

## KNOWLEDGE VALORIZATION IN COGNITIVE CAPITALISM

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**ABSTRACT.** This work subscribes to approaches that defends the idea of a rupture in the long-term dynamic of capitalism. This rupture it is linked to the passage of the industrial capitalism to a new historical system of accumulation. The cognitive division of work suppose a new logic of valorization that not replace but overlap to the logic of industrial capitalism. The role of knowledge in the process of valorization is a fundamental resource to understand the historical breakthrough in the accumulation process. We propose a historical reading of this dynamics around two main aspects of the accumulation of capital: the creation of value, the relationship between work and means of production and in second place the appropriation of value, where we can see in jeopardy the capture of the innovation rent.

**Keywords:** valorization, innovation rent, appropriation, cognitive capitalism.

### **1. Introduction**

During the last decades we aid in an intense debate about the historic turning point within the long term dynamic of global capitalism. We may

identify three main postures in this discussion. First, we find the Posfordist and neo-Shumpeterian literature which sustains the existence of techno-economical changes related to informational and communicational technologies, referring to a new 'flexible' model of working organization. This literature frames these mutations within the industrial capitalism continuity<sup>1</sup>. A second viewpoint refers to these on financial globalization<sup>2</sup>. This position, in contrast to previews ones, proposes the existence of an historical rupture in the configuration of capitalism. This estrangement denotes a financial capital that commands the economical process and relegates the productive capital to a subordinate place. Finally, there is a third outlook<sup>3</sup> of a more post industrial, informational or cognitive capitalism perspective which conceives the historical rupture in terms of a particular change in the nature of the accumulation process of the industrial capitalism. The causality goes from the productive dimension to a financial one.

The present work focus on the third perspective. Our main objective is to analyze the new role of knowledge in the process of valorization, since it is knowledge the fundamental element to understand the historical rupture in the accumulation process where the new capitalism is funded.

Recent transformations in process of creation and appropriation of value are so big that break the long term accumulation dynamic of the industrial capitalism<sup>4</sup>. To analyze this historical change we will use the concept of 'historical system of accumulation', developed by Dieaudié, Paulré and Vercellone (2007), that refers to "the association between a mode of production and a logic of accumulation that guides, in a large period of time, the tendencies of capital valorization, the work division, and the reproduction of fundamental social relationships". In this perspective, what is in jeopardy, on one hand, is the crisis of an accumulation 'industrial' system that essentially relied on the dominion of the time used to reproduce standardize commodities with mechanical technologies, and, on the other hand, the passage to a new accumulation type that 'is refered to knowledge and is focused into creativity, in other words, into the immaterial investment' (Dieaudié et al, 2007: pp. 74).

The valorization process of capital refers to Karl Marx studies about long term dynamics of capitalism. As we know, this process developed from objective factors -means of production- and from one subjective factor, the labor force. Both factors produce use value. The objective factors represent 'dead work' – work objectified in tools and objects from the working process whereas the subjective factor constitutes the 'living work', labor force that act in the labor process with the means of production. The valorization process ends when value created in the work

enters the market, to the sphere of circulation, transforming money in capital.

The role of knowledge in the valorization process requires some conceptual clarifications. First, we have to differentiate the subjective character of knowledge, as a human faculty of comprehension, creation, communication, etc., from its objective dimension (as information). This objective dimension refers to the codification of knowledge produced with a process of transcription into symbolic representations that can be stored and transmitted (David and Foray, 2002). In this way, knowledge is part of the value creation process, through its incorporation into its two basic components: means of production and living work.

In second place, it's necessary to problematize the role of knowledge in the instance of value realization. For this it will be helpful the contributions from the Information Economy (Arrow, 1962; Nelson, 1959) or from the Knowledge Economy (Teece, 1986; David and Foray, 2002; Foray and Lundvall, 1996). These authors analyze the commodification process of knowledge, from an appropriation point of view: even when a commodity materialized at market, the extraordinary profits derived from innovation<sup>5</sup> is not necessary captured by the agent that has created knowledge. In a general way, we may say that the problem of value appropriation is associated to the differentiation degrees of knowledge objectified in commodities, and to technical and institutional ease of its reproduction (imitation and/or copying). From these elements, it depends that thirds (users or competitors) have incentives and feasibilities to use the innovation free.

In the following sections, we will see the role of knowledge in the valorization process from a historical perspective, identifying the breaking elements that emerge in the transition from the industrial capitalism to the new one. Although factors that constitute this process have an integrated character, in an analytical way, we will present them as separated parts. We will start with the value creation instance, concluding with the appropriation of this value.

## **2. The instance of value creation**

To see the historical rupture in the role of knowledge within the value creation process, the main element to consider is the change in the nature of the process of production and, in particular, the change in its two main components: the means of production and the labor.

The role of the means of production during the industrial capitalism was related to the development and diffusion of modern machines, emerged with the First Industrial Revolution. The transition from Manufacture to Great Industry where possible by the bases that this revolution provides. As Marx said in Chapter XIII, volume I, of *The Capital*, machinery, is composed by three different elements: the motor mechanism, the transmitting mechanism, and the moving tools (or work machine). Integrated to operate in a systemic way, machines constitute a “large automaton” that relegates workers to a subsequent assistance, to some specific movements that point to correct possible deviations from the automatic system (Marx, 1969: 453-464). Within this historical context, Marx explained the machinery system as an emblematic development of capitalism in this period.

