

established tradition within economics, tracing back to some authors from the classical political economy period, which started to treat labour at the same time as a technical factor of production and psycho-physiological or moral toil and trouble¹². Historians of economic thought often discuss one peculiar question called “the Adam Smith problem”. It turns out that Smith formulated not only a simple version of the labour theory of value, but also the cost-of-production theory of value. Still, in both cases, he referred, often tacitly, to the idea of disutility of labour. This was the reason why controversies over labour flared up one more time. As Marx pointed out, labour is not, as Smith, and even Ricardo have thought, “the mere sacrifice of rest, freedom, and happiness, [but] at the same time the normal activity of living beings,”¹³ “productive (...) expenditure of human brains, nerves, and muscles,”¹⁴ “human labour in the abstract,”¹⁵ where:

the individual, ‘in his normal state of health, strength, activity, skill, facility’, also needs a normal portion of work, and of the suspension of tranquillity. Certainly, labour obtains its measure from the outside, through the aim to be attained and the obstacles to be overcome in attaining it. But Smith has no inkling whatever that this overcoming of obstacles is in itself a liberating activity – and that, further, the external aims become stripped of the semblance of merely external natural urgencies, and become posited as aims which the individual himself posits – hence as self-realization, objectification of the subject, hence real freedom, whose action is, precisely, labour¹⁶.

It is now clear that it was Marx who decided to break with those perspectives and found more abstract (i.e. less subjective and hedonistic-originated, more intersubjective and socially-originated) foundations of labour-based economic theory. Smith, Ricardo and Marx differed not only in regard to perspectives on the nature of work but also in regard to technical problems with finding out the proper measure of labour input. It seems that Marx agreed with his predecessors that one can adequately measure labour by means of its aim (i.e. magnitude of output).

¹²See: Nowak Krzysztof, *Status pojęcia pracy w teorii ekonomii i teorii krytycznej*, Wydawnictwo Naukowe Instytutu Filozofii Uniwersytetu im. Adama Mickiewicza w Poznaniu, Poznań 2011; Theocarakis Nicholas J, *Metamorphoses: the concept of labour in the history of political economy*, *The Economic and Labour Relations Review*, 20(2)/2010, pp. 7-38.

¹³Marx Karl, *Capital*, volume I, International Publishers Co., Inc., New York 1967, pp. 46-47.

¹⁴Ibidem, p. 44.

¹⁵Ibidem, p. 38.

¹⁶Marks Karol, *Zarys krytyki ekonomii politycznej*, Książka i Wiedza, Warszawa 1986, pp. 491-493.

He was also in accordance with classical economists when he pointed out that what should follow is the measuring of labour by means of “obstacles”, which have to be overcome in the process of achieving the aim. But this was the moment when Marx and classical economists were reaching the crossroads, because Marx did not interpret “obstacles” in a psychological or emotional manner, in Smith and Ricardo’s case, but in much broader terms of social relation of the worker to their own objectivising productive activity.

It is justified, and useful to perceive this stage of debate over the concept of work within the broad economic tradition as two parallel disputes: first, as a controversy concerning “the question as to whether the economic concept of labour can really be expanded into the concept of a simultaneously creative and self-formative productivity”¹⁷ or whether it is necessary to reduce the economic concept of labour to the concept of a simultaneously unpleasant and instrumental effort. The second controversy concerns the following question: should economic labour input be measured in specific units of human productivity, which comply with all the peculiarities of human labour or should it be measured in universal units of effectiveness, which abstracts from almost all important specific attributes of human labour (in favour of taking into consideration its reified representation in terms of technical factor of production). It turned out that Smith, deriving his understanding of the concept of labour from the idea of disutility of labour, assumed the universal unit of effort disutility¹⁸. Ricardo, on the other hand, while continuing the toil and trouble presupposition in interpreting work, took the mineralisation of one’s effort to produce one unit of product in a given period of time. Finally, Marx, contrary to the two economists, defined his concept of work assuming the idea of the creative and abstract nature of work and adopted the so-called socially necessary labour time as a labour unit.¹⁹ Despite these discrepancies, all the classical economists, including Marx, made the necessary assumption of labour homogeneity.

It is commonly known that Marxian tradition in economics took the socially necessary labour time unit (abstract labour unit) as a starting point, while Smithian (either classical or neoclassical) tradition took disutility of

¹⁷Habermas Jürgen, Reply to my critics, in: Thompson John B., Held David (ed.), *Habermas: Critical Debates*, Macmillan Press, London 1982, p. 225.

