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Neoliberal epistemology – from the impossibility of knowing to human capital

Abstract *Today's discussions on education policy mostly consist of uncritical shuffling of allegedly neutral and merely technical or practical notions such as life-long learning, learning to learn or problem-solving and are based on similarly uncritical acceptance of socio-economic theories of the knowledge society, which is supposed to present an objective framework of education reforms. The aim of this article is to sketch the history of mentioned notions and to present a critique of theories of the knowledge society through an analysis of its tacit political content. To this aim, we took upon early neoliberal epistemology (Hayek and Polanyi) as well as its transition towards theories of human capital (Drucker and Machlup).*

63

Keywords: *knowledge, neoliberalism, epistemology, human capital, knowledge society*

Most critical discussions on neoliberalism focus on its economical aspects and policies, such as fiscal austerity and various liberalisations and privatisations. Those are usually unequivocally condemned, while, on the other hand, mainstream calls for knowledge society or knowledge-based society as an alternative way out of the crisis are often, even in the left-wing literature, seen in a much more approving light, although they are no less part of a wider neoliberal economic and political project. This is probably due to undue neglect of non-economic aspects of neoliberalism, especially its relation to “the use of knowledge in society” and its epistemology in general. A survey of key early neoliberal thinkers and ideas on how knowledge is (and ought to be) socially produced, distributed and used, shows that neoliberal economic doctrine is inseparable from its basic epistemological theories and presuppositions. While the negative aspects of neoliberalism (budget cuts, austerity) can certainly be criticised without regard to its epistemology, such neglect prevents full comprehension of the positive, or, in Foucauldian terms, politically productive aspects of neoliberalism as a technology of power and overlooks the necessary connection between its economic, political and “knowledge-based” dimensions.

Contemporary neoliberal theories of social knowledge can be broadly divided into theories of knowledge-based economy and/or society on the one hand, and theories of human capital on the other. While their historical paths and institutional settings do not always coincide, they still share a common origin – mid 20th century polemics on economics and epistemology that set early middle European neoliberal intellectuals apart from neoclassical economics and forged a distinctly neoliberal view of a relation between knowledge and economic (and broadly social) conduct, a view, which is becoming increasingly influential in contemporary educational, social and economic policies.

Hayek's epistemological turn

64

Friedrich von Hayek's contribution to neoliberal epistemology began near the end of the socialist calculation debate, which took place in Vienna in the 20s and the 30s. The opposing sides were socialist economists, who were – rather than strictly Marxist – logical positivists, and early neoliberals. The topic of the polemic was rationality of central planning as opposed to allegedly anarchic free market.¹ The most successful representative of the intellectual Left, Hungarian economist Oskar Lange, succeeded to (at least in theory) prove, using the neoclassical and not a Marxist methods and argumentation,² socialist central planning to be more rational and efficient than free market. Such immanent critique of neoclassical economics presented a severe blow and a challenge for bourgeois economic theory.

In a way, Lange did to neoclassical theory what Ricardian socialists did to the classical political economy – he used its own methods and concepts to develop an immanent critique, whose result is a new theory, which, in opposition to aims and motivations of the original theory, shows the superiority of socialism over capitalism. Hayek's reply to Lange and his comrades was no less ambitious and groundbreaking than was marginalist revolution in response to socialist appropriation of classical political economy, although it did not trigger a new theoretical revolution.

1 We are here interested only in Hayek's contribution. For a more comprehensive and exhaustive accounts of the socialist calculation debate see Paul Cockshott and Allin Cottrell, *Calculation, Complexity and Planning: The Socialist Calculation Debate Once Again* (1993), <http://gesd.free.fr/calculdeb.pdf>; Richard Hull, "The Great Lie: Freedom, Markets and Knowledge", in: Plehwe, Dieter, Walpen, Bernhard, in Neunhöffer, Gisela, *Neoliberal Hegemony*, Routledge, London and New York, 2006.

2 Oskar Lange and Fred Taylor, *On the Economic Theory of Socialism*, Augustus M. Keller Pubs, Fairfield, 1970.

Although still influential as a social and political thinker, Hayek is today regarded a marginal figure in mainstream economics.

The reason why Hayek is, despite his passionate apology of free market and capitalism, today studied only as a peripheral curiosity, is that he was – in order to decide the socialist calculation debate and sweep the carpet from under Lange’s feet – ready to abandon several cornerstone concepts and methods of neoclassical theory. Hayek’s famous text *The Use of Knowledge in Society*³ is as much an attack on socialist ideas on central planning as it is a vindication of certain symptomatic weak points and blindspots of neoclassical theory. The conception of economy as timeless equilibrium, without regard for temporal dynamics of contemporary economies, and the illusion on perfect information on the part of market agents receive Hayek’s heaviest critical barrages. Hayek tried to undermine Lange’s theory at the point where it relied the most on the neoclassical one.