As Radovan Richta (1971) said, in this way, a process of mechanization was consolidated in productive forces, which aim was to increase exponentially the productive levels. Machinery, fixed capital, “is presented as the only and necessary intermediary to apply the science in the production” (Vence Deza, 1995). As a specific type of knowledge, science represented the main way in which this was manifested in industrial capitalism, but as an indirect productive force, its incidence appeared mediated by its own objectification in fixed capital.

Because of the importance that this process of objectivity knowledge carried within the fixed capital, it is necessary to address more specifically the historical evolution of the different types of machinery that revolutionized the production during industrial capitalism. Different authors recognize numerous milestones or fundamental inventions in different historical periods, since the last decades of the XVIII century towards the period of diffusion of the electronic and informational means of production, characteristic of the new capitalism.

As an example, Carlota Pérez (2004) identifies five technological revolutions. The first one is associated with the Industrial Revolution itself (First Industrial Revolution), when mechanization and measuring and saving of time were the most relevant factors. Second, the vapor and trains era, when great scales and standardization of parts are in the center of the scene. The third revolution (which is at the same time as the Second Industrial Revolution), is when vertical integration and scale economies start consolidating and the standardization universalizes. In fourth place the oil, cars and mass production era, brings the horizontal integration and standardization in products. The last one is the fifth technological revolution (still in process), when knowledge (as an intangible capital) networks structures, decentralized integration and the intensive use of

information break into the productive process. It's important to notice that for this author this last stage doesn't represent a rupture with the industrial capitalism. Otherwise, Castells (1999) stresses the importance of the energy fonts in the first and the second industrial revolution, when he says that "even when both gave a whole array of new technologies that formed and transformed the industrial system in successive stages, its core was that they were fundamental innovations in generation and distribution of energy" (Castells, 1999: 64). For this author, the vapor machine is the key invention of the First Industrial Revolution (at the end of XVIII Century), and the emergence of electricity the key fact in the second one (at the end of XIX Century). Its generation and distribution allowed the other fields to "develop its applications and contact between themselves" (Castells, 1999: 65).

Naturally, there were other technical innovations in each instances. The First Industrial Revolution was characterized by the appearance of new textile and metallurgical technologies. Another characteristic was the creation of better technics to obtain and elaborate raw materials (Landes, 1979). Despite this, the main transformation was the replacement of tools by machines. The Second Industrial Revolution was characterized by the emergence of new products (internal combustion engine), processes (efficient steel casting), industries (chemistry) and informatic technologies (invention of telephone, dissemination of the telegraph). The main difference between those revolutions lies in "the importance of scientific knowledge to produce and direct the technological development", a fact that can be seen since the second half of XIX Century (Castells, 1999).

We cannot understand the role of work in industrial capitalism without looking at the importance of machinery in this model of factory production. In mercantile capitalism, capitalist distributed materials to each household and bought a quantity of work that got objectified in a product. This product was paid by pieces or in function to other measuring unit where handicraft produced or subcontracted to assistants and apprentices. In the XIX Century, when the transition from the handicraft and manufacture production to the "Great Industry" was consolidated, a substantial change in the relation between work and means of production took place.

According with Braverman (1980), the craftsman was the one who had the technical knowledge. Within the craftsman's activity, there was a low division of tasks, where master craftsman used constantly rudimentary scientific knowledge in ordinary practice, as calculations of strength, power, speed, mathematical instrumental, design, etc. Marx explained that in handicraft work, the execution of tasks with instruments or tools was made with broad autonomy by workers. With manufacturing –which

appears at the same time with handicraft- the content of work would lose autonomy, and the use of tools started to get more specialized<sup>6</sup>. This allowed, according to Marx, the emergence of the “partial worker”. With the arrival of machinery of the industrial capitalism, loss of autonomy would be notorious, almost complete. Machinery would appear as an organism totally objective, moved by an external force, that preexists to workers (Neffa, 1990:95). Machinery revolutionized the production while destroyed the cooperation based on the division of labor within the manufacture. It also transformed the worker into an appendage of the machine (Marx, (1973) [1867]:349). Men’s actions on the work objects are not made directly, anymore. They’re made in an indirect way, on the machines.

Machine imposed to the production process a collective character, as an activity that was partly mechanical and partly human (Dobb, 1971). It increased the division of labor to an unknown degree of complexity, until this time. Finally, it developed a new type of specialization at the service of machine. Although, the main problem for capitalist was that he couldn’t use completely the whole potential of human work, because he couldn’t assume directly the control of the production process. At the beginning of the XX century, and with the emergence of Taylorism – which originated the Scientific Management<sup>7</sup> -, was introduced a basic change in the control of work process, imposing the worker the precise way to make his work and eliminating (as much as possible) the “porosity of the working day” - death time-. Both, reduced the worker’s power and initiative, and tried to beat the natural tendency of workers to idleness (Braverman, 1980). The objective of Taylorism was to save time, to increase the work speed (Neffa, 1990). To do that, it was necessary to know the way in which the products were done. For this reason Taylorism emerged as the most advanced way to expropriate knowledge to workers for capital profits. “This separation between labor activity and worker subjectivity is a result of a process of knowledge coding: it’s the condition that allows work to get objectified inside the describable and measurable tasks with the timer criteria” (Lebert and Vercellone, 2006: 25)

In this way, Taylorism expresses and promotes one of the basic tendencies in labor organization during the industrial capitalism: separation between the conception and execution of the job. In fact, according to Taylor conception, mental work had to be removed from factory and had to be concentrated in management, even when it was the systematization of workers’ knowledge. In this way, work was devoid of its complexity, partials emptied of content, of qualification or scientific knowledge, producing as a main effect the disqualification of workers and the

deterioration of their technical skills (comparing with craftsmen and manual worker). Fordism didn't change the work process in a substantial way. By incorporating the assembly line, it deepened even more the separation between the conception job and the execution one.