¹⁸See: Smith Adam, *Inquiry into the Nature and Causes of the Wealth of Nations*, vol. I, Methuen & Co Ltd, London 1961, p. 37.

¹⁹See: Marx Karl, *Capital...*, p. 39.

effort unit, in various forms - as irksomeness of work, allure (or absence) of leisure time, or slothfulness of workers²⁰. Representatives of both approaches faced a very important question: which indices to provide to better approximate the formal units adopted earlier. Marxists reduced homogeneous labour (or labour-power) to a common denominator in the form of a counterfactual condition of what is the norm. The Smithian tradition reduced homogeneous labour to another common denominator in the form of the real cost of labour. It is necessary to mention that since the marginal-subjectivist revolution in the economic theory (related to works of L. Walras, V. Pareto, C. Menger and W. S. Jevons), Marxian economics, as well as the whole classical political economy, ceased to be a part of the mainstream economic thought. Needless to say as similar or an even worse fate awaited various versions of the labour theory of value. Since A. Marshall unified a two-fold theory of value (i.e. marginal cost of production and marginal utility), and J. B. Clark provided simple technical theory of valuation of factors of production in the form of marginal productivity theory, the door to describing labour [supply] in terms of interplay between marginal utility of income and marginal disutility of effort stood wide open.

A modern approach to analytical treating of labour input in economics found its best expression in the words of Edward F. Denison - one of the originators of growth accounting, who pointed out that:

the units of measurement of labour input that are available for comparisons over time may be reduced to the average number of persons employed and the total number of hours worked (...) Differences between the movements of the two arise from changes in average hours of work. Intelligent choice, or even discussion, requires information concerning two aspects of working hours about which we unfortunately know too little. First, what is the relationship between hours of work and real costs - "disutility" - of labour? Second, what is the relationship between hours of work and output? Does the movement of total man-hours worked or of employment better approximate changes in the real cost, or disutility, of labour? If we waive the problem of aggregation²¹, we can rephrase the question to ask how disutility varies with hours of work

²⁰See: Spencer David A., *Love's Labor's Lost? The Disutility of Work and Work Avoidance in the Economic Analysis of Labor Supply*, Review of Social Economy, No. 2/2003, pp. 235-250.

²¹E.F. Denison assumed that in order to investigate the relation between changes in *disutility of labour* and *quantity of hours worked*, the so-called aggregation problem is not so important. Although, what is interesting in that case is the uncritical approach to the concept of disutility when deriving the neoclassical labour supply function. As Joan Robinson pointed out, the idea of total or marginal disutility of labour seems to be very flawed and incongruous with the real labour market. Robinson stressed, for example,

for typical individuals. We concentrate upon the range of hours prevalent in the past and possibly prevalent in the not-completely-remote future - say over thirty hours a week²².

In his article embracing the standard mainstream approach towards dealing with labour input, E. F. Denison draws attention to two crucial problems, which may occur in the field of modern labour economics: first,

that it is artificial, from the scientific point of view, "to separate the marginal utility of income from the disutility of work experimentally" (Robinson Joan, *Economic Philosophy*, Penguin Books, 1974, p. 87). Moreover, "the value of leisure is not independent of disposable purchasing power. The disutility of work may actually be negative if the alternative is nothing to do and nowhere to go, and is very high when the alternative is delightful, expensive treats" (Ibidem). When one wants to investigate the relationship between changes in *disutility of labour* and *quantity of hours worked*, one should always remember that "any measure that can be proposed for disutility of work will turn out to be elastic" (Ibidem). The above mentioned aggregation problem seems to be very important when one wants to analyze the relation between *hours worked* and *quantity of output* produced by labour input in a given period of time. Drawing more attention to this problem, which can be as well called the problem of measurement of marginal physical product of labour, was a by-product of the famous "Cambridge capital controversy". Although this is not the time to discuss this dispute in details, it will be sufficient to recall two arguments referring to this debate. The first comes from G. Harcourt, who said that: "The search for a unit in which to measure capital arose from the argument that both (homogeneous) labour and land could be measured in terms of their own technical units so that *their* marginal products could be defined independently of the equilibrium factor prices. This allowed their marginal products to be used in the explanation of their prices. Aggregate capital, though, could not be similarly defined in terms of its own technical unit. It could only be defined in value terms both because the rate of profits or interest, a pure number, had to have a *value* to bite on in order to define the value of profits and because capital goods were specific, heterogeneous and *someone's private property*. (If capital goods were *not* someone's private property they would not need to be valued)" (Harcourt Geoffrey C., *Some Cambridge Controversies in the Theory of Capital*, Cambridge University Press, Cambridge 1972, pp. 3-4). The second comes from E. J. McKenna and D.C. Zannoni, according to whom: "The Cambridge Capital Controversy concluded with the acceptance of the idea that there does not exist any necessary inverse relationship between the rate of interest and an aggregate measure of capital. Neoclassical views concerning a downward sloping investment schedule sensitive to changes in the rate of interest are derived from the belief that there is an inverse relation between the rate of interest and aggregate measure of capital, and hence are invalid. Further, the critique of capital applies equally to the concept of labor. Therefore, the concept of a demand curve for labor which is an inverse relation between the real wage and the quantity of labor is also invalid" (McKenna Edward J., Zannoni Diane C., *On the Nature and Use of the Concept of the Marginal Physical Product in Post Keynesian Economics*, *Journal of Post Keynesian Economics*, 4/Summer 1987, pp. 483-484).

