

THE THESIS OF COGNITIVE CAPITALISM. NEW RESEARCH PERSPECTIVES. AN INTRODUCTION

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ABSTRACT. This Special Issue, *The Thesis of Cognitive Capitalism. New Research Perspectives*, proposes a set of contributions that presents some of the research lines organized around the thesis of cognitive capitalism, a project that insists upon rereading the historical development of the capital/labor relation from the point of view of the knowledge economy. In this introduction we outline a method of analysis in terms of cognitive capitalism by insisting on the critique of conventional theories of both the *economics of knowledge* and the *knowledge-based economy*. This is done in order to explain the role of knowledge in the long-term development of capitalism, while providing a Marxian theoretical map of historical time in the process.

Keywords: cognitive capitalism, knowledge-based economy, theory of value.

1. From knowledge-based economy to cognitive capitalism

At the beginning of the second millennium, a group of scholars coordinated by Bernard Paulré proposed to the attention of the so-called French Regulation School the notion of “cognitive capitalism” to specify the

transformations that affected, after the crisis of Fordism, the regime of growth that characterizes the developed economic systems. As suggested by such group of scholars:

The new mode of regulation must be characterized in terms of cognitive capitalism. We affirm the idea that the dynamics of transformation which dominate the waged societies is characterized by the fact that today growth is mainly based on knowledge. [...] We move beyond the research program on post-Fordism, in fact we develop the hypothesis of a new phase of capitalism that corresponds with the exhaustion of industrial capitalism and the transition to cognitive capitalism. (Corsani et alii 2002: 1. Our translation).

During the first decade of the new millennium the cognitive capitalism hypothesis opened up new research perspectives. Following Paulré (2004), the objective of cognitive capitalism theory is to address the role of knowledge in understanding the evolution and transformation of contemporary capitalism. As Vercellone (2007: 14, note 3) stresses, i) the notion of ‘capitalism’ defines the enduring element in the change of the structural invariants of the capitalist mode of production; ii) the term ‘cognitive’ emphasises the new nature of labor on which value production in new capitalism rests.

To understand the specificity of the cognitive capitalism thesis, we must first of all dissipate the theoretical misunderstanding that assimilates it to a variation on the theories of knowledge-based economy. To do so, in this section we will begin by characterizing certain fundamental limitations of the contemporary theorizations of knowledge. Subsequently, we will show that the thesis of cognitive capitalism rests on a method of analysis that is able to perceive the meaning and stakes of the current mutation of the place of knowledge in the economy, on the basis of the primary role played by historical transformations in the capital/labor relation.

1.1. Limitations of the contemporary theories of knowledge

Contemporary theory perceives knowledge either as the object of a new sub-discipline (the economics of knowledge) or as the index of a shift to a new stage of economic development (the knowledge-based economy). Two series of closely associated critiques can be addressed to these theorizations.

The first critique concerns the tendency to approach the question of knowledge by starting from general theoretical models that would be valid at all times and in all places, and are founded on a separation between the

economic domain and that of social relations. This tendency to reject the historicity of economies is particularly clear in Howitt's work. In his view (1996, 2004) nothing really new characterizes the place of knowledge in economic growth. The only real novelty resides in the current capacity of theory to better discern its functions and primary role, neglected by former theories of growth. In short, the historical novelty is not to be found in a new phase of capitalism or even in the shift to a knowledge-based economy. It is to be found exclusively in the formation of an economics of knowledge, that is, of a sub-discipline of the science of economics specialized in the study of the mechanisms governing the production, distribution and appropriation of knowledge. This is the way Howitt (2004) interprets the birth and development, through gradual improvements, of the theories of endogenous growth, without any reference to the historical transformations in the accumulation of capital and the wage relation. In this kind of conception the theoretician seems to ignore or deny the importance of the underlying structural changes that provide the foundation for the emergence of a new field of research.

The second critique concerns the reductive vision of the place of knowledge and its new role, a vision on which most interpretations of the emergence of a knowledge-based economy are founded. These approaches have the unquestionable merit of foregrounding the idea of an historical break, and for that reason they will receive the most attention in the rest of this sub-section. However, their conception of historical time skips over the transformation of social relations and relations of knowledge/power that structure the development of the productive forces, both material and immaterial.

The origin of a knowledge-based economy is essentially explained as a change in the magnitude of the phenomenon, a kind of Hegelian shift from quantity to quality. It is seen as the result of the encounter or indeed, the clash, between two factors: 1) A long-term trend towards a rise in so-called intangible capital (education, training, R&D, health) which from the mid-1970s onward (in 1973 in the US, for example) the percentage of "material" capital in the stock of capital and now asserted itself as the key variable in growth; 2) the sweeping change in the conditions of the reproduction and transmission of knowledge and information resulting from the "spectacular spread" of the information and communication technologies (ICT) (Foray, 2006).