Work rhythm was imposed by engineers, and workers had to follow this movement (Míguez, 2009: 186). When the industrial capitalism matured, the increasing degree of development of capital goods pointed to reduce the presence of living work in the production process. This was translated into a higher automation of industrial processes.

In fact, incorporation of knowledge in new machines with mechanical nature, driven by inanimate energy sources, had a principal role in the configuration of value process, during the industrial capitalism (Dabat, 2006). From the point of labor, productive knowledge tend to concentrate in managerial areas, in administrative work and in the organization of productive process, carrying by managers and engineers while workers, increasingly disqualified, made manual tasks, with less intellectual content. The creation of machines that created machines was the work of engineers that studied and perfected production methods, developing the technical process whose leadership, direction and management lay in managers. Technological innovation were progressively eliminated from the production- the execution phase and the intellectual work became property of a minor part of the labor force, specialized in conception activities and production of knowledge (Lebert and Vercellone, 2006).

The role of knowledge in process of value creation had a significant change within the transition to a new historical system of accumulation. To analyze its specificities, in cognitive capitalism we have to see transformations in means of production and in labor process again. Although some theories, based on the proliferation of services focus, say that industrial work continuous having a fundamental importance, these ideas must be seen with the complexity of the new means of production or innovation composition. The organization of the informatic flows is like a mean of production, or more precisely, as a mean of innovation, as machines at the industrial period. From Castells' view (1999) informatic and communicational technologies are new and powerful instruments of work that are part of the informatic development of capitalism. In Dabat's concepts (2006), in other way, new technologies are not as important as how these technologies are the base of new electronic- informatical means of production. Their properties, flexibility and re- programmable opportunities, are a qualitative leap in their potential of production, compared with the typical machines of the industrial capitalism. The qualitative leap is exposed in the set of electronic-informatical devices,

within the computers designed in 70's, that allows a revolutionary capacity of storage, processing and transmission of information.

Castells points out that the impact of this technological revolution is higher than the past ones. Other technological revolutions were in specific societies, in limited geographical areas and with slower rhythms, comparing with present revolution in course, that has spread all around the world since the 80's, and during the 90's. As the Shumpeterian economists, like Rosemberg and Dosi, Castells points out that in new informatic technologies (that "are not only tools to apply but processes to develop"), knowledge applies, in one way, to equipment that generates knowledge, and in another one, to others that process information and communication. This process crystallizes in a feedback accumulative circle between innovation and its uses. Following to Rosenberg, he adds that in this new phase, users innovate, creating technology –they appropriate and redefine it. This process is different from previous stages when users only use them. Technological innovation is not an isolated event. It "reflects a determined state of knowledge, a particular environment of institutions and industries, a certain availability of aptitudes to define a technical problem and to solve it, an economical mentality to make this application a profitable thing, and a new network of producers and users that can communicate their experiences in an accumulative way, learning to use and create" (Castells, 1999:63).

In a similar way, Lev Manovich, a theorist of visual arts, from University of California, points that new informatic and communicational technologies, the new informatical medias, constitute the new means of production. These are mediation between men and nature, between subject and object, and they impact in our sensible experiences of the world. New means of production and information are mediations of a new type. They alter our experiences of the world even more, not necessarily impoverishing, as Frankfort School said, but multiplying it. These new medias modificate in a radical way, artistic, cultural, goods and services, transforming the personal computer into an universal mediator. From Manovich's perspective is a real revolution that "supposes the displacement of culture to production, distribution and communication forms mediated by the computer. It's almost questionless that this revolution is deeper than previous ones, and that we can only see its initial effects. In fact, the introduction of printing affected only a phase of the cultural communication: the media distribution. In the same way, photography affected only a kind of cultural communication: the fixed images. Instead, revolution of informatical medias affect every phase of the communication and cover the collection, handling, storage and distribution,



as well as affect every media: texts, images that are fixed and in movement, sound or spacial constructions” (Manovich, 2006: 64). Feedback is increasing, and allows to a breakdown in capitalism ways of production, a new relationship between labor/ means of production”, because all these new means -graphics, images in movement, sounds or texts- are translated into numerical data that are only accessible with a computer. This is, now, informatical data translated into an informatical language (Manovich, 2006: 65).

Meanwhile, theorists of Cognitive Capitalism point out that these changes within the means of production are an effect of the increase in the general level of knowledge and in the average level of labor force training, and not its causes. This singularity allows for economists like Dieaudié, Paulré and Vercellone to talk about the knowledge production as if it were a source that is in the basis of a new “historical accumulation system”, on which a cognitive division of work spreads. From this process, emerges an informational logic that doesn’t substitute the industrial logic. This logic superimposes and conditions the industrial logic. In these ideas, is a new stage that doesn’t make a clean step of previous logic<sup>8</sup>.