65

Hayek’s case against the alleged superiority of central planning is twofold. Firstly, if we take account of quick and unpredictable changes and a fast tempo of technological innovations in complex contemporary economies, the theory of superiority of central planning crumbles, since it is premised on a view of economy as temporally static. Quick and unpredictable changes, characteristic for contemporary economies, would present an unsurmountable obstacle for any government planning agency since modern tempo of technological innovations requires immediate feedback and corresponding economic adjustments. If individual productive units were to first refer all new information regarding changes in economic environment to central authorities and if the central authorities were to process all of them at the same time, adjust the central plan accordingly, and then feed back to individual productive units, than the process of economic coordination would become too slow and unresponsive for efficient management, causing delays and preventing the smooth functioning of the economy.

Secondly, the presupposition of perfect information on the part of all involved in the economic process is unrealistic. Since the real knowledge of the market agents, even those who do the planning or intend to do so, is imperfect, partial and subjective, we can not simply delegate all knowledge, necessary for efficient functioning of complex economic systems

³ Friedrich von Hayek, “The Use of Knowledge in Society”, in: *Individualism and Economic Order*, University of Chicago Press, Chicago, 1948.

to some, no matter how benevolent, central authority. Instead we, according to Hayek, need a social mechanism, which would be capable of rationally and efficiently connecting the imperfect and fragmentary knowledges of the market agents. Only a price system in the free market is able to achieve that.⁴ Besides, central planning, based as it is on scientific aggregation, can never capture specific, embedded knowledges of merchants and entrepreneurs, knowledges, which are indispensable for quick and up-to-date adjustments to unpredictable economic changes.⁵

66

The price Hayek has to pay for such refutation of Lange's theory of central planning is, apart from rejection of certain basic postulates of neoclassical economics, which brought him eternal exclusion from the pantheon of great bourgeois economists,⁶ also the necessity to leave the theoretical terrain of economics proper and to do something akin to epistemological twist. At some point in *The Use of Knowledge in Society* Hayek no longer discusses economics, but epistemology – what do people know, how do they know what they know, what is the ontological status of knowledge, how is knowledge socially acquired and distributed etc. For Hayek, the market is no longer a mechanism of rational allocation of scarce resources among mutually competing ends, but the most rational processor of economic information and fragmentary, imperfect and subjective individual knowledges.⁷ Such reformulation brought him from the terrain of economics to epistemology and social philosophy.

What are the main postulates of Hayek's epistemology and what are their social and political implications? The main axiom of this pioneer attempt at neoliberal epistemology is that knowledge is by definition fragmentary, imperfect and socially dispersed.⁸ Hayek does not tell whether such ontological state of knowledge is the case only in modern societies – and, as such, has a history – or whether it is a “natural state” or even a part of “human nature.” It just is so. Such conception of the dispersment and fragmentary nature of social knowledge and

4 Friedrich von Hayek, “The Use of Knowledge in Society”, v: *Individualism and Economic Order*, University of Chicago Press, Chicago, 1948, p. 86-87.

5 Friedrich von Hayek, “The Use of Knowledge in Society”, v: *Individualism and Economic Order*, University of Chicago Press, Chicago, 1948, p. 83-84.

6 Ben Fine in Dimitris Milonakis, *From Political Economy to Economics*, Routledge, London in New York, 2009, p. 266-267.

7 Hayek's idea of the market can be better illustrated by Wikipedia than any really-existing market in a strictly economic sense. See Philip Mirowski, “Defining Neoliberalism”, in: Mirowski, Philip, in Plehwe, Dieter (ur.), *The Road from Mont Pelerin*, Harvard University Press, Cambridge in London, 2009, p. 417-428.

8 Friedrich von Hayek, “The Use of Knowledge in Society”, in: *Individualism and Economic Order*, University of Chicago Press, Chicago, 1948, p. 77.

imperfection and punyness of individual knowledges as an ontological *a priori* carries certain important socio-political implications.

Firstly, central planning is not possible. Secondly, to prevent society from falling apart into a chaotic and potentially antagonistic sum of autistic psychotics due to dispersed and idiosyncratic character of knowledge, an objective social institution, capable of integrating and coordinating dispersed and imperfect knowledges, is necessary. For Hayek such institution can only be a free market. Free market and price system are not, according to Hayek, a result of conscious human endeavours, but organic institutions, which have evolved spontaneously, as unplanned by-products of complex interactions of social actions of individuals. Thirdly, any attempt to know more than just a tiny and relatively insignificant fragment of the whole of social knowledge is a sign of dangerous intellectual hubris and uncalled for promethean audacity. Only elect few neo-liberal intellectuals are allowed to pass judgment on knowledge, society, history, life and universe as a whole.⁹ Fourthly, any attempt to to consciously and rationally manage society, that is, to replace the objective domination of impersonal market forces with subjective self-management, can only lead to economic collapse and political totalitarianism.