Finally, for the hard core of this vision, today broadly shared by the theorists of the knowledge-based economy and by numerous international institutions (OECD, EU), the rise of a knowledge-based economy is still essentially considered as an effect of crossing a threshold. The social determinants that are at the origin of the social crisis of the Fordist model

and on the historical bifurcation towards an economy founded on distribution and the primary role of knowledge remain largely hidden.

More precisely, in our opinion two obstacles keep the theories of a knowledge-based economy from accounting for the new and contradictory place of knowledge in the “new capitalism”:

1. The reductive nature of a characterization of the knowledge-based economy centered on activities devoted to the deliberate production of knowledge. Thus, for example, the research of the OECD (2003) remains essentially anchored in the “Fordist” conception that emerged from of Arrow’s model (1962), where the production of knowledge is the privilege of elite R&D workers, scientific research and the knowledge industries. This interpretation obscures the most important phenomenon to have taken place since the crisis of Fordism, namely the return in force of the cognitive dimensions of labor, which are apparent at almost every level of production, material and immaterial alike. Such an evolution is accompanied by the shift from a linear/vertical paradigm of innovation to an interactive/horizontal one.

2. The technological determinism that lends information and communication technologies (ICT) a primary role in the shift to the “*mass production*” of knowledge and immaterial goods, adopting a mechanistic theory similar to approaches which, according to Thompson (1963), made the steam engine into the vector of the first industrial revolution, leading to the formation of the working class and the mass production of material goods.

Let us note that this tendency towards technological determinism and the under-estimation of social causalities is also found in analyses which nonetheless develop a wider vision of the knowledge-based economy, integrating the problem of non-deliberate forms of knowledge production (Foray and Lundvall, 1996). Despite the sophistication of such work, the principle explanation of the growing importance taken on by these non-deliberate forms still appears to rest in fact on the primary role of ICT. The latter is in effect understood as the major vector for the effectuation of mechanisms of horizontal coordination and networked organization at the origin of historically unprecedented modes of “collective invention”.

Despite changes in detail, the shift towards a knowledge-based economy is always conceived via an interpretative grid which casts it as the product of a happy encounter between the information revolution and a long-term trend towards the increase of intangible capital.

In this way, even the most highly articulated theories of the rise of the knowledge-based economy are led to omit certain elements necessary for understanding what we see as the origin, the meaning and the stakes of the current transformation of capitalism. A few preliminary observations will

allow us to measure the breadth and importance of these omissions.

No real reference is made to the social conflicts at the origin of the crisis of Fordism and the transformations of the relations of knowledge and power that structure the division of labor and the regulation of the wage-relation. The interpretation of the stylized fact relative to the primacy of the new so-called intangible capital, embodied for the most part in human beings, systematically ignores a key element: this dynamic is linked above all to the development of collective services furnished historically by the welfare state. To forget the largely non-commodified nature of these collective services and their role as a motive force in the new capitalism of knowledge is all the more astonishing when the institutions of the welfare state are now being powerfully destabilized by austerity policies and falling prey to creeping privatization.

In our view, it is not so much in ICT as in the development of a diffuse intellectuality that one should seek the primordial factor of the transition towards a capitalism founded on knowledge and towards new forms of the division of labor. We will advance this thesis: the departure point of the formation of cognitive capitalism is to be found in a process of the diffusion of knowledge, engendered particularly by the development of mass education and a formidable rise in the average level of training. What is more, this phenomenon, which has played a key role in raising the percentage of so-called intangible capital, does not only correspond to the slow deployment of a long-term trend. Instead it is a historically accelerated process driven to a large extent by the social demand for the democratization of the access to knowledge conceived at once as a means of self-realization and of social mobility for the popular generations of the baby-boom. The constitution of the figure of a diffuse intellectuality, which finds its first form of social expression in the events of 1968, not only precedes the “information revolution” from the logical and historical point of view, but is also partially at its origin. It is enough to consider the fact that some of the major innovations of the aforementioned “revolution” come out of the ideals and practices of the protest culture of the years 1960-1970.

Moreover, where ICT is concerned one must also make two other remarks. On the one hand, ICT can only function correctly on the basis of a living knowledge capable of mobilizing it, because it is *knowledge* that governs the treatment of information: otherwise it remains a sterile resource, like capital without labor. On the other hand, its role can be profoundly ambivalent depending on its use and on the technical support structures into which ICT is integrated, favoring either the operation of

neo-Taylorist forms or a requalification and de-hierarchisation of labor relations.