Above this base, a new kind of link between production and physical space opens out: “digitalization of production, favoring the increased production in long distances, through outsourcing chains (more or less internationalized), develop the labor division based in knowledge. As a consequence, in countries where capitalism is advanced, value creation is more defined by immaterial and symbolic elements” says Fumagalli (2010: 86-87). In this way, new modalities of production organization at a global level are articulated; in which it seem a tendency of a fragmentation of the phases in the production process. In one hand the fases of biggest capacity of innovation (where tend to concentrate the innovation rent) and in the other those that are sustained over cost advantages coming from the use and adaptation of existing technologies. (Dicken, 2003; Altenburg et al 2008; Kaplinsky, 2000).

From Cognitive Capitalism perspective, the key element to considerate is the generalization and centrality that knowledge has within an organization of production that tends to be social<sup>9</sup> (Fumagalli, 2010:85), to the extent that the value of goods which are the core in the global economy, in this historical period, is not determined by labor time used in its production, but by a set of general knowledge that is deployed in the enterprise, but whose origin predates it. In this context, capitalist enterprise is the instance where capital pull together social knowledge for a personal objective. To make this a management expertise is needed, to respond to the complexity of the goods and services production of new capitalism. Its

fundamental to catch apprehended capacities outside enterprise but realized and enhanced inside it. Work produced within the enterprise implies to bring into play capacities, skills, and perceptions about social life, in function of a hetero-determined objective, as the production and goods realization.

The increased automation within the productive process was the answer to the insubordination of the specialized workers, during the fordism, that made jam within the production. The complex production of qualified goods did not required much specialized workers, hence their jobs start being outsourced with subcontracts, with the atomization of the groups of work and with the development of a diffuse factory that spread outside the classical limits of the company. The productive connections take part within “relationships that are external to the direct structure of manufacturing products” (Negri, 1980:19). As it is possible to check with the subsequent flexible production, those mechanisms allows to stop those sabotages with the traceability of the quality within the process, and allows to discover the intentional (or not intentional) origins of the process failures. In this flexible production, workers have to work to make better products and improve the process. Workers have to spread their knowledge, acquired within and outside the factory.

Vercellone and Fumagalli retook those intuitions and debates, in the center of their own theoretical arguments, about the centrality of the 'general intellect' and the 'immaterial work' in the contemporary capitalist production, during the 90's. Vercellone proposes to analyze it from the development of a diffuse intellectuality, which emerged from the increase of the general levels of worker's instruction with the mass schooling, during the Welfare State. During that period, this rise of education, allowed the passage to a cognitive division of work. With the same arguments, Fumagalli analyze the role of knowledge as a result of cognitive work that is fed from the intellectual capacities, from language and communicational skills of each human being. Those capacities make it difficult to differentiate between “time of work”, “time of production” and subsequence of this last one the “time of life”. Making reference to this topic, Virno says that “In posfordism, time of production includes time of not- working, the social cooperation that takes roots in it. When I designate 'time of production', I'm talking about the indissoluble unity between retributed life and a not retributed one, work and not work, evident social cooperation and immerse social cooperation. The time of work is only one part, and not -necessarily the most important one of the 'time of production', as it is understood”(Virno, 2003:119).

Referring to work that implies creation of new knowledge, the productive size can't lean in objective parameters. Because it's a result from collective work it can't be measured as in the industrial capitalism that used to associate time of production and time of work. As Marazzi says: "the classical definition of production, ergo, the value of ended products in relation with costs of production factors (work and/ or invested capital) has not an operative meaning (...) Which measures productivity, however, is a set of factors that characterize the socio- regional space, and leak out the isolated worker, allowing him to be the creator of wealth as a member of a community" (Marazzi, 2003: 65-66).

In this way, the development and diffusion of the electronic and informatical means of production, and the cognitive evolution of work, assume an historical rupture -with the industrial capitalism- in the role that knowledge plays within the process of value creation at a world level.

### **3. The instance of value realization (The problem of appropriation)**

But the analysis of knowledge role in the value process doesn't end in its contribution to the labor process. In fact, once knowledge becomes objectified in a good, that has independent entity from the cognitive work needed for its creation, the value process of capital is not complete until the commodity is not realized in the circulation sphere of market. From the perspective of the appropriation of created value, the differentiation degrees of knowledge objectified in a product, and technical and institutional facilities to reproduce this knowledge (imitation or copy) are fundamental.

During the industrial capitalism, the main competitive focus of firms was associated to the improvement of processes, more than to the differentiation of products. Knowledge was integrated to the labor process through two different ways: on one side, objectified in means of production and, on the other, in the process of rising complexity oriented to production of low differentiation goods. From this point of view, fundamental knowledge for the value process were more linked with process innovations than with product ones, and the intellectual property issue, although were present, hadn't the importance which was acquired with the new capitalism development (Sztulwark, Míguez y Juncal, 2011).

This characteristic of the industrial capitalism is related with a basic level of consumer's likes and a large life cycle of market products. Behind that, there is a low demand segmentation<sup>10</sup>. This passive role of consumer in the

value process is defined clearly by Schumpeter, in his book *Economical Cycles*, in 1939: “the vast majority of changes that have occurred in the goods consumed have been imposed by producers to the consumers that, more often than not, have resisted to change and have to be educated by elaborated publicity psico- technicals” (Schumpeter, 2002 [1939]: 50). The author mentions the fashion phenomena, but he immediately says: “this kind of facts is not sufficiently important to be essential”. This ‘cultural’ resistance to change by consumers, and the short character of fashion phenomena are the principal attributes that define the essential passive role of consumers in the valorization process of the industrial capitalism.