67

The first implication of Hayek's epistemological position seems to be a rather marginal trigger of a quite more ambitious discussion on social and political order as such. It is not just about central planning – a critique of central planning is for Hayek merely a launching pad for a critique of all promethean and utopian political projects, of which 20th century was abundant. The second implication shows that Hayek's epistemological twist allowed the development and rejuvenation of Adam Smith's quite weak and intuitive thesis of the "invisible hand of the market" into a full scale apology of objective market domination as a constitutive mechanism of social organisation. The third implication is a part of Hayek's life-long project of a critique of continental (French and German) enlightenment or, as he himself prefers to call it, rationalist individualism, which he considers a false individualism.¹⁰ Contrary to continental enlightenment thinkers, Hayek does not see intellectual weakness or immaturity, which prevents the rational mental appropriation of the social whole, as a problem but as a solution. For Hayek,

9 Christian Arnsperger, *Critical Political Economy*, Routledge, London in New York, 2007.

10 Friedrich von Hayek, "Individualism: True and False", in: *Individualism and Economic Order*, University of Chicago Press, Chicago, 1948.

coming to terms with one's own intellectual limitations is a condition of economic efficiency and political liberalism. Such position is quite far from traditional conceptions of democracy, since that presupposes that, for sovereignty of the people to be functional, each person is capable of thinking and deciding on general matters and that therefore individuals are precisely *not* Hayek's psychotics.

68

Fourth implication presents a tacit critique of a thinker, who was not content with merely partial and formal political emancipation, provided for by enlightenment's political philosophy, and sought to expand it also to social and economic matters – Karl Marx. According to Marx, a silent compulsion of market relations presents one the most problematic characteristics of capitalism and because of it he considers capitalism as the last stage of humanity's *prehistory*. Real history will, for Marx, begin only when objective social domination, characteristic of capitalism, is overcome by conscious planned cooperation among freely associated producers themselves. Hayek is in this case as radical as he was when confronting Lange. Just as he is prepared to sacrifice neoclassical economic theory to get rid of Lange, he also throws away the legacy of enlightenment (apart from some idiosyncratically read Scottish representatives) to get rid of Marx.

“... the necessity, in any complex society in which the effects of anyone's action reach far beyond his possible range of vision, of the individual submitting to the anonymous and seemingly irrational forces of society – a submission which must include not only the acceptance of rules of behavior as valid without examining what depends in the particular instance on their being observed but also a readiness to adjust himself to changes which may profoundly affect his fortunes and opportunities and the causes of which may be altogether unintelligible to him. It is against these that modern man tends to revolt unless their necessity can be shown to rest upon ‘reason made clear and demonstrable to every individual.’ Yet it is just here that the understandable craving for intelligibility produces illusory demands which no system can satisfy. Man in a complex society can have no choice but between adjusting himself to what to him must seem the blind forces of the social process and obeying the orders of a superior. So long as he knows only the hard discipline of the market, he may well think the direction by some other intelligent human brain preferable; but, when he tries it, he soon discovers that the former still leaves him at least some choice, while the latter leaves him none, and that it is better to have a choice between several unpleasant alternatives than being coerced into one.”¹¹

11 Friedrich von Hayek, “Individualism: True and False”, in: *Individualism and Economic Order*, University of Chicago Press, Chicago, 1948, p. 24.

For Hayek, freedom means subordinating oneself to objective, impersonal market forces as a lesser evil than totalitarianism, which is supposed to necessarily follow from bolder, promethean ideas of human emancipation. He is less bothered by the idea that people are subordinated than that they might be governed by themselves instead of by objective market mechanism:

“The problem which we pretend to solve is how the spontaneous interaction of a number of people, each possessing only bits of knowledge, brings about a state of affairs ... which could be brought about by deliberate direction only by somebody who possessed the combined knowledge of all those individuals. ... How can the combination of fragments of knowledge existing in different minds bring about results which, if they were to be brought about deliberately, would require a knowledge on the part of the directing mind which no single person can possess?”¹²

According to Hayek, a free person is an ignorant consumerist-entrepreneurial idiot, which wastes no time dwelling on higher truths or grand narratives, but possesses and uses only a tiny socially necessary quantity of specialised knowledge, which allows her to adapt quickly to ever changing economic circumstances without any redundant reflection on rationality and justness of said circumstances. One is no longer required to know why, only how. For everything else, there is the market.

69

Polanyi’s higher principle

As opposed to his perhaps better known brother Karl, Michael Polanyi he was not in favor of socialism and had no reservations against the free market. Quite the opposite – although he was a talented scientist and had a bright career in chemistry ahead of him, the experience of Soviet Union, which he visited in 1935 and where he met with Soviet scientists and even Bukharin – who told Polanyi that in socialism there would be no pure science – , shook him so much that he switched his focus to economic and epistemological questions. He taught chemistry in Manchester, where he escaped from nazism in 1933, until 1948, when he re-oriented himself towards questions closer to the domain of social science, especially those of the role of science in society and the manner in which scientific community is organised.¹³

¹² Friedrich von Hayek, “Economics and Knowledge”, in: *Individualism and Economic Order*, University of Chicago Press, Chicago, 1948, p. 50-54. Since, according to Hayek, human beings do not know much at all, the true subject of genuine social knowledge can only be the market.

¹³ Philip Mirowski, *The Effortless Economy of Science?*, Duke University Press, Durham in London, 2004, p. 75-76.

His biographical trajectory is similar to those of Hayek, Schumpeter, Drucker, Popper, Machlup and other middle European liberal intellectuals who fled from fascism in the 30s to the UK and USA. Just as Hayek he naively thought that anglo-saxon societies would be, as opposed to the continent, contaminated as it was with “open society’s enemies”, a kind of utopias of liberal thought and free enterprise. Upon arriving to UK he was unpleasantly surprised to find out that it was under the strong influence of socialist and Keynesian ideas, that its government is curtailing private entrepreneurial initiative with strong state regulation, and that its economy is based on elements of central planning.