Finally, the technological determinism of the theorists of the knowledge-based economy refers back to a positivist conception of science, knowledge and technological progress. This perspective leads to the abstraction of the social relations and conflicts surrounding the question of the control of the “intellectual powers of production” that have marked the entire history of capitalism. Indeed, the proof of this is the recourse to the colorless notion of the knowledge-based economy, to which one could apply the same remark made by Galbraith (2004) when, in his last work, he stigmatized the “lie” that consists in speaking of a *market economy* instead of capitalism, with the aim of erasing the power relations which the latter word conveys.

Ultimately, these approaches overlook the fact that the novelty of the contemporary historical conjuncture does not involve the simple creation of a knowledge-based economy. The meaning and stakes of the current transformation of capitalism are not to be found, in fact, in the simple constitution of an economy founded on knowledge, but in the formation of a knowledge-based economy framed and subsumed by the laws of capital accumulation.

The approach of cognitive capitalism vis-à-vis mainstream theorizations of the *knowledge-based economy* constitutes a double reversal at both the conceptual and methodological levels.

On the one hand, the neutral concept of the knowledge-based economy is justly replaced by that of cognitive capitalism. This concept throws into relief the historical dimension and conflictual dialectic between the two terms of which it is composed. The term ‘capitalism’ indicates the permanence, beyond all variation, of the *invariants* of the capitalist system; in particular the determining role of profit and the wage relation or, more precisely, the different forms of labor on which the extraction of surplus value rests. The term ‘cognitive’ brings to light the novel nature of labor, the sources of value and the forms of property that support the accumulation of capital and the contradictions that this engenders. These contradictions are made manifest both in the relationship between labor and

capital (in the sphere of production and circulation) and in the increasingly acute antagonism between the social nature of production and the private nature of appropriation.

At the methodological level, the approach of cognitive capitalism places knowledge at the heart of the concrete historical development of conflictual relations of knowledge and power that have forged the development of the capitalist division of labor and the transformation of the wage relation.

1.2. Knowledge and the dynamics of the capital/labor relation: a Marxian approach

To better understand this problematic, it is important to recall that for Marx, labor as a cognitive activity – understood as the inseparable unity between thought and action – is the very essence of man (see *Capital* Book I, ch.7). It seems to us that the crucial point is the following: if the cognitive dimension of labor is the very essence of human activity, awareness of this might be understood as an impediment to the capitalist control of production and, therefore, accumulation. From this, it is clear why the relationship between knowledge and power constitutes an essential element in the class struggle resulting from the organization of production. This struggle is articulated around two central points. First, those who master and dictate the forms of labor are also masters of the intensity and the quality of labor. To the extent that the buying and selling of labor-power affects the availability of a quantity of time and not the effective labor of salaried workers, this results in structural uncertainty. Here we have an area that Taylor, for example, explicitly attacked when he analyzed the causes of the stalling or slowing down of working processes. He deduced that through scientific studies of time and movement it is necessary to bring to light and expropriate the tacit knowledge of the worker, in order to convert it into the codified knowledge possessed by management, and then return it to workers in the form of timed schedules for the labor process.

The second reason regards the fact that those who possess this knowledge might aspire to manage production, that is to say, to define the organization of labor as well as the social ends of production. In fact, a large body of work has shown that the diffusion of Fordist and Taylorist methods of organizing labor and production are not only restricted to the logic of mass production. This results in the necessity of undermining, of *destructuring* (in the sense of the Italian Workerist term *destrutturare*), the composition of the professional working class who, most notably with the workers council movement between the wars, have struggled for the direct re-appropriation of the means of production in the face of a labor process that was not yet entirely subjected to and molded by capital into the form of an “objective armature independent from the workers” (in Marx’s terminology).

Finally, the conflictual relations connected with control over the intellectual power of production explains why the development of the capitalist division of labor, in the wake of the industrial revolution, consisted of trying, as much as possible, to empty labor of its cognitive dimension and to transform it into its opposite, a mechanical and repetitive activity. Here we have the origin of the tendency that Marx characterized as the passage from the formal to the real subsumption of labor by capital. However, this tendency, which finds its historical fulfillment in the model of Fordist growth, will remain imperfect and unachieved. It is always new types of knowledge that tend to reconstitute themselves at the highest levels of the technical and social division of labor, much as Marx had already envisioned in his hypotheses about the *general intellect* and the crisis of the logic of real subsumption (Vercellone, 2007).