²²Denison Edward F., *Measurement of Labor Input: Some Questions of Definition and the Adequacy of Data*, in: *Output, Input, and Productivity Measurement*, The Conference on Research in Income and Wealth, 1961, p. 350.

the problem of the degree to which the measurement of man-hours approximates the real cost, or disutility of labour to a sufficient degree²³; and second, the problem of the degree to which employment measurement sufficiently approximates the effective labour input, i.e. magnitude of output produced by that labour input in a given period. The reason why economists should be careful is that there are many variants of the undifferentiated hours-worked variable,²⁴ such as hours paid for, normal hours of work, contractual hours of worked, or hours actually worked. Differences between these variables and time-units are, from the economic statistics' point of view, of major importance, especially in labour productivity accounting. Moreover, there could arise a problem with aggregation stemming from the fact that labour is actually heterogeneous in two major aspects: first, that there exist different working time units (as mentioned above); and second, that labour (and the stock of labour-power) is essentially heterogeneous (for example in terms of skills or qualifications). This is why the classical assumption of homogeneous labour, which was possible by making a few controversial analytical reductions, for example, of complex labour to simple manual labour, cannot be maintained without major simplifications and omissions²⁵.

There are, of course, more advantages and disadvantages related to this first stage of formal capitalisation of the concept of work in the economic theory. On the one hand, labour was seen as a simple, unpleasant and bothersome physical effort, which could be reduced to an exercise of the labour-power measured in the hours-worked unit. On the other hand, some economists pointed to limitations of this "classical notion of labour

²³E. F. Denison points out a few major limitations of that kind: "Evidence as to the shape of the real cost curve based on the decisions of individuals facing choices as to how many hours they will work is impossible to obtain. All that can be observed is, at best, the marginal rate of substitution between effort and income, not absolute changes in disutility. Further, individuals are not necessarily in equilibrium because they cannot get the combination of hours and earnings that would suit them best, or do not know the available alternatives. Even for groups of individuals, standard hours have rarely been set by any real comparison, of leisure gained with income lost, or even with knowledge of the income actually sacrificed for shorter hours." (E. F. Denison, *Measurement of Labor Input*... p. 351).

²⁴International Labour Organization, *Report II, Measurement of working time*, in: http://www.ilo.org/wcmsp5/groups/public/@dgreports/@stat/documents/publication/wcms_099576.pdf [access: 09. 11. 2010].

²⁵See, for example: Steedman Ian, *Heterogeneous labour and 'classical' theory*, *Metroeconomica*, 32/1980, pp. 39–50.

as a capacity to do manual work requiring little knowledge and skill, a capacity with which, according to this notion, labourers are endowed about equally.”²⁶

WORK AND HUMAN CAPITAL

The limitations mentioned above were raised by the so-called human capital theorists. While mainstream economists, until the end of the 1960s, seemed satisfied with a simple view of labour in terms of labour input or factor of production expressed in time-units, this simplistic vision started to be questioned once the human investment *revolution in economic* thought took place. The idea of human capital is not new, as B. F. Kiker has shown²⁷ in his retrospective investigation of its roots. A Cambridge (UK) economist A. Marshall once dismissed the concept of human capital by calling it unrealistic, while a Chicago theorist T. Schultz had a different explanation for the absence of human capital idea in economic discourse: he claimed that it had to be “deep-seated moral and philosophical issues”²⁸ that prevented the community of economists from seeing free people and their economic capabilities and professional skills as another example of marketable assets.

