



# The hypothesis of cognitive capitalism

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## **THE HYPOTHESIS OF COGNITIVE CAPITALISM**

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The aim of this presentation is to introduce some aspects of the research programme on *Cognitive Capitalism*. The main point that characterises this research program resides in the fact that it assumes as its main pillar the social crisis of Fordism. Such a crisis manifests itself as a break with respect to the polarising tendency of the forms of knowledge informing Industrial Capitalism, thereby, realising some aspects of Marx's hypotheses concerning the notion of *General Intellect*.

Accordingly, we shall articulate the reasoning as follows

- Firstly, we shall explain the main features of the research agenda. In particular, we shall address the application of Marxist methodology and the extent to which its interpretation differs from other approaches to contemporary capitalism;
- Secondly, we shall deal with the historical transformations of the capital/labour relation that has led to the crisis of Industrial Capitalism and, consequently, to the transition towards Cognitive Capitalism;
- Finally, we shall focus on the analysis of the new nature of antagonism and contradictions (subjective and objective) inherent to Cognitive Capitalism.

I. As a consequence of the social crisis of Fordism, capitalism has entered into a phase of deep transformations concerning both the division of labour and the modality of capital valorisation. During this phase, the increasing importance of the role of knowledge and the dimension of cognitive labour have to be considered as the main factors of the changing nature of the capital/labour relation.

However, the key role played by knowledge in the dynamics of capitalist development is not a historical novelty. Hence, to understand the reason why it is possible to refer to a "new" role of knowledge, and how to analyse its repercussions on the nature of the capital/labour relation should be considered as the main two issues to be addressed.

At theoretical level, the radical opposition between the concept of *Cognitive Capitalism* and the concept of *knowledge-based economy* should be emphasized.

The interpretation provided by neo-classical theories of *endogenous growth* and *knowledge-based economy* take into account neither the antagonism between capital and labour nor the conflicts between knowledge and power investing the transformations of the division of labour. In fact, the determination of the meaning and the stakes of the current mutation of capitalism are not to be found in the simple constitution of a *knowledge-based economy* (as mainstream theory does). Rather, we have to find them in an economy based on knowledge framed *by* and *subsumed to* the laws of capital accumulation.

The starting point of *Cognitive Capitalism* is a radical critique of the apologetic vision of the actual mutation entailed by the new liberal theories of knowledge-based economy. This critical perspective is clearly indicated by the two terms that compose our object of analysis, namely *Cognitive Capitalism* :

- i) the term of “capitalism” underlines the permanence of the structural invariants of the capitalist mode of production: in particular, the driving role of profit and the wage relation, or more precisely the different forms of dependent labour upon which the extraction of surplus labour rests;
- ii) the term “cognitive” emphasises the changed nature of the capital-labour relation and the forms of property upon which the accumulation of capital depends.

Hence, the combination of these two terms serves us to underline both conflicts and contradictions that the shift towards the actual phase of capitalism determines.

From a methodological point of view, this requires to utilize Marx’s approach when he underlined the *conflictual* relation between knowledge and power; relation that has structured the capitalist evolution of both the division of labour and productive forces.<sup>1</sup> In these regards, an important lesson bequeathed by Marx is related to the nature of living labour. In fact, as a cognitive activity, *labour* is the main characteristic and, broadly speaking, the essence of man.

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<sup>1</sup> Specifically, we shall deal with the theoretical and heuristic value of the concepts of *formal subsumption*, *real subsumption* and *general intellect*. With the notion of *subsumption*, Marx qualifies the forms of subordination of labour to capital. With *general intellect*, he designates a radical change of the subsumption of labour to capital and indicates a third stage of the division of labour. It involves a *tendential* overcoming of the logic of Smith’s division of labour proper to Industrial Capitalism, and posits, in a new manner with respect to the other writings of Marx, the possibility of a direct transition to communism.

By definition, human labour is an activity that reunites within it both thought and action are tightly entangled and embedded, and remains distinct from any repetitive and instinctive activity performed by other living creatures.