We are referring to those passages in the *Grundrisse* in which Marx develops, after the stage of real subsumption, the hypothesis of the *General Intellect*, which anticipates the coming of an economy founded on the diffusion and centrality of knowledge, in addition to the increasing dominance of the productive value of scientific and intellectual labor (Negri, 1997). Framed in this way, the law of value founded on abstract labor time where value is expressed as a definite quantity of simple and homogeneous unskilled labor enters into crisis. This does not mean that the law of value disappears entirely, because capital continues to artificially

maintain the logic of exchange value. Nor does this situation mean that labor, notably in its cognitive dimension, loses its centrality as the source of the creation of value and surplus value.

In sum, the concept of cognitive capitalism can be defined as follows: a new “historical system of accumulation” in which the cognitive of dimension of labor becomes the dominant principle of value creation, whereas the main form of capital becomes the so-called immaterial and intellectual one. Such notion – it must be noted – expresses a true oxymoron. In this framework, what is first and foremost at stake in the valorization of capital, on the one hand, and in the forms of property, on the other, directly concerns the control of social conditions of knowledges production and of the transformation of these latter in a fictitious capital and commodity (Vercellone, 2010). This evolution is inscribed in a context characterized by what we can call the “becoming-rent of profit” (Vercellone, 2013). Such a concept indicates the level of contradiction between contemporary capitalism the potential of both development and emancipation which is inscribed in a knowledge-based economy. Such a developed and emancipatory knowledge-based economy may be defined as the society of *general intellect*.

A question emerges: is cognitive capitalism inherently unstable? Is it unable to mobilize a progressive struggle-development dynamics, as it was the case in the Fordist epoch? To this question some authors answer negatively. For example André Gorz (2003) underlines that the contradictions of cognitive capitalism indicate the crisis of capitalism *tout court*. Other authors are more optimistic and emphasizes the possibility of stabilizing cognitive capitalism by reconciling it with the knowlege-based economy¹.

2. Organization of this special issue.

Following these lines of thought, the articles published in this special issue are organized around the following questions.

In what sense can we say there has been a shift from industrial capitalism to a capitalism grounded on knowledge and the immaterial? How is the evolution of the relationship between knowledge and power transforming

the production system? What kind of transformation is taking place in the logics of consumption? Are the industrial innovations tendentially based on the appropriation of the digital revolution sustained by *open science*?

One of the essential elements in the growth of the cognitive dimension of labor is linked to what has been defined as the "feminization of labor" (Morini, 2007). What are the meanings and the stakes of this mutation and, in particular, what is its impact on the new segmentation of cognitive labor? And which new and unique articulations are today assumed by racialization and cognitization of work?

Some theorists of cognitive capitalism highlight the deep contradictions which oppose its basic logics to the development of an economy based on knowledge. What are the case studies that may shed light on the contradictory relationship between knowledge-based economy and cognitive capitalism? Under what conditions can knowledge represent a fundamental valorization element in contemporary capitalism? What is the role of universities in cognitive capitalism, especially in newly established global forms that involve multi-campus transnationalism and forms of open science and education? And what are the consequences of the neo-liberal reforms of the higher education?

Miguez and Sztulwark defend the idea of a rupture in the long-term dynamics of capitalism, linked to the passage of industrial capitalism to a new historical system of accumulation. They propose a historical reading of this dynamics around two main aspects of the accumulation of capital: 1. the creation of value (the relationship between work and means of production) and 2. the appropriation of value. A knowledge-based economy presents a paradoxical element: on the one hand, the appropriation of innovation rents requires an institutional frame leading to the collective learning to capital accumulation. On the other hand, the development of social learning may depend of a public re-appropriation of this rent. We find the same conclusions in Atsushi Naito's contribution, where the author offers an examination of the macroeconomic defect of cognitive capitalism from a post-Keynesian perspective. Starting from the seminal work proposed by Fumagalli and Lucarelli (2007) - that shows how the increasing polarization of income distribution risks penalizing not only aggregate demand, but also the knowledge-learning process - Naito investigates both the weakness in demand as primary cause of macroeconomic instability and the role of financialization. Finally he focuses on affective labor and examines its function in the macroeconomy. In cognitive capitalism, affective skills are becoming more and more important, but affective labor is connected with non-regular employment and a low level of wages.