Human capital theorists started to underline that the notion of labour they received “was wrong in the classical period and it is patently wrong now”²⁹. Moreover, “it has been too convenient in marginal productivity analysis to treat labour as if it were a unique bundle of innate abilities that are wholly free of capital”³⁰. As a consequence, the theory under discussion “rejects a simplistic assumption of homogeneous labour and centres attention on the differentiation of the labour force”³¹. Since that moment, the productive capabilities of *homo oeconomicus* ceased to be perceived as innate abilities, and started to be interpreted as “produced

²⁶Schultz Theodore W., *Investment in Human Capital*, The American Economic Review, LII/March 1961, p. 3.

²⁷Kiker B. F., *The Historical Roots of the Concept of Human Capital*, Journal of Political Economy, 74(5)/October 1966, pp. 481-499.

²⁸Schultz Theodore W. (1961), *Investment in Human Capital...*, p. 2.

²⁹Ibidem, p. 3.

³⁰Ibidem, p. 2.

³¹Bowles Samuel, Gintis Herbert, *The Problem with Human Capital Theory...*, p. 74.

means of production”³². Instead of imputing the innate nature of abilities and fixed skills, human capital theory presupposed that “people acquire useful skills and knowledge”³³ and that this process takes the form of capital-like investments. As M. Blaug asserts, “the concept of human capital, or ‘hard core’ of the human-capital research programme is the idea that people spend on themselves in diverse ways, not for the sake of present enjoyments, but for the sake of future pecuniary or non-pecuniary returns”³⁴.

It is completely understandable that while some efforts of the founders of the human capital theory were channelled to advancing this theory³⁵, endeavours of other economic schools were focused on revealing hidden presuppositions, lack of coherence and problems with measurement operations and empirical premises of the hypothesis in question. In general, there are a few controversial points in the human capital theory (as is the case for every capital theory) which can be divided into three main categories: (i) “the empirical status of the human capital theory”³⁶ including such problems as the nature and significance of “the correlation between education and earnings”³⁷; (ii) the logical status of the human capital theory,³⁸ including such problems as the lack of sufficient clarity in conceptualizing the notion of capital, which may lead to logical incoher-

³²Schultz Theodore W., *Reflection on investment in man*, The Journal of Political Economy, LXX-Supplement/October 1962, p. 1.

³³Ibidem.

³⁴Blaug Mark, *The Empirical Status of Human Capital Theory: A Slightly Jaundiced Survey*, *Journal of Economic Literature*, 3/Sep.1976, pp. 829-850.

³⁵Becker Gary, *Human Capital. A Theoretical and Empirical Analysis with Special Reference to Education*, The University of Chicago Press, Chicago and London 1993.

³⁶Blaug Mark, *The Empirical Status of Human Capital Theory...* pp. 827-855.

³⁷Blaug Mark, *The Correlation between Education and Earnings: What Does It Signify?*, *Higher Education*, 1/Feb.1972, pp. 53-76. There are at least three major approaches to this problem: first, the human capital (investment-based) explanation, according to which education improves vocationally useful skills and hence potential productivity and earnings; second, the radical (structural and class-based) explanation, according to which there is some connection between education and productivity, but a more important aspect of the former is that school attendance corresponds to social class origins and that education makes people not only “smarter” (in the terms of, let’s say, IQ), but also responsive (positively or negatively) to the material incentives, prone to on-the-job-training, and also to internalize value that is prized at the labour market; third, the “selection-based” explanation, according to which there are not convincing evidences for the close education-productivity relationship, so the only probable explanation is that education only selects and give credentials to people who manifest the biggest innate abilities.

³⁸See: Westoby Adam, *The Correlation between Education and Earnings: A Comment*, *Higher Education*, 4/Nov.1972, pp. 463-468.

ence and composition difficulties; (iii) general measurement problems,³⁹ resulting from non-observable nature of human capital components⁴⁰.

The purpose of this paper, however, restricts our examination only to the following question: does the revolution of investing in knowledge and skills imply, as S. Bowles and H. Gintis assert, the disappearance not only of the concept of class but also of labour. If the pessimism of Bowles and Gintis is justified, then one should not be surprised that the second stage of capitalisation of the concept of work leads to the following conclusion:

labour disappears as a fundamental explanatory category and is absorbed into a concept of capital in no way enriched to handle labour's special character. One gets the uneasy feeling that the operation was successful, but the patient vanished!⁴¹.