Therefore, if the cognitive dimension of labour is the essence of human activity, it could become an obstacle to the capitalist control of production and, hence, to the process of accumulation.

If so, the relation between knowledge and power constitutes an essential feature of the class struggle in organizing production, and this for two main reasons:

- 1) who controls the organization of the working activity of the many can also determine the intensity of their labour and production times;
- 2) who controls productive knowledge (which Marx refers to as *the intellectual powers of production*) can also aspire to manage production itself, that is to say, can determine the organization of labour and the social purpose of production.

These elements have played a key role in the historical dynamics of the capital/labour relation and in the organisational forms of the workers' movement itself. The kind of knowledge-power relationship that comes into being between people and the instruments of production (material and immaterial) significantly contributes to the characterisation of the concept of "technical and political-subjective class composition". This concept facilitates the explanation of the determinate historical forms of the capital-labour antagonism (**see box**). As we shall see below, in this way, the re-appropriation of the cognitive dimension by labour would explain the re-emergence, in the aftermath of the social crisis of Fordism, of tensions within the social organisation of production. Indeed, the social cooperation of work is increasingly autonomous from the previously exerted functions by capitalists in organizing and controlling production. However, the new characteristics of living labour do not guarantee, in a mechanistic fashion, the development of conflicts explicitly leading to the self-determination of work and the social ends of production. Differently from the Taylorist control of work, mechanisms focused on the control of the very subjectivity of workers might take place. This is one of central aspects of the passage from disciplinary to controlled societies.

During Industrial Capitalism, the conflict regarding the control of *intellectual powers of production* explains why the development of the division of labour tended, as much as possible, to deny the cognitive dimension of labour transforming it into its opposite: a

mechanical and repetitive activity. In a nutshell, this is the logic of *real subsumption*. However, this trend towards *real subsumption* will always be imperfect. In fact we assist to the establishment of a new type of workers' knowledge that incessantly reconstitute itself at the highest level of the capitalist development of the technical and social division of labour.

### **The notion of technical and political-subjective class composition**

The notion of technical and political-subjective class composition is an essential methodological tool aimed at characterising the historically determined forms of the capital/labour antagonism. As its name indicates, it is defined on the basis of the combination of two levels of analysis.

1. The first level defines the technical class composition as the counterpart of the relation of domination expressed by the *organic composition of capital*. It allows to characterise, from the « point of view » of living labour, the forms of subsumption in the capitalist organization of production and to identify the figures of work situated at the centre of the process of capital valorisation. On this ground, some decisive and historically determinate aspects of the conflictual relation between capital and labour can be isolated. Thus, for example, the professional worker emerging from the second industrial revolution struggled for the direct reappropriation of the means of production in the face of a labour process which was not yet entirely subjected *to* and modelled *by* capital in the form of an objective armature independent from workers. Subsequently, the mass-worker, facing with a labour process completely forged by the process of valorisation, refuses the very *physicality* of the assembly line. As a result of the social crisis of Fordism, technical class composition would undergo a major upheaval to the extent that “*the most important fixed capital, the one that determines productivity differentials, now finds itself in the brain of those who work. This is the absolutely essential novelty in contemporary productive life*” (Negri, [1998], p. 18). The forms and the stakes of struggles are, in turn, profoundly transformed.

2. We must note that the heuristic value of the notion of technical class composition is nevertheless only an element and a first [preliminary] analytical passage aimed at defining the problematic arising from the notion of “technical *and political-subjective* class composition”. If the analysis limits itself to the characterisation of the technical dimension of the capital/labour relation, the risk is that of grasping the composition and behaviour of the proletariat as a structural category forged by the accumulation of capital. That is why the analysis of class composition should be carried out mainly on the basis of its exteriority to the mode of production and in terms of the autonomy of the mechanisms at the root not only of the formation of workers' subjectivity. but also by their modes of life and reproduction. Therefore it is necessary take into account the conflictual mechanisms which forge – at the very least to the same extent that they are determined by it – the developmental dynamics of industrial capital.