Following a Foucauldian approach, Antonella Corsani describes the

figure of *salaried-rentier* in the “subjectivity factory”. From a neoliberal perspective, as Foucault (2004 : 149) wrote, “social policy will have to aim not at the redistribution of income, but at the increasingly generalized capitalization of all social classes”. The global finance transforms both the nature of wage and the subjectivity of waged workers. Individual capitalization has replaced solidarity systems and produced a new form of alienation. In a certain sense, Yann Moulier-Boutang continues Corsani’s discourse. He does so by deepening one of the most interesting examples of social forces which resist on the micro-political level, i.e. the open source, open data, open culture movements. This contribution aims at showing that no bottom up innovation is possible without the creation of new institutions and new rights. Open source is similar to the *terra nullius* principle. In human history, every time the *terra nullius* principle was revoked, the members of traditional communities have been harmed and deprived of their rights to use land, natural resources, crafts, language, and culture. For the future, Moulier-Boutang sustains the necessity of new struggles that may affirm a *scientia nullius* principle against the new enclosures. In his discourse, the notion of cognitive capitalism seems to lose its capitalist features and begins to assume the forms of a new society based on the socialization of knowledge(s).

Also George Tsogas’s original and attractive analysis deals with the social movements that show their opposition to contemporary capitalism. He considers that the London (commodity) riots of August 2011 represent a warning: consumption and cognitive capitalism are asphyxiating in the structures and norms of industrial capitalism that are still in place. We would also propose the following notes: during the London riots people expressed a demand of collective consumption goods that are at the same time collective investments (i.e. personal computers, mobile phones, smart phones etc...). It was the revolution of consumers without purchasing power to obtain the possibility to control the collective production inputs that populate shop-windows. This case shows that new “subjectivity factory” – where neoliberalism imposes the replacement of consuming subjects with “self-entrepreneurial” subjects – is not necessarily the unique alternative. It also demonstrates that the role of consumption in cognitive capitalism is not always easy to understand.

In their paper, Fumagalli and Morini aim at analyzing the link between “productive” social reproduction and the central role played by precarity as a generalized, structural and living condition. Social (re)production is at the same time a collective and individual activity, since it simultaneously deals with individual learning and social relations.

The way through which social reproduction is valorized is the rising of the “precarity trap” that the authors define as “the result of the absence of

policies promoting social security and of the pressure to keep brains under control”.

Anna Curcio takes into account the processes of racialization of cognitive labor. In her contribution, race and knowledge are assumed as specific – if different – devices of contemporary capitalist valorization, as tools of organization and regulation of the labor market. Curcio tells the vicissitudes of a young Dominican nurse in the Italian job market, where the *racialized gender* is articulated with knowledge as simultaneously agent of inclusion – although subordinated – and terrain of marginalization and discrimination. Knowledge, just as race, is turned into a machine of segmentation and subordination: it ceases to describe talent, skills, and abilities and becomes instead the measure of exploitation. Emphasizing the articulation of race and knowledge within cognitive capitalistic production allows us to sharpen the analytical tools through which labor transformations can be read to break the silence of new possible social relations.

The new generation of overworked, in-debt and unpaid cognitive workers, without whom cognitive capitalism cannot survive, is also at the core of Francesca Coin’s contribution. Coin discusses the neoliberal reform of higher education within the theoretical framework of Marx’s *Grundrisse*. She highlights the relationship between the economic crisis and the neoliberal reform in education by considering assessment as its distinctive feature, and its root to be the law of value itself.

Finally, we are very glad to conclude this special issue with an interview to Allen J. Scott, one of the most attentive readers of our complex contemporaneity, where the power of knowledge and culture remains the main road to the liberation of women and men.

NOTES

1. In this context an important debate emerges: according to Moulrier-Boutang (2011: 58), a stable regime of cognitive capitalism may be established. The spread of positive externalities in the globalization serves to balance out the negative externalities, in the hopes of eliminating the sources of lasting imbalance in the growth of knowledge production. Positive externalities may be captured and then put to value in the creation of private profit.

However, a different conclusion may be reached: the negative effects produced by capitalist command on knowledge with regard to cognitive labor-force, in fact, reduce the diffusion of knowledge itself. This process may be defined as the tragedy of the anti-commons as produced by knowledge privatization. Moreover this privatization occurs within a financelized monetary economy of production (Fumagalli and Lucarelli, 2011). As a consequence, the system’s instability

increases. On the other hand, if the capitalist command on knowledge decreases – in so doing favoring the production of collective goods – then the specifically capitalist character of contemporary production and consumption would be destailized (Vercellone, 2010, Monnier and Vercellone, 2011, Lucarelli and Vercellone, 2011).

Moreover, after the Great Recession, also American scholars discover the relevance of placing the concept of cognitive labor under examination. Prominent scholars in the fields of digital labor, humanities, and education have been involved in the discussion (see for example the contributions collected in Peters and Bulut, 2011).

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