However, this kind of pessimism as presented by both scholars seems not fully justified. First of all, if the concept of human capital were to replace labour, it would have to be homogenous and measurable to a greater extent than is the case with labour. Secondly, it should be characterized by theoretical clarity. Moreover, it seems that it was not the concept of work (labour) that was attacked by human capital theorists but rather the concept of labour-power, even though many times they nominally revoked the term "labour". As T. Schultz asserted, "there can be no doubt whatsoever that the concept of labour force, or of man-hours worked, fails to take into account the improvement in the capabilities of man"⁴². For human capital theorists it was evident that the concept of labour-force measured in terms of man-hours-worked neglected two main elements: a qualita-

³⁹ Among those problems, it is possible to distinguish: (a) a statistical imputation problem concerning biases in the process of providing missing data; (b) an aggregation problem related to summing up different components of human capital embodied in different individuals; (c) the problem raised by dimensional analysis, of how to count "human capital": as a stock or flow; (d) biases in estimations (overestimation or underestimation) of human capital in terms of rates-of-returns from investment in human capital; (e) the problem with differentiating causes and effects in the process of human capital formation; (f) the question of what form variable (cardinal, ordinal etc.) components of the human capital actually have.

⁴⁰ For instance, human capital approach deals with this last problem by stating that, while human capital as such is not visible, one can observe internal and external effects of it. Internal effects of investments in individual human capital include effects of schooling and other levels of education, on-the-job training, learning by doing, or getting information on individual productivity, earnings, income and welfare. External effects, on the other hand, are related to their impact on the economic growth rate.

⁴¹ Bowles Samuel, Gintis Herbert, *The Problem with Human Capital Theory...* p. 74.

⁴² Schultz Theodore W., *Reflection on investment in man...* p. 2.

tive differences actually existing among labour-force and the importance of quality of effort and expected quality of the product of work. As human capital theorists put it:

[the received system of] counting individuals who can and want to work and treating such a count as a measure of the quantity of an economic factor is no more meaningful than it would be to count the number of all manner of machines to determine their economic importance either as a stock of capital or as a flow of productive services⁴³.

Still, despite some correct observations made by proponents of the human capital theory, several backdrops in their reasoning can be named. First, the use of the concept of capital in the context of investing in skill-acquisition seems to assume that formal education and credential of one's practical skills are a legitimate guarantee of one's claim on future earnings and a warranty of autonomous entering and functioning on the capitalist labour market. While the first principle can be met, under few restrictive conditions, it is hard to consider that the owner of human capital decides on his or her own about the allocation of previously acquired professional skills. Secondly, innate or acquired skills cannot be reduced to single-dimensional technical skills, which increase one's productivity, and hence earnings, as human capital theory used to do. It is much more likely that characteristics required on the labour market cannot be reduced to the technical skills only⁴⁴. Thirdly, bearing in mind the Cambridge capital controversy, the major problem is how to measure components of the human capital. A question arises: what is the real object of measurement in case of human capital? Is it measured by years of education or some other observable index? The choice of variable is very important, because in the case of education and on the job training it seems unsatisfactory to limit oneself to analyzing only variables such as grades or time spent at school. This question is even more striking in the case of all forms of informal training and learning by doing⁴⁵. There are different channels through which education can increase personal earnings apart from forming one's technical skills and hence increasing his or her productivity. It may provide individuals with non-observable soft social skills, via membership in various social

⁴³Schultz Theodore W., *Investment in Human Capital...* p. 3.

⁴⁴Gintis Herbert, *The Nature of Labor Exchange and the Theory of Capitalist Production*, *Review of Radical Political Economics*, 8/1976, pp. 36-54.

⁴⁵See: Arrow Kenneth J., *The Economic Implications of Learning by Doing*, *The Review of Economic Studies*, 3/Jun.1962, pp. 155-173.

networks or organizations, or induce individuals to acquire certain characteristics, demanded on the labour market, i.e. lower rate of time preference, lower susceptibility to feel the disutility of effort (either mental or physical), and cooperative attitude toward superiors.

WORK AND SOCIAL CAPITAL

While representatives of the human capital theory concentrated on the fact that people invest (not consume or save) their disposable resources, i.e. time and money, in acquisition of professional qualifications, proponents of the social capital theory went one step further. They assumed⁴⁶ that people seem to invest similarly in their social competences and cultural bonds. This move represented the next stage of capitalisation of the concept of work and can also be seen as another attempt to “reject a simplistic assumption of homogeneous labour and centre attention on the differentiation of the labour force”⁴⁷ because of apparent specific social competences. This was the justification to interpret labour as a produced social relation, produced thanks to previous investments and to reject the assumption of labour homogeneity due to heterogeneous social competences. The creation of a social capital term once more blurred the classical distinction between labour and capital. As mentioned earlier, one of possible objection against the human capital theory was that individual investment in education and training “allows one to go into production on one’s own”⁴⁸ only to a limited extent and does not prevent frictions on the labour market. It seems that the social capital approach aimed at filling this gap and indicating possibilities of investing in social competences increasing the probability of entering the labour market and succeeding professionally.