Instead that, the degree of differentiation of objectified knowledge in products expands notably in new capitalism. Product innovations occupy, in this new historical context, the center of the rent construction, moving the process innovations - the heart of industrial capitalism dynamics- to a subordinate place, and reflecting what Piore and Sabel (1984) called the “passage from mass consumption to specialized consumption”.

Innovation rents are related with a new demand segmentation, that moves from the basic product (easy models produced in a high quantity and with low costs) to the differentiation of quality, variety, or adaptability. Behind this, there is an historical tendency to extend the range of products and the proliferation of niches (Pérez, 2010). This higher differentiation of products is associated to the fact that in new capitalism the monetary realization can’t be based on - not completely- quantitative extension of market (“saturation of demand”). Instead that, it is based on the increase of rate of goods replacement. In this way, if in industrial capitalism the stability of consumption was one of the main things in monetary realization, in new capitalism the instability and dynamics of likes changes determine the realization resorts (Fumagalli, 2010).

This increasing in cognitive content of goods has two complementary ways. On one hand, there is an informational way (or post- industrial), linked with the electronic- informatical character of means of production and goods in which this content is objectified. Because of its materiality, the electronic- informatical support expands radically the potential to store, process and transmit information, opening a new space for proliferation of objects charged with informational contents. Software is a paradigmatic case in this kind of innovation (Castells, 1999; Dabat, 2006, Míguez 2012).

On the other hand, there is a second way of cognitive transformation of goods, that is related with their symbolical content. In this instance, we have to consider not only the production of more specialized use values. We have to consider the “sign value” (or image) that embodies in material

objects and brings them an increasing capability of signification (Lash, 1997). This new intensity of product design implies that production is more penetrated by knowledge and that it's becoming more cultural: "what it's at stake is not the primacy of the novel informatical processing, but the more generic capacities of processing symbols" (Lash and Urry, 1998: 173).

The character of production, increasingly symbolic, makes monetary realization of products in new capitalism be associated with the construction of imaginaries that impulse some ways of life. In this context, consumption appears dominated by more precise and dynamic conventions every time (Fumagalli, 2010). In this way, the character cognitively differentiated form goods is related with a specialized character, but reflexive too. This 'reflexivity' is inherent to a radical strengthening of individualization in late modernity<sup>11</sup>.

A second idea to point, in the appropriation instance in new capitalism, is the way in which objectified knowledge of goods is reproduced. With new electronic- informatical means of production, changes the way of knowledge circulation. The codified component (similar to information) may be transferred with a low or null cost. However, to have advantages of codified knowledge, it's necessary to know the code and to have the ability to use it efficiently. And codes are more complex while the importance of codified knowledge increases. Second, the tacit component of knowledge continues being less mobile and portable, because it requires important interactions face to face. Generation of knowledge in specific fields tends to concentrate in some nodes, where skills agglomerate (Archibugi and Pietrobelli, 2003; Ernst and Lundvall, 1997).

In this way, although productive process of high complexity is difficult to be replicated by competitors, if the product of this process is a codified knowledge it's possible that other may reproduce it with a low cost, without replicate knowledge that has originated the product. This asymmetry between the cost of knowledge reproduction and information is a fundamental element to considerate when we have to analyze the appropriation of rent nowadays (Sztulwark, 2012).

To see the nature of these phenomena we will use the contribution of Enzo Rullani (2000), for whom the fact that nature of knowledge, as a good, differs from the characteristic goods of industrial capitalism<sup>12</sup> forces to rethink the terms in which neoclassical and Marxist economists thought the valorization fact in industrial capitalism. The medullar point is that with the emergence of informational means of production, codified knowledge may be reproduced with a zero cost. Therefore, knowledge "has a use value but doesn't have value – cost of reference that may be used as a referent to

determine change value and work as a marginal cost (neoclassical theory) or as a reproduction cost (Marxist theory)” (Rullani, 2000: 2). So, the cost of knowledge production is uncertain (because the learning process has a random nature) but, it differs radically from its reproduction cost.

Rullani elaborates important conclusions from this verification: in a competitive economy, the change value of a commodity, which cost is null, tends inevitably to zero. The change value of knowledge is entirely linked to practical capacity of limiting its free diffusion, ergo, limiting with legal strategies (patents, author’s rights, licenses, contracts) or monopolists strategies, the possibility to copy, imitate and learn from other’s knowledge. In other words, knowledge value is not the result of its natural scarcity<sup>13</sup>. On the contrary, “the scarcity of knowledge, that brings value to it (change value), has an artificial nature: it derives from a power’s capacity, whatever its gender, of limiting temporally its diffusion and to regulate its access”. Coinciding with Rullani, David and Foray (2002) point that “sudden and wild passion for private property in knowledge fields has created a paradoxical situation: try to create an artificial rarity within a sphere in which abundance is a natural rule”.

In this way, knowledge economy appears as an economy of speed and accessibility. Knowledge valorization requires that it could spread as wide as possible, without socialize it. To give it value, knowledge’s proprietary have to keep the process under control, accelerating diffusion and slowing socialization. Knowledge’s value –says Rullani (2000)- depends, each time, on the gap that stays between speed of diffusion and the speed of socialization.