70

Things got even worse for Polanyi – in the 30s and the 40s, UK witnessed the rise of the movement for central planning in science. The key figure of this movement was John Desmond Bernal, British chemist with openly expressed communist sympathies. Bernal’s views on the role of science in society were the opposite of Polanyi’s – he was in favor of rational planning of science and public control over scientific research and against pure and free science, which he saw as anarchic, chaotic and socially irresponsible as the free market. Instead of at last discovering a liberal utopia, Polanyi stumbled upon another Bukharin.

Most of Polanyi’s epistemological works were therefore written against the idea of social control over and rational management of science. This polemic was based on similar arguments as Hayek’s against the central planning in the economy. Polanyi took over Hayek’s underdeveloped thesis about fragmentation and dispersment of social knowledge and gave it a more precise and stringent definition in the concept of tacit knowledge. His views on epistemology and social organisation of science are presented in a most clear and succinct way in his short but important essay *The Republic of Science*, published in 1962.

In the beginning of said essay, Polanyi uses a metaphor of the marketplace of ideas to describe science and claims that science is, just like the market, a spontaneous order,¹⁴ which has developed apart from

14 The concept of the spontaneous order and organic social institutions (present in both Hayek and Polanyi) was inspired by one of the founders of marginalist economic theory Menger. According to Menger, who was also not particularly fond of classic continental enlightenment thought, human beings are imperfect, prone to mistakes and not particularly smart (and do not even have the potential to better themselves). Impersonal, objective social system, such as the free enterprise economy, is supposedly the best that humanity can hope for, since irrational individuals can not consciously create a rational social order, which can only develop as an unintended result of limited private initiatives and individual actions. See Ben Fine

conscious efforts or social planning and is, as such, based on a traditional authority and transfer of knowledge between “masters” and “apprentices”. Any attempt by the state or any other political authority to intervene into science would suffocate its free development, since – as is the case with economy in Hayek’s theory – efficient functioning of science can only be based on free interaction of many personal, tacit and fragmented knowledges, on many independent initiatives, which spontaneously, without a conscious plan, produce the field of science. “Scientific opinion is not an opinion held by any single human mind, but one which, split into thousands of fragments, is held by a multitude of individuals ...”¹⁵ This of course does not mean that scientific world is without rules and left to the wholly arbitrary impulses of the individual researchers, but rather that it is the traditional system of authority, based on meritocratic hierarchies and professional ethics, that can better deliver order in science than state planning.

71

Even though Polanyi uses Hayek’s model, made as it was to illustrate the functioning of the free market in the economy, he does not advocate the subsumption of science to the economy. His defense of autonomy and purity of science is unwavering. For Polanyi, science can be efficient and productive only inasmuch it exists only for science’s sake and does not submit to any external criteria or dictates, even if they are capitalist or marketlike. Contrary to Hayek, for whom free market represent the highest and most perfect form of social organisation and ideal institution, which all other social institutions ought to imitate, for Polanyi both free market and pure science represent only two specific and separate concrete manifestations of something that he calls the higher principle: “The self-co-ordination of independent scientists embodies a higher principle, a principle which is reduced to the mechanism of the market when applied to the production and distribution of material goods.”¹⁶

This is the real breaking point of Polanyi’s epistemology and philosophy of science. An analysis, which at the first glance looks like a simple application of Hayek’s model onto new social area and which at first uses the metaphor of the marketplace of ideas, stops short of its last logical consequence (the definition of science as a subspecies of the market)

in Dimitris Milonakis, *From Political Economy to Economics*, Routledge, London in New York, 2009, p. 264.

15 Michael Polanyi, *The Republic of Science* (1962), http://sciencepolicy.colorado.edu/students/envs_5100/polanyi_1967.pdf, p. 4.

16 Michael Polanyi, *The Republic of Science* (1962), http://sciencepolicy.colorado.edu/students/envs_5100/polanyi_1967.pdf, p. 10.

and, to remain loyal to its original refusal of Bukharinism and Bernalism, rejects any interference with and attempt to control science, even in its market motivated guise. Instead of an expected (and nowadays quite usual) call for a tighter connection between science and the economy we can catch a glimpse of a much deeper and frightening aspect of neoliberal political philosophy – a higher principle, which discards all classical notions of enlightenment and democracy and is also not limited to economy proper; a vision of a society without collective ideals and plans for collective political emancipation, where half blind and intellectually challenged individuals can only hope that their chance encounters will someday spontaneously lead to something at least close to a rational social order: “... the pursuit of excellence offers no part to the popular will and accepts instead a condition of society in which the public interest is known only fragmentarily and is left to be achieved as the outcome of individual initiatives aiming at fragmentary problems.”¹⁷