The idea of social capital seems to have appeared as a response to the well-recognized flaws related to market failure and government failure in correcting the former. It was Kenneth Arrow who underlined first that:

⁴⁶See, for example: Coleman James S., *Social Capital in the Creation of Human Capital*, in: Dasgupta P., Serageldin I. (ed.), *Social Capital: A Multifaceted Perspective*, World Bank, Washington 2000.

⁴⁷Bowles Samuel, Gintis Herbert, *The Problem with Human Capital Theory...*, p. 74.

⁴⁸Ibidem, p. 79.

In the absence of trust (...) opportunities for mutually beneficial cooperation would have to be foregone (...) norms of social behaviour, including ethical and moral codes [may be] (...) reactions of society to compensate for market failures⁴⁹.

This thought was later developed by other economists and sociologists, such as G. Becker, R. Putnam or J. Coleman. Broadly speaking, it is possible to distinguish two major methodological approaches towards social capital within economics. The first one is focused on collective aspects of the social capital as an aggregate outcome, while the second considers "individual social capital as a person's social characteristics - including social skills, charisma, and the size of his Rolodex - which enables him to reap market and non-market returns from interactions with others"⁵⁰. The latter approach is referred to as methodological individualism. More specifically, social capital formation was analyzed in terms of optimal individual investment decision. At that time the positive effect of the social capital on economies' efficiency and on economic growth was recognized as the missing link in the process of explaining the causes of economic development, thus joining the existing chain of natural, physical, financial, and human capital.

The individual social capital approach has had an impact on the standard concept of labour, in particular, on the social and team aspects of work. Work is seen here as a produced social relation, which formally comprises three kinds of interactions: between co-workers, between employees and their superiors, and, finally, between employees and their clients. Therefore, an employee, in order to increase their productivity or effectiveness, can embark on the process of investing into their stock of social capital. This may include: joining a trade union or other professional associations, trying to increase the level of trust their co-workers and superiors put in them, or joining corporate volunteer programs. All these investment-like decisions may increase social competences of a given individual. Their scale is proportional to the social character of a given job and intensity of professional interactions necessary to do the job well.

The process applying the capital formula to social relations implied some complications. "The problem with social capital - as P. Dasgupta and I. Serageldin have noticed - is that the concept has not been nailed

⁴⁹ Bowles Samuel, *Endogenous Preferences: The Cultural Consequences of Markets and other Economic Institutions*, Journal of Economic Literature, XXXVI/March 1998, p. 92.

⁵⁰ Glaeser Edward L., Laibson David, Sacerdote Bruce, *An economic approach to social capital...*, p. 438.

down sufficiently to be useable in quantitative research into the character of societies"⁵¹. It seems that difficulties with this concept are threefold: (i) empirical falsehood of investment motive's premise: one cannot rationally assume that individuals are driven by the willingness to invest, because "the essence of social networks is that they are built up for reasons other than their economic value to the participants"⁵² (ii) theoretical vagueness of the term in question: even if investment motive is the prevailing one, social capital "may even be a good idea. A good term it is not. Capital refers to a thing that can be owned (...) By contrast, the attributes said to make up social capital describe relationship among people"⁵³; and (iii) problems with its measurement as it is not clear what in fact should be measured: as B. Fine put it, "we need to know economic outcomes to measure social capital in order to account for the effects of social capital on economic outcomes that we have already assumed."⁵⁴

WORK AND CREATIVE CAPITAL

As we demonstrated in the prior section, proponents of the social capital approach underlined that individuals can improve their position on the labour market by investing time or money to enlarge their social network. Some social scientists (economists included) went further by claiming that it is a unique talent and innovative economic behaviour that accounts not only for competitive advantages of some individuals on the labour market, but that it also stands behind the creation of a new brave economy. In this new economy the notion of work is undergoing a transformation, which can be referred to as the fourth stage of capitalisation of the concept of work. Work is no longer seen as an activity leading to tangible effects, but as an immaterial creative activity leading largely to intangible effects.

⁵¹ Dasgupta Partha, Serageldin Ismail, *Preface*, in: Dasgupta P., Serageldin I. (ed.), *Social Capital: A Multifaceted Perspective...*, pp. X-XI.

⁵² Arrow Kenneth, *Observations on Social Capital*, in: Dasgupta P., Serageldin I. (ed.), *Social Capital: A Multifaceted Perspective...*, p.4.