This fact shows that the appropriation of economical rents in informatics activities is associated to the possibility to perform economical control to the innovation’s diffusion. This forces to agents implicated in production of knowledge assets to develop specific strategies to change this productive advantage into economical rent. One way to do that is the establishment of monopolistic conditions “in fact”, the industrial secret, brand development, possession of complementary actives, speed of innovation or advantages of knowledge. Other way is the creation of institutional conditions for appropriation. On one hand, the legal conditions, associated with the settlement and application (*enforcement* degrees) of intellectual property rights. But, also, the governance conditions within the production line; the firm capacities to build, keep and develop networks that regulate the knowledge access (Sztulwark, 2012).

In summary, because of the type of knowledge involved, and the conditions of reproduction of goods in which knowledge get objectified the

appropriation problems didn't have centrality in the valorization process during the industrial capitalism. Probably, this explains why Marx and Schumpeter, two major theorist of capitalist development, haven't problematize this topic. Instead, in the new capitalism, the problem of appropriation of innovation rent has a new centrality, linked to a higher differentiation of cognitive goods, in its informational or symbolic aspects, and to properties of material supports in which knowledge circulates and reproduces. These elements have disposed the appropriation problem in a critical point of the valorization process in cognitive capitalism, conforming one of the more evident ruptures with the regarding industrial capitalism.

#### **4. Conclusions**

During this exposition it has been analyzed the historical rupture in the role of knowledge within the valorization process around the world, pointing that this element is fundamental to understand the transition from the industrial capitalism to a new historical system of accumulation.

In the new Capitalism the main vectors in which we may see a rupture in the role of knowledge within the process of value creation are: I) generalization of electronic-informatical means of production, that enhance the intellectual functions of work and allows a revolutionary change in capacities to store, process and transmit information, ii) the dominant character of the cognitive work which implies an integration between execution job and the conception one, and a wide mobilization of knowledge, in particular, from communicational and reflection capacities and iii) the develop of a reflexive accumulation, that emerges as an answer to new patterns of more specialized consumption and subject to a new "design intensity". If in industrial capitalism, stability in consumption was one of the pillars in monetary realization, in new capitalism instability and dynamics of changing tastes determines the results of realization.

The problem of correspondence between created value and its appropriation is presented more strongly in this stage, because of the specific characteristics in the accumulation process. In industrial capitalism these considerations were less relevant, because there were reduced degrees of differentiation in objectified knowledge in goods, and in technological and institutional conditions of knowledge reproduction, characteristic of this historical system of accumulation. Instead, in the new capitalism, because of singular conditions of knowledge reproduction (that objectified in an electronic- informatical support) and the increasing degree of

differentiation of the cognitive content in goods, the problem of converting a created value in the production process into an innovation rent assumes an strategic character.

In this context, the fundamental element to consider is the contradiction between the diffuse sources of value creation that include but exceed the restricted frames of capitalist firm, and the aim of accumulation in a cognitive capitalism: the private appropriation of innovation rents. In this way, development of a knowledge 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, development of social learning may depend of a public re-appropriation of this rent. The implications related to the display of this conflict about the theoretical basis used traditionally to think the economical and social development, must not be underestimated.

## NOTES

1. Coriat (1991), Pérez (2004), Ernst and Lundvall (1997).
2. Chesnais (2001), Dumenil and Levi (2002).
3. See, as an example, Vercellone (2011), Lucarelli (2009), Fumagalli (2010), Dabat and Rivera (2004), Castells (1999).
4. To a general characterization of knowledge role in the valorization process in industrial capitalism, see Sztulwark, Míguez and Juncal (2011).
5. In this work, we use the concept of rent as Napoleoni, cited by Vercellone (2011): “an income that proprietaries receive from certain goods as a consequence of that these goods are rarely available or are changed into those”. This definition allows to see more than the classical view about “ground rent”, and to incorporate the cognitive basis of goods as the foundation of an innovation rent.
6. In his classical example about the manufacture of pins, Smith pointed that under this new division of labor, the attention of men “concentrate naturally into an only and simple object” (Smith, 1997 [1776]:12). According to this author, advantages of the division of labor are: to increase skills of individual workers, to save wasted time when work is transferred and the invention of machines that makes the labor easier. With each step fragmentary labor is created and time is saved, increasing productivity.
7. Taylor’s principles are in his works: *Shop Management*, written in 1902, and *Principles of Scientific Management*, in 1911.
8. Castells suggests that hardship of work are reduced to that activities that continuous subsumed to the industrial logic, excepting that type of activities related with the “informal logic”. From this idea emerges the “dual society” characterized for its segmentation, which means that painful labor increase but qualified jobs increase too, creating new singular and complex configurations that we are starting to understand. However, Vercellone (2011) emphasizes that work keeps the



oppressive character that had during the industrial capitalism, but changes its forms, according to the requirements of a cognitive accumulation system. As an example, see Míguez (2012).

9. The social character of the production was analyzed by Toni Negri at the end of the seventies, in the development idea of the “Social Work Man” who puts at risk his knowledge, subjectivity, experience within the frame of the so called “Factory-Society” in contrast with the “massive worker” from the Fordian period.

10. This situation hasn't a static character. On the contrary, when industrial capitalism got mature, and goods started to be developed, from the second half of the twentieth, a sustained process of product differentiation was registered. These phenomena gave rise to pioneer writings about post- industrial societies in late sixties and early seventies (Touraine, 1973; Bell, 1976).

11. As Lash and Urry say (1998, p. 86), “in our days consumption has become important for self-identity formation. Even in traditional societies there was a plurality, for example, styles of dress. But they recognized a symbolic distribution under specific social positions. Instead, in late modernity clothing styles crystallize more personality than a social position. Suggest a greater freedom from the symbolic distribution of positions in society”.