72

From Polanyi's case study we can also see how strongly neoliberal ideas preside over what is nowadays considered left wing viewpoints in struggle against commercialisation of science and higher education. Is it even possible to conceive of pure and autonomous science, which is today often idealised as a kind of a counterweight to the capital's pressure to subjugate the university, without the metaphor of the marketplace of ideas and the idea of spontaneous coordination of free and independent research initiatives? Can autonomy of science be thought beyond the higher principle, which might prove useful as a defense against most vulgar attempts to instrumentalise science for commercial purposes, but also presents the danger of capitulating to liberal ideology – or do we have something to learn from Bukharin's decisive rejection of pure science? Can an alternative way of thinking about the role of science in society be based on an idea of militant and promethean theoretical production, which would allow us to emancipate ourselves precisely from the idea and practice of the higher principle? Absolute refusal of any kind of connection between the university and the economy is not a political, but a moral stance, which fails to take into account that it is the workers who present most of the “economy” and source of all new value and that the connection between the university and the economy – once we relax the assumption that the economy means solely capital – does not necessarily mean subordinating the first to the latter, but can

17 Michael Polanyi, *The Republic of Science* (1962), http://sciencepolicy.colorado.edu/students/envs_5100/polanyi_1967.pdf, p. 11.

also potentially mean education needed for social and political emancipation of the working class.

Already in 1973, a decade after Polanyi's intervention, american sociologist Daniel Bell wrote approvingly about the invasion of economic principles in science,¹⁸ inclusion of science into economy through institutionalisation of research¹⁹ and about the development and future possibilities and methods of the planned technological and scientifically encouraged economic growth.²⁰ Principled rejection of central planning was relevant for liberal capitalism only inasmuch as planning presented the "competitive advantage" of socialisms and regulated versions of capitalism. In 1973 it seems that the polemic about the socialist calculation truly became anachronistic – central planning, rationally managed technological development and conscious integration of science into economy have become a capitalist reality, causing passionate denunciations of central planning *a la* Hayek and Polanyi to become marginal historical curiosities. Liberal capitalism suddenly, when both socialism and keynesianism found themselves in serious crisis, had no problem with central planning. The decisive question is thus not pure or applied science – none of them carries any predetermined political prefix – but either applied science for capital or for labour, whereas pure science presents only an intermediate ideological stop-gap when the political role of science in society is being questioned and contested.

73

Today, historical result of three decades of really existing neoliberal capitalism is a partial abandonment of classical democracy and the development of new, hybrid political division of labour, where technocratic elites do the capitalist planning and the higher principle of fatal ignorance and constant adjustments to rapidly changing circumstances holds true only for the working class. As the capitalist planning develops into its contemporary form, traces of Hayek's and Polanyi's ideas are transplanted to the "civil society" and, when theories of human capital assume a central place in neoliberal epistemology, to the area of (especially higher) education.

18 Daniel Bell, *The Coming of Post-Industrial Society*, Basic Books, New York, 1973, p. 174.

19 Daniel Bell, *The Coming of Post-Industrial Society*, Basic Books, New York, 1973, p. 196.

20 Daniel Bell, *The Coming of Post-Industrial Society*, Basic Books, New York, 1973, p. 196-212.

Education as capital investment (Drucker)

Peter Drucker is otherwise better known for his contribution to management studies, but in his book *Landmarks of Tomorrow* (1959) he also invented the term “knowledge worker” and laid out important groundwork for later theory of human capital, which was subsequently – although without explicitly referencing Drucker – developed by Schultz, Becker, Friedman and others. Drucker’s theory of knowledge workers, knowledge society and human capital is important because of its unusual reinterpretation of the economic history of the West and its political implications.

74

Drucker’s economic history is an “education based” reinterpretation of the classical theories of consecutive changes in social modes of production up until capitalism. Drucker replaces classical schema: hunting and gathering society → ancient slaveholding society → feudalism → capitalism, whereas basic heuristic devices are relations of production, by a simple schema, depicting the relation between educated and uneducated part of the population, which means that, according to Drucker, there were only two modes of production in hitherto existing history.

The first includes not only ancient and feudal societies, but also modern capitalism up until the 50s. In this mode of production, productive work is done by a subordinate part of the population – slaves, serfs, industrial proletarians – , which is ruled by a non-working and non-productive educated elites.²¹ Up until the mid 20th century economic systems were always based on the restricted access to education, whereas knowledge and education were seen as a privilege of the elites and as a social opposite of productive manual labour. A strict social division of labour was imposed where productive work was manual and intellectual work was unproductive, part of aristocratic leisure.

Socio-economic situation in late 50s signals the beginning of transition into new era, the knowledge society. According to this theory, the knowledge society is the first really new mode of production – knowledge workers and knowledge itself is becoming increasingly productive and education is, subsequently, not anymore the privilege of the rich but an economic necessity (since economies insufficiently based on knowledge are less productive and therefore uncompetitive on the

²¹ Peter Drucker, *The Landmarks of Tomorrow*, Transaction Publishers, New Jersey, 1996, p. 119.

world market). The main reason for this is, according to Drucker, the development of industrial automation and new communication and information technologies. The first made classical manual work increasingly redundant, while the latter established commercial services as the new paradigm of productive work: “We are undergoing the educational revolution because the work of knowledge is no longer unproductive in terms of goods and services. In the new organization it becomes the specifically productive work. The man who works exclusively or primarily with his hands is the one who is increasingly unproductive.”²²