⁵³ Bowles Samuel, Gintis Herbert, *Social capital and community governance*, *Economic Journal*, vol. 112/ November 2002, p. 420.

⁵⁴ Fine Ben, *Social Capital versus Social Theory: Political Economy and Social Science at the Turn of the Millennium*, Routledge, London 2001, pp. 179-180.

As a consequence, it became partly possible to treat this creative activity, formerly a variable that was non-measurable or, at least difficult-to-measure, as kinds of produced abilities and talents, which no longer can be reserved to a few chosen prodigies. As R. Florida puts it, creativity represents an ability specific to every man, although to different degrees⁵⁵. This opened the opportunity of interpreting select elements of standard labour input as a stock of creative or intellectual capital, which originally is traced back to the propensity to risky and innovative behaviour, as often seen among entrepreneurs, and to creative activities performed by artists. As D. L. Rubenson and M. A. Runco pointed out, creative capital conception "postulates the existence of creative potential for each individual as the product of initial endowments and active investments in creative ability"⁵⁶. Moreover, just "like investments in education, the pursuit of creativity is based on consideration of costs (including psychic and temporal) and the expected benefits"⁵⁷. This type of model of individual investments in one's creativity was supposed to explain not only economic growth, but also differences in position on the labour market and wages.

Among numerous controversies around creative capital, one can point out two major difficulties. The first one is the problem with measuring creative capital as it is still hard to find what should be a common measurement unit for heterogeneous knowledge and creativity. A question arises: what stock of creativity, knowledge, and idea are we talking about? Moreover, as we do not know whether creativity is a homogenous magnitude, how can we state that there is more or less of it? Even if we assume that creativity can be uniform, how does one attribute proper weights in a process of measuring the annual stock of a nation's knowledge to ideas created, for example, in the chemical industry, insurance business, or in literature? It would be trivial to take as weights market prices obtained from the sale of material and non-material effects of implementing those ideas. In this context the question of creativity formation becomes crucial. Certainly, we cannot ignore the importance of individual creativity,

⁵⁵Florida Richard, *Narodziny klasy kreatywnej*, Narodowe Centrum Kultury, Warszawa 2010, p. 51.

⁵⁶Rubenson, Daniel L., Runco, Mark, *The psychoeconomic approach to creativity*, *New Ideas in Psychology*, 10(2)/1992, p. 131.

⁵⁷*Ibidem*.

which, according to R. Frydman and M. Goldberg⁵⁸, is one of the features of human behaviour, but at the same time is one of the most intangible among its characteristics. Even, if there was a consensus concerning measuring creativity, a second, even more serious, objection can still be raised – the one concerning conceptual clarity of the notion of creative capital.

CONCLUSION

The paper attempted to show that all concepts of human, social and creative capital were not enriched enough to take into account all inalienable peculiarities of work. These peculiarities go far beyond trivial remarks, commonly acknowledged in the standard economic theory, that labour [power] is embodied in human beings. It turns out that the same can be said about stocks of human, social or creative capital. Instead, the line of defence against formal capitalisation of the concept of work could be based on the general argument (presupposition), according to which it is not important what human beings nominally own (possess), but rather what human beings really do (work), either on the labour market, or within the household, or within the framework of informal community or neighbourhood.

That is why the concepts of labour-power, the ability to work, human, social or creative capital all refer to the static state of affairs and to reality of tangible or intangible objects. Of course, even within the capital theory as applied to labour process, there is room for dynamic activity: spending time on-the-job in a productive manner, exercising one's labour-power, investing in human, social or creative capital, learning by doing, and so forth. All uses of various capital-like concepts in the labour theory can contribute, of course, to increasing adequacy of economic analysis of the labour market processes. This is the reason why the notion of capitalisation used in this paper was not applied in a pejorative sense. After all, it can be interpreted as a product of theoretical attitude undertaken in order to quantify previously immeasurable or difficult-to-measure components of the traditional concept of labour-power and hours-worked. However,

⁵⁸ Frydman Roman, Goldberg, Michael D., *Ekonomia wiedzy niedoskonałej. Kurs walutowy i ryzyko*, Wydawnictwo Krytyki Politycznej, Warszawa 2009, p. 11.

it is well known that there is sometimes a huge discrepancy between theory and practice, between stating formal requirements to the scientific concepts and fulfilling them in the conducting of research. If these formal conditions are not met, many difficulties may arise. In order to avoid employing the concept of capital only as a persuasive metaphor or ideological key, capital should be defined in a manner which meets, to a satisfying degree, requirements of empirical validity, theoretical clarity and measurability.