12. Really, knowledge can't ever be a good. Rullani's analysis may only be consistent if we understand that there are some goods where it's possible to get apart support from content, and that the main value of this good is in knowledge that objectified in it. These cognitive or informational goods contrast with typical goods of industrial capitalism, in which content and support were an inseparable unit.

13. Moulier-Boutang (2004) says that: “indefinite reproduction of knowledge with a null cost, makes practically, rules and sanctions (provided to obligate consumers to pay) ineffective, inapplicable (...) Goods as knowledge and information has not the characters of exclusive, rivalry, divisibility, transferability, difficulty of production and shortage that allows to commodity its use, its results and reproduction and, to make applicable the property rights in an effective way”. That's why it's “impossible to classify goods as exclusive and rivals and, therefore, to get private”.

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## RENT AND SUBJECTIVITY IN NEOLIBERAL COGNITIVE CAPITALISM

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**ABSTRACT.** This paper aims to provide analysis of “salaried-rentier”. This figure stems from a double process: the “individualization of salaries” and the “socialization of capital”. We will focus on the understanding of the double process engendering such a figure and on the machine whose function is to produce subjectivities by melding together neoliberalism and cognitive capitalism in a dangerous liaison. In this perspective global finance can be understood as a vector of neoliberal subjectivity. Finally, the purpose of this paper is to demonstrate that in neoliberal cognitive capitalism, understood as the arrangement of a mode of capital valorization and a mode of government, society based on wage/labor relations is condemned to disappear, giving way to an entrepreneurial society.

**Keywords:** salaried-rentier, neoliberalism, cognitive capitalism.

*Ce qui fait la force de la subjectivité  
capitalistique, c'est qu'elle se  
produit autant au niveau des  
opresseurs qu'au niveau des  
opprimés.*

*Félix Guattari<sup>1</sup>*

Labor market deregulation and individualization of wage formation lead to the precariousness of work relations and growing wage disparities. Consequences include the development of indebtedness and what may be called as private deficit spending: credit replacing wage. So, Raghuram Rajan (2010) explains the financial crisis of 2007-2008 as a consequence of

the increase of the disparities of income. But these devices -labor market deregulation and individualization of wage- cannot be reduced to simple economic measures; indeed, they make up the mainstays of the neoliberal project understood by Michel Foucault (2004) as a project of society, whose rationality is political. Adopting a foucauldian perspective but going beyond Foucault, Maurizio Lazzarato ([2011] 2012) has developed a theory of “indebted man” as human neoliberal condition. But there is another side of neoliberal condition, that is “salaried-rentier”.

This figure is not new *per se*, if we think about the differences in salary tied to the social determinations within the hierarchic organization of professions. We can also think about the “rent” derived from the wages earned by a salaried elite at the expense of female, precarious and immigrant labor. What is new is that today the figure of the “salaried rentier” stems from a double process: the “individualization of salaries” and the “socialization of capital”. The new nature of this emerging figure is blurring the borders that used to separate the main categories of revenues: wage, rent and profit. But we will focus less on the figure of the “salaried rentier” from a strictly economic point of view than on the understanding of the double process engendering such a figure, and on the machine whose function is to produce subjectivities by melding together neoliberalism and cognitive capitalism in a dangerous liaison.

What do we understand by cognitive capitalism? I will attempt to answer this question in the first section where I will argue that cognitive capitalism is a new step in the long-term dynamics of capitalism, prefiguring the overcoming of logic and modes of valorisation and accumulation of capital which were characteristic of industrial capitalism. The adjective "cognitive," attached to capitalism, indicates this displacement and a new centrality of knowledge in capital's valorisation process. However, the importance of scientific knowledge for the accumulation of capital does not establish a novelty in the history of the capitalism: the passage from agrarian and commercial to industrial capitalism is inseparable from the original link which is formed, from the seventeenth century, between scientific knowledge and industrial production. But, against any thesis which attributes primary and leading roles to scientific knowledge and technological innovations, industrial capitalism was able to emerge only due to the institutional innovations introduced by the liberal conceptions of the market and the State. Also, the transition towards cognitive capitalism is inseparable from the "great transformation" which established the neoliberal conceptions of the relationship between economy, society and the State. So, in the second section I develop the analysis of “neoliberal cognitive capitalism” understood as an *agencement* of both mode of capital valorization and

mode of government.

This approach allows to grasp global finance not as exogenous towards wage/labor relations but as an essential device for the configuration of a new shape of wage/labor relations. By wage/labor relations I mean an institutional configuration characterized by modes of arrangement of work and determination of wage, by forms, which are more or less socialized by composition of the income. The shift of household savings towards the stock markets, more particularly, the development of pension funds contributed to transforming the nature of the deferred wage which organized retirement funds and unemployment benefits in the form of social insurance. Individual capitalization has replaced solidarity systems. I develop these questions and more particularly the figure of “salaried-rentier” in the last section.

### **1. Cognitive capitalism as a counter-productive knowledge economy**

Capitalism, according to the most common meaning, indicates a mode of production, that is, a certain configuration of the social relations of production and exchange. Following Braudel (1985), and rejecting partially Marxian capital's conception, capitalism is inflexible in the productive and industrial capitalism. The history of capital begins before and overtakes that of industrial capitalism (Dockes, 2003).