This change was not caused by popular demands for free access to education, which used to be a privilege of the elites (in fact, Drucker completely ignores such political events), but by economic necessity. Drucker’s theory is technologically determinist in posing technological development as a “motor” of history. It was technological development that supposedly brought contemporary societies to a point where they can no longer afford to restrict the access to education, since in high-tech capitalism knowledge becomes the only true capital,²³ and the only way of valorisation of that capital is granting the masses the access to education. Such technologically determinist approach allows Drucker to avoid potentially democratic political implications of his theory, since popular masses could, for example, use their historical educational deprivation as a basis for a demand to access to education as an unconditional and universal right. But Drucker, as indeed most theorists of the knowledge society, is not concerned with just any type of knowledge or education, but only with a specific type of mass education, which can increase productivity and competitiveness of a given national economy. The conclusion is therefore necessarily cynical – after centuries of them being denied the access to education and being condemned to hard and mind-numbing manual work, we have to grant the popular masses the access to education, but only to once again make them productive for the economy, although this time in a different way. Broader access to education is in this case not seen as a possibility for intellectual and political emancipation of the masses, but as a strictly economic measure, which only changes the relation between manual and intellectual component in the technical composition of the

²² Peter Drucker, *The Landmarks of Tomorrow*, Transaction Publishers, New Jersey, 1996, p. 120.

²³ Peter Drucker, *The Landmarks of Tomorrow*, Transaction Publishers, New Jersey, 1996, p. 120.

workforce, but not the relations of economic subordination and exploitation themselves.

76

In a certain way, Drucker's theory of an imminent transition into knowledge society also anticipates later educational policies, which are today carried out by European Union²⁴ or World Bank.²⁵ Latent populism, inherent in his thesis on the history of education in the West as a history of exclusivity and elitism, does not lead to a demand for a democratisation of and an universal access to education, but instead to a demand for a privatisation of education. Education used to be, according to Drucker, a privilege of elites, financed from the public budget. In other words, the state used to take away from already poor and exploited workers a part of their hard earned income to be able to finance intellectual pursuits and pleasures of the few. In such historical circumstances, education was an unproductive social cost, since the education of the aristocracy or classic bourgeoisie did not feed back into the economy and was irrelevant for its productivity and competitiveness. Today, education is, in sharp contrast, "the central capital investment, the highly educated people the central productive resource in such society."²⁶

This means that the mode of financing of education has to change. If the society is to allow broad access to education this also presupposes large increases in its cost. Therefore it would be, as Drucker suggests, wise to also attract private financiers and donors. Besides, no proponent of open and free society would want the state to control society's basic capital investment – the state would, due to a lack of market incentives and discipline, mismanage the education finances, and its control over social knowledge and thought would certainly lead to totalitarianism.²⁷ "... education, especially higher education, has become the central capital investment of an educated society, and can therefore no longer be regarded and financed as a luxury, as a social service or as a cultural ornament."²⁸ Drucker's vision of an alternative is a kind of education-

24 European Commission, *Europe 2020 Flagship Initiative: Innovation Union*, Brussels, 2010.

25 World Bank, *World Bank Education Strategy 2020*, <http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTEDUCATION/0,,contentMDK:22474207~menuPK:282402~pagePK:210058~piPK:210062~theSitePK:282386,00.html>.

26 Peter Drucker, *The Landmarks of Tomorrow*, Transaction Publishers, New Jersey, 1996, p. 124.

27 Peter Drucker, *The Landmarks of Tomorrow*, Transaction Publishers, New Jersey, 1996, p. 133-134.

28 Peter Drucker, *The Landmarks of Tomorrow*, Transaction Publishers, New Jersey, 1996, p. 137.

al civil society – a network of privately financed, but not necessarily profit oriented, non governmental organisations, offering educational services.²⁹ His other concrete suggestion are private individual contracts on returns on human capital, which differ in an important way from regular students' loans. Human capital contracts are investments by individual or institutional investors in individual students' human capital, whereas investors pay for the costs of investee's education in return for a right to appropriate a certain share of her future earnings.³⁰ Such individualisation of education costs and their transformation into capital investments "would, in one stroke, solve the financial problems of higher education and at the same time prevent government control of the central capital investment of the economy."³¹

Drucker concludes his discussion of higher education policies in a knowledge society with delirious invocations of excellence and personal growth, during which he also takes some time to address potential criticisms of his economic and technologically deterministic views on education in late capitalism. But what Drucker refutes are only humanistic critiques, which were, truth be told, never in short supply ever since "the knowledge society" began to take shape. Drucker shows that even if we consider education a capital investment that doesn't mean that general education or basic research are bound to disappear and that the only knowledge left will be knowledge, which is directly useful for commercial purposes. With a degree of sarcasm we could say that Drucker manages to demonstrate the misery of such critique *avant la lettre*, before they even began in earnest.

The problem is, after all, not that neoliberal education policies (willingly or unwillingly) destroy basic research (since basic research is way too important for long term capitalist planning) or that they strip education of creativity and personal growth (quite the opposite, creativity and personal growth present the main ideological catch phrases of neoliberal education reforms).