This is an essential teaching which is bequeathed to us, in the very process of the formation of the workers' movement during the first industrial revolution, by the exemplary case of the Luddist movement. The birth of the working class was not the objective product of the formation of the system of factories. On the contrary, like the whole history of capitalism, it is an active process set off by agents as much as by conditions. In other terms “*class is a*

*conflictual historical relation, and we cannot separate the notion of class from that of class struggle; classes do not struggle because they exist, they come to exist because they struggle”* (Abensour, in Thompson [1988], p. V).

This approach bequeaths to us a methodological heritage of the utmost importance to grasp the constitution and successive transformations of capitalism on the basis of the centrality and motive function of the antagonism of living labour.

**II.** This said, we shall move on addressing the historical perspective of the shift from Industrial Capitalism to Cognitive Capitalism.

In the history of capitalism, three main stages of the division of labour and of the role of knowledge can be identified (even if these phases partially overlap with one other). Each of these stages could be characterized as a specific *historical system of accumulation and production*.

The first stage is represented by Mercantilist Capitalism, whose models of production were based upon the so-called *putting out system*<sup>2</sup> and centralised manufacture. We shall not analyse in depth this historical phase, even if it shows some meaningful analogies with the ongoing historical environment. In particular, the capital/labour relation is marked by the hegemony of craftsmen and skilled factory workers’ knowledge, and by the pre-eminence of mercantile and financial mechanisms of accumulation.

The second phase is represented by Industrial Capitalism. It is informed by the logic of *real subsumption* that, in some ways, would find its historical fulfilment in the Fordist model. This historical phase would lead to the development of the economy of knowledge and the division of labour, a path that can be characterized by the following four features:

- A) a dynamics of capital accumulation founded on large factories, specialised in the production of mass, standardised goods.<sup>3</sup>
- B) a division of labour characterized by a process of polarization of knowledge. The progressive separation of intellectual from manual labour (which entails the separation of conceptual from executive tasks) corresponds to a process of expropriation of workers’ knowledge incorporated into fixed capital and into the organisational structure of the firm. Labour is separated from the subjectivity of the worker. In such a way, labour becomes more

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<sup>2</sup> This system, also called the system of the diffuse factory, is based on the figure of the mercantile entrepreneur who organises production in the home by artisans and independent workers.

<sup>3</sup> First of all, those of the Mancunian model, then those of Fordism

and more abstract in its very content both because it assumes the form of exchange value and because it is emptied of any intellectual and creative quality,.

C) on the basis of the division of labour inherent to Industrial Capitalism, along side with the centrality of material production, the main criterion of economic efficiency and productivity becomes the search for homogenous economies of time and the principle of productivity-yield.<sup>4</sup> This criterion would become one of the historical materialist foundations of the theory of value based on the time of labour. It would be realized in an organization of labour in terms of prescribed tasks in a given time frame.

D) Broadly speaking, the economic efficiency translate into a social representation of time according to which the time of the direct labour of waged workers is considered to be the only productive time. In this normative context, any other social times devoted to the formation and reproduction of labour power are considered as unproductive.

This opposition is spelled-out on numerous levels that today are questioned by the mutation of work. For example:

- i) the opposition production/consumption (or work/leisure);
- ii) the opposition education/productive activity;
- iii) the ternary cycle of life which provides the rhythm for and separates the time of formation from that of active life and finally from that of retirement

The last phase begins with the crisis of industrial-Fordist capitalism and continues with the transition toward Cognitive Capitalism.

This transformation finds its origin in the increased importance of knowledge and its diffusion that brought about higher levels of education and the expansion of the immaterial and intellectual content of labour.

At least from the standpoint of production, the social crisis of Fordism determines a tendential crisis of the logic of the *real subsumption* of labour by capital. This crisis manifests itself as a break with respect to the polarising tendency of the forms of knowledge informing Industrial Capitalism, thereby, realising some aspects of Marx's hypotheses concerning the notion of *General Intellect*.

The main feature of this crisis is embodied by the new qualitative preponderance of *living*

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<sup>4</sup> That is to say, an essentially quantitative conventional determination of productivity, founded on the relationship between the quantity produced and the volume of labour employed measured in hours of work.