It seems that the propensity to redefine some basic economic concepts, driven by the goal of scientific progress in economics, will always be present. Evolution of concepts is unavoidable and can be described as an example of a semantic shift within economics, which, in turn, is related to the changing scope and subject matter of the discipline. Our investigation concentrated on one example of that shift - the shift hidden behind the capitalisation of the concept of labour within the economic theory. Besides, one should take seriously the following statement by J. Stiglitz: "if one didn't know better, it might seem as if the fundamental propositions of neoclassical economics were designed to undermine the rights and position of labour"⁵⁹. This opinion can be interpreted in terms of reactions to treating labour as another factor of production, which does not have to be distinguished from any other capital assets or intermediate commodities. Neoclassical economics seems to intentionally ignore the specific nature of labour by underlining the object-related aspects of labour at the expense of subject-related aspects, which are more difficult to quantify or formalise. Moreover, it seems to assume that being a worker "is to choose (and carry out) a consumption plan made now for the whole future, i.e., a specification of the quantities of all his inputs and all his outputs"⁶⁰. One of the consequences of this assumption is that a situation in which "worker could sell all of her future labour at once. If sold to one buyer, it would essentially be the slavery contract"⁶¹. Yet, as P. Samuelson put it, "since slavery was abolished, human earning power is forbidden by law to be capitalized. A man is not even free to sell himself; he must rent himself at a wage"⁶². Even if possi-

⁵⁹Stiglitz Joseph, *Democratic development as a fruit of labor*, Keynote Address Industrial Relation Research Association, Boston January 2000, in: http://www2.gsb.columbia.edu/faculty/jstiglitz/download/2000_Democratic_Development_KEYNOTE.pdf, [access 12.05.2008].

⁶⁰Debreu Gerald, *Theory of Value*, John Wiley & Sons, New York 1959, p. 50.

⁶¹Stiglitz Joseph, *Democratic development as a fruit of labor...*

⁶²Samuelson Paul, *Economics*, McGraw-Hill, New York 1976, p. 52.

ble, it is not allowed to sign a labour contract on the basis of which one can “sell all of one’s present and future labour services”⁶³. Even it were not forbidden by the law, it would be, in fact, impossible or intractable to measure the real value of one’s professional life-long work.

Moreover, J. Stiglitz in his critique of the neoclassical interpretation of labour goes even further, claiming that some of the theoretical propositions of the neoclassical school seem to “eviscerate the rights and positions of workers”⁶⁴. When one wants to analyse labour in a way different from reducing it to a technical factor, intermediate commodity, capital good, wage bundle, or time-unit, a different methodological value judgement has to be made.⁶⁵ One may base this methodological value judgement on different material premises, for example: an incomplete labour contract, which “determines not only who bears the residual risk, but who has residual control rights—the rights to take actions not specified in the contract”⁶⁶, or the fact that earning money from employment is still the most important source of income for a major part of every developed society and a relative measure of individual welfare.

Of course, for many reasons there is no return to the classical theoretical representations of labour and worker, at least, to that according to which labour was treated as a cornerstone and source of the wealth of nations, while a worker was seen as an actor entitled to the fruits of economic development. The semantic shift related to the concept of labour and worker was partly due to the change in the main characteristics of the modern economy. But it is still very informative to take into account the inalienable peculiarities of work when comparing labour with capital, even if it means facing the labour composition problem. It becomes even more important when one notices that the concept in question is undergoing formal capitalisation. It does not mean that the concept of labour is devoid of any analytical problems. However, one has to pay attention to the tendency characteristic for a part of the economists’ community to reduce the importance of the concept of work, probably in reaction to the fact that previously this notion was normatively overloaded. Still, one gets the uneasy feeling that the evidently favoured concept of capital is also

⁶³Stiglitz Joseph, *Democratic development as a fruit of labor...*

⁶⁴Ibidem.

⁶⁵Bowles Samuel, Gintis Herbert, *The Labor Theory of Value and the Specificity of Marxian Economics*, in: (ed.) Resnick S., Wolff R., *Rethinking Marxism. Struggles in Marxist Theory*, Autonomedia Press, New York 1985, pp. 34-35.

⁶⁶Stiglitz Joseph, *Democratic development as a fruit of labor...*

undergoing transformation into a kind of metaphor which can start to live its own life. It is ironic that the concept of capital previously applied as the one devoid of weaknesses pertaining to the concept of work, is entangled in ambiguities. The question is: whether the capitalisation of the concept of work in the economic theory is or is not another example of resolving theoretical problems by assumption rather than by analysis?

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