The main problem with neoliberal education reforms lies in its deep reaching transformation of the educational field, which can, even after

29 Peter Drucker, *The Landmarks of Tomorrow*, Transaction Publishers, New Jersey, 1996, p. 135.

30 For a critical analysis of human capital contracts see Morgan Adamson, "The Human Capital Strategy", *Ephemera* 4 (2009).

31 Peter Drucker, *The Landmarks of Tomorrow*, Transaction Publishers, New Jersey, 1996, p. 136

78 it is successfully reformed, still include both basic research and personal growth, but from which any theory, critical towards capitalism as such, not only its particular excesses, is systematically excluded. So the problem is not so much the often supposed neoliberal eradication of basic research or individual creativity (which would be suicidal considering capitalism's continuing dependence on both), but the deep depoliticisation it imposes on both individual scientists and the university as an institution. Subjects, emerging from neoliberal schools, can well be creative, developed as persons, and intellectually sophisticated, but they are still politically conformist and "adjustable" future "stakeholders", who see life as an economic challenge and no longer believe in a possibility of a collective political emancipation. A critique of neoliberal school policies is therefore incomplete if it includes only a resistance against the budget cuts and "rationalisations" or if it articulates itself exclusively as a defense of traditional humanistic notions of intellectual "excellence". To be politically productive, it has to also include a critique of individualistic and depoliticising neoliberal *Weltanschauung* and the attempts to bring the "higher principle" into educational field.

Knowledge as human capital (Machlup)

Fritz Machlup was a less known, although no less important, theoretician of human capital than Nobel prize winners Gary Becker and Milton Friedman. His biography is similar to Hayek's or Polanyi's: he fled from fascism and migrated to the USA in 1933 and joined the Mont Pelerin Society after the war. Unlike them though, he was not primarily an academic, but a practical businessman. His *magnum opus*, a trilogy *Knowledge: Its Creation, Distribution, and Economic Significance*, is dedicated exclusively to the economics of knowledge. In the first part, *The Production and Distribution of Knowledge in the USA*, which came out in 1962, the same year as Polanyi's *The Republic of Science* and two years before the human capital theory's landmark book *Human Capital* by Gary Becker, Machlup invented and popularised the concept of the information society. For our present purposes, however, the most important part of the trilogy is the last one, *The Economics of Information and Human Capital*, where he, based on the work done by Hayek and other early neoliberals, outlined a specifically Austrian (as opposed to Chicagian) theory of human capital, with which he completed Hayek's protoepistemological intuitions and created a full-fledged and mathematised economic theory, which also includes concrete proposals for

education policy. With Machlup, the problematic of knowledge and its production and distribution returns to the field of economics and at the same time transplants itself to the area of education policies.

Machlup's discussion of human capital begins with a confirmation of the main postulates of Hayek's social philosophy, whereas what counts is the adjustment to constant changes, in which spontaneous private coordination in the free market system is supposedly superior to central planning.³² Similarly to Hayek, Machlup also believes that freely or spontaneously determined market prices are the most efficient transmitter of economic information. That is so mainly because of the simplicity of the price system in free markets – to coordinate even the most complex economic activity, one has to know only simple quantities, encapsulated in a price, and does not need to bother with qualitative details about the production process or consumer preferences. Hayek's critique of central planning thus presents a general framework for Machlup's specific theory of human capital.

79

Machlup continues with general definitions of capital and investment – investment is any financial input which potentially brings positive financial returns,³³ whereas capital is everything that enables said returns.³⁴ If we define capital and investment in such a general way, we can also see the education process as an accumulation of capital, since better educated people receive higher incomes and the difference between average and higher incomes, accruing to better educated employees, can be seen as a positive return on an investment in human capital.

But such a perspective is possible only in specific historical circumstances. Whereas in 1959, in times of mass protests, demanding access to education as an universal democratic right, Drucker still had to hide behind technological determinism, in 1984, when *The Economics of Knowledge and Human Capital* came out, neoliberal transformation of the university was already a more or less accomplished fact. It is only in a historical situation when, on the one hand, university is becoming more closely integrated into an economy, and, on the other hand, workers' and other progressive social movements are being vigilantly

32 Fritz Machlup, *The Economics of Information and Human Capital*, Princeton University Press, Princeton, 1984, p. 191.

33 Fritz Machlup, *The Economics of Information and Human Capital*, Princeton University Press, Princeton, 1984, p. 491.

34 Fritz Machlup, *The Economics of Information and Human Capital*, Princeton University Press, Princeton, 1984, p. 428.

repressed, that one can see the road to higher wages exclusively in terms of investments in individual human capital, and not, for example, in terms of mass strikes and political pressure for more just and equal economic redistribution. In a certain point in history “life-long learning” as a permanent accumulation of personal human capital comes to the fore and collective political education through practices of resistance moves to the second stage.³⁵

80

Most theoreticians of human capital readily admit that human capital is still a special sort of capital, which is distinguished from, say, machines, by the fact that it can not be separated from its human carrier/owner. In practical terms this means that putting theory of human capital into political practice means an even further subordination of labour to capital. If in the past, before the advent of the “knowledge society”, capital could only count on worker’s hands and a certain part of her intellectual capacities, necessary for efficient carrying out of certain working tasks for a certain time, in neoliberalism this availability of worker’s “body and soul” for capital’s exploitative needs is extended to most, if not nearly all, human intellectual, cognitive and affective capacities. In temporal terms, working time tends to extended beyond actual work into all kinds of informal, “life-long learning” practices, since the more of our “free” time we dedicate to acquiring additional skills and competences, the better our comparative advantage on the labour market is supposed to be. Personal space and time, once available to capital only indirectly, through the consumption of everyday consumer goods and mass culture, are becoming increasingly dedicated to direct increases of the productivity and “employability” of the workforce.