*knowledge*, incorporated and mobilized by labour, over *dead knowledge*, incorporated in fixed capital (and the firm organisation).

The new hegemony of the knowledge incorporated into living labour represents the main feature of Cognitive Capitalism.

Thus, what we can observe is the crisis of the modalities of the previously established (Smithian and Tayloristic) division of labour and the technical progress inherent to Industrial Capitalism. It should be kept in mind that the determining element of this mutation cannot be reduced to the *computer/IT revolution*.

Accordingly, the point of departure of the transformation of the new Capitalism is to be found in three crucial phenomena inherent to the social crisis of the Fordist wage relationship.

The first is represented by the challenge to the scientific organization of labour. The refusal of labour, the increased need of workers' autonomy rendered the Taylorist modalities of labour increasingly obsolete.

The second, is represented by the spread of knowledge, mainly due to the development of mass education or what has been named the development of a *diffuse intellectuality*. It is this new intellectual quality of labour power that has led to the reaffirmation of the cognitive dimension of labour, strenuously denied by industrial capital. It explains the shift from the dumb and repetitive cooperation entailed by the Tayloristic model to that of a communicating cooperation that characterises the cognitive division of labour.

Finally, the formidable expansion of the social salary and collective Welfare services as a result of social struggles have led to, and is one of the main causes of, the social crisis of the Fordist model of regulation.

This dynamics has been often interpreted as a simple factor of the crisis of Fordism, tied to the increase of indirect labour costs necessary for the reproduction of labour power. Indeed, the expansion of the Welfare state provided the ground for the development of both an economy whose main drive is knowledge and the hegemony of cognitive labour This has been possible because:

- A. The propulsive heart of a knowledge-based economy resides in Welfare State institutions aimed at collective productions such as health, public education and university research rather than in the centres of research and development own by private companies.
- B. The expansion of the social salary (pensions, subsidies of unemployment, etc) has weakened the monetary constraints of the wage-form and gave sway to a degree of



chosen flexibility (not merely imposed flexibility) between different activities and forms of labour (above all during years' 70).

In this sense, to the expansion of the *social wage* correspond an expansion of free time that, from the point of view of an economy based on knowledge is, borrowing Marx's words, an immediate productive force.

In this respect it is worth to emphasize an often forgotten argument:

The expansion of free time, a time emancipated from the direct control of capital, is not a simple effect of the increase of productivity of the firms. The expansion of free time has also been one of the main causes of the increase of the social productivity of labour, and this is because of its direct and indirect effects on the spreading of knowledge and the cumulative dimension of the production of knowledge.

Borrowing Marx's words, the conditions of the formation of an economy and a society based on knowledge rest upon the creative power of living labour. Both from a logical and historical point of view, these conditions anticipate and give sway to the advent of Cognitive Capitalism. If so, it is important to clarify the following questions.

1. The development of the cognitive dimension of work precedes and is antagonistically related to Cognitive Capitalism. On this point, it is perhaps useful to clarify a misunderstanding which sometimes is elicited by the term "Cognitive Capitalism". In fact, to the extent that the adjective "Cognitive" is associated with the noun "Capitalism", many think that it is Capitalism which is Cognitive. However, from our point of view, the essential feature of the current transformation concerns the nature and quality of living labour. That is to say, it is labour and not capital which is "Cognitive", even if capital accumulation increasingly derives from the control and exploitation of the intellectual product of labour and the transformation of knowledge into a commodity.
2. The logic of Cognitive Capitalism, at least according to the "Anglo-Saxon" model of regulation, is in many respects an obstacle for the development of an economy not only based on knowledge, but also based on the "free circulation of knowledge" (as a key condition for its development).<sup>5</sup> However, the judgment must differ in what concerns the social-democratic model of North European countries (Sweden, Finland, etc.).

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<sup>5</sup> It is also for this reason that the title of one of my article published by the European Social Forum was 'Cognitive Capitalism Against a Knowledge based Economy'.