Accumulation of “human capital” does not transform a worker into a capitalist and class antagonisms do not soften up or disappear with the coming of the knowledge society. If anything, they are becoming even harsher and more pronounced. “Human capitalist” tends to be even more subordinated, controlled and exploited than classical industrial proletarians.

We could oppose the narrow economic and individualistic view on education as an accumulation of human capital from the perspective

35 See also critiques of human capital theory in Samuel Bowles in Herbert Gintis, “The Problem with Human Capital Theory”, *The American Economic Review* 2 (1975); D. W. Livingstone, “The Limits of Human Capital Theory” (1997), <http://www.irpp.org/po/archive/jul97/livingst.pdf>; Matthijs Krul, *A Critique of ‘Human Capital’ Theory*, <http://mccaine.org/2010/10/11/a-critique-of-human-capital-theory/>.

of the society as a whole – if education is more than a sum of individual struggles to gain competitive positions on the labour market, than public financing and control of education are justified. Human capital theorists did indeed dedicate a lot of space in their discussions to a relation between individual and social aspects and returns to investments in human capital in both their technical (how to measure both) and political dimension (to what extent should education be publicly organised and financed and to what extent should the government be in charge of education policy). Machlup solves this question in an elegant and peculiarly neoliberal way – for him, the main problem with pinpointing the exact extent of social interference in education policy is that in the open and free society there is no such thing as a society.³⁶ Or, if we put it in Polanyian terms, if social problems reveal ourselves to our limited cognition only in a partial and fragmentary way and if there is no central political instance, which could or should decide what the public interest is, than the basic argument for collective democratic control over education is also invalid. If there is no society in a strong sense, but only intellectually challenged individuals (and their families), who freely stumble around according to their private plans and purposes, than the only way to truly serve the public interest is to keep the society open (and, at the same time, prevent any totalitarian social and political tendencies) by implementing the “higher principle” in any way possible and by any means necessary, in all public institutions and in all social areas.

81

Machlup does indeed recognise the inadequacy of conceiving of educational policy in a strictly economic terms, but justifies it with the necessity of adaptation to objective economic laws since they will assert themselves in any case, independently of government’s good intentions. Any state decision to finance education outside of strictly economic considerations – to, for example, encourage general social intellectual development as such – can only retard economic growth and development.”³⁷

Such formulations just go to show that critiques of neoliberal education policies are tragically inadequate unless we put them into a wider context of a critique of capitalism as such. Despite frequent attacks on the state role in education, state is, at least in neoliberal practice if not

36 Fritz Machlup, *The Economics of Information and Human Capital*, Princeton University Press, Princeton, 1984, p. 441.

37 Fritz Machlup, *The Economics of Information and Human Capital*, Princeton University Press, Princeton, 1984, p. 597.

82 always in neoliberal theory, still seen as a main actor in education reform. The state is not withdrawing from education, but is actively organising a transition from classical models of university to a network of project based problem-solving “teams”, which are coordinated and disciplined by a mechanism of market competition. The question is not so much to what extent should the state interfere with education, but in what way should such interference be carried out – in a way, allowing for democratic deliberation and participation, or as authoritarian capitalist planning. In a historical situation, where state actively carries out neoliberal educational policy, the main political choice is between a vision of education as a potential space of theoretical production and political imagination, enabling collective human emancipation, against strictly economically conceived education as a training ground for life-long individual adjustments to the objective domination of the “higher principle” (in Margaret Thatcher words, changing of the people’s souls).

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Primož Krašovec

Neoliberalna epistemologija – od nemogućnosti znanja do ljudskog kapitala

83

Sažetak

Današnje rasprave o politici obrazovanja koje treba da predstavljaju objektivni okvir obrazovnih reformi uglavnom se svode na nekritičko mešanje navodno neutralnih i čisto tehničkih ili praktičnih pojmova kao što su: doživotno obrazovanje, učenje učenja ili rešavanje problema i pri tom se temelje na jednako nekritičkom prihvatanju socio-ekonomskih teorija o društvu znanja. Cilj ovog rada je da skicira istoriju pomenutih pojmova i da kroz analizu njihovog prikrivenog političkog sadržaja ponudi kritiku teorija o društvu znanja. U tu svrhu, dovedemo u pitanje ranu neoliberalnu epistemologiju (Hajek i Polanji) kao i njenu tranziciju ka teorijama ljudskog kapitala (Druker i Mahlup).

Ključne reči: znanje, neoliberalizam, epistemologija, ljudski kapital, društvo znanja