Given the above, it is fair to say that the transition towards Cognitive Capitalism is mainly the product of a complex dynamics of conflicts and restructuring through which capital has tried to achieve the control of the *General Intellect* within a knowledge-based society within which the figure of the collective worker becomes hegemonic. This process of restructuring bring about a new phase of *desocialization* of the economy. It does so by pursuing three objectives that conflict with the social and institutional conditions that would allow an effective management of the economy of knowledge.

First objective: to expand the logic of the market in order to colonize welfare institutions and the transformation workers' knowledge and life into commodities. .

Second objective: to increase the precariousness of paid employment, since the strengthening of the economic constraints upon wage earners becomes an essential condition of the control and subordination of an increasingly independent type of labour power. This is one of the effects of the crisis of the *real subsumption* of labour by capital.

Third objective: to break the unity of the productive figure of diffuse intellectuality, thereby determining an artificial segmentation of two components of labour power – a segmentation similar to one suggested by neo-classical models of endogenous growth.

That is to say:

- 1) the first component, called human capital, would correspond to an aristocracy of intellectual labour whose qualification will be recognised and remunerated through financial capital dividends.
- 2) the second component, in contrast, will go unrecognised. Under the weight of economic constraint it would need to assure the most precarious employments within the cognitive division of labour as well as the neo-Taylorist tasks of not very innovative traditional sectors and of new standardised services.

Therefore, and this point is crucial, Cognitive Capitalism deploys a logic of normalization and segmentation of labour to destroy the collective forces of the production of knowledge.

**III.** In conclusion, it is possible to say that the transition towards Cognitive Capitalism, far from eliminating contradictions and antagonisms, dislocates them and, in a certain measure, increases their stakes.

We could briefly mention some of the areas in which these contradictions and tensions manifest themselves.

- A first dimension concerns the way in which the privatization of knowledge and

life makes the contradiction between the social character of production and the private character of appropriation possibly even more acute. To the extent that the time of labour directly dedicated to the production of high-tech commodities becomes ever more insignificant,<sup>6</sup> these commodities should be distributed for free. In this situation, the solution sought by capital is now to establish strict intellectual property rights aiming at capturing monopoly rents. This stratagem corresponds to a situation that contradicts the very principles on which the founding fathers of political economy had theoretically justified private property and the efficiency of a competitive order. In fact, it is now the creation of property which generates scarcity. It is a case that Marx (but also a classical economist like Ricardo) would qualify as an artificial way of maintaining the primacy of *exchange value* (which is based on the difficulties of production) upon *wealth*, which is based upon abundance and use value, and therefore upon gratuitousness.

- A second dimension concerns the way in which under Cognitive Capitalism the traditional opposition between *dead labour* and *living labour*, inherent to Industrial Capitalism, gives sway to a new form of antagonism: that between the *dead knowledge* of capital and the *living knowledge* of labour. Such a dislocation corresponds to a *subsumption of labour to capital* that, from the point of view of the labour process, return to be essentially formal. So, under Cognitive Capitalism, the cooperation of labour no longer need to be ruled by capital, and this reaffirmation of the autonomy of living knowledge could lead to the resurgence of tensions regarding self-determination in the organization of labour and the social ends of production.

- Finally, in Cognitive Capitalism, the social and intellectual character of labour determines a displacement of the concept of productive labour as well as that of exploitation. The labour time directly devoted to an activity of production during the official working day constitutes merely a fraction, and frequently not the most important, of the social time of production.

Precisely due to the crumbling of the traditional frontiers between the sphere of reproduction and that of direct production, the exploitation of the use value of labour power is extended to the totality of the social day.

In this context, the proposal of a social income or wage guaranteed independently of employment and conceived as a remuneration for the totality of social times that contribute to the creation of wealth and value is meaningful. From the perspective of a

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<sup>6</sup> Or, to put it in the language of Neoclassical economic theory, to the extent that the marginal costs of reproduction are practically nil or extremely low.

knowledge based economy, the guaranteed *social* income or wage should be understood both as a collective investment of society in knowledge and as a primary income for individuals. That is, as a social salary directly stemming from a productive contribution and not as mere social security deriving from a redistribution of income.

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