Numerous research on the European and American economy at the end of twentieth century converged on one point : that capital/labor social relations, the fundamental social relations of production, were undergoing a metamorphosis as well as both their components, labor and capital. The mode of valorization of capital appeared to be following an unknown path. From then on, tools and categories of analysis built around the Adam Smith Pin Factory and developments leading to the Fordist factory henceforth appeared unsuitable. Cognitive capitalism is an interpretative hypothesis of these transformations of contemporary capitalism. It was initially put forward by a group of Italian (Cillario, 1990; Rullani and Romano, 1998), and French (Azaïs, Corsani and Dieuaide, 2001; Corsani et alii, 2001; Vercellone, 2003) researchers, based upon its analysis of the crisis of the so-called “Fordist/Keynesian” mode of development, that is, of an intensive scheme of accumulation and a mode of regulation characterized by Keynesian forms of State interventionism. This crisis revealed a major crisis of industrial capitalism and of the categories and analytical schemes forged since the birth of industrial capitalism (Corsani, 2003). The hypothesis of cognitive capitalism is then that of a major shift in the long-term dynamics of capitalism, comparable to the one which had driven capitalism from mercantile and slavery to industrial. This shift refigured



the overcoming of industrial capitalism and the logics of valorization and accumulation that characterized it.

So, unlike the a-historical theories of the “knowledge economy”, the theories of cognitive capitalism:

- Analyze, from a historical perspective, the process of production and valorization of knowledge in relation to the process of valorization of capital.
- They aim to seize differential power relations and the conflicts which engender the submission of the process of knowledge production to the process of capital-money accumulation.

To characterize different types of capitalism Yann Moulier Boutang (2007), Carlo Vercellone, Patrick Dieuaide and Bernard Paulré (Colletis, Paulré, 2008) introduced a new analytical category, that of a "historical system of accumulation" which indicates association of the mode of capitalist production with a logic of accumulation. Cognitive capitalism would then become, according to Moulier Boutang (2007), the third type of capitalism:

- In industrial capitalism, the system of accumulation is based on the machine and on the organization of labor according to the social and technical division of the labor driven by the assignment of posts and functions within the factory. The factory is the main place of the process of valorisation.
- In cognitive capitalism, the system of accumulation is based on knowledge and creativity, that is, on forms of intangible investment. The empirical appearance of this new capitalism is the increasing importance of education, research, innovation, technical progress, systems of communication, circulation of information, organizational learning and the strategic management of organizations.

So, we have an initial definition of cognitive capitalism : "Cognitive capitalism designates a system of accumulation whose main object of accumulation is constituted by knowledge, which becomes the main resource of value as well as the main place of the process of valorization" (Moulier-Boutang, 2007 : 86). In Moulier Boutang's view, the transition towards cognitive capitalism is inseparable from the new industrial revolution, that is digital technology, quite as the passage from mercantile capitalism to industrial capitalism is inseparable from the first industrial revolution. In this new capitalism the main source of value is knowledge.

It is true, nonetheless, that the importance of scientific knowledge for capitalist accumulation is not new in the history of capital : science and capital are at the very core of what historians have called the industrial

revolution. But then, can it not be said that capitalism has always been cognitive? One answer is in Carlo Vercellone's work: The emergence of industrial capitalism corresponds to the opening of a very precise path of regulation of the knowledge economy based on three main trends: the social polarization of knowledge, the separation of intellectual labor and manual labor and a process of incorporation of knowledge as a fixed asset. This process leans on a logic of accumulation initially based on the centrality of the big "Manchester firm", later on "Fordist firm" and on mass production of standardized durable goods. On the other hand, cognitive capitalism is an Economy based on the driving force of knowledge and its dissemination, but this knowledge is now incorporated into living labor rather than in machines, as he writes : "The knowledge incorporated into living labor occupies a dominant place with regards to knowledge incorporated into the fixed asset, by inciting a movement of reorganization of the tasks of conception and execution, activities of manufacturing and innovation; a scheme of permanent innovation succeeds the sequential scheme of industrial capitalism, this evolution keeping place with the implementation of a new international division of labor based on cognitive principles" (Vercellone, 2004). So, in this analytical perspective, although both capitalisms mobilize knowledge, in particular scientific, they draw the value from two different sources: industrial capitalism from the manual labor applied to the machine which incorporates the knowledge, cognitive capitalism from the knowledge incorporated in living labor.

Capitalism has always been cognitive: such is the thesis of Enzo Rullani, who was among the first to refer to cognitive capitalism. His analysis brought us new light (Rullani, 2000).

If capitalism has always been cognitive, why speak only today about cognitive capitalism? Because, thanks to new technologies, virtualisation allows the separation of knowledge from its material medium and makes knowledge reproducible, exchangeable and usable independently of material capital as labor. Rullani show how virtualisation allows to reveal and amplify the difficulties with which capitalism has always been confronted : reducing knowledge to capital. As he explains, the valorization of capital claims to subsume not only living labor but also the value which it generates, it is the living labor which produces knowledge which allows the creation of value. But this subsumption is not easy because knowledge follows very particular laws.

What are the laws of knowledge? We can already find some first reflections in John Bates Clark's work. In *The Philosophy of Wealth* (Clark, 1886), he asserted that knowledge, unlike material goods, is not submitted to the law of diminishing returns and he envisaged the broadcasting of a movement of voluntary cooperation, a collective use of "goods" such as works of art.

Several years later, Kenneth Arrow (1962) highlighted that knowledge is not reducible to material goods so, numerous problems arise when we try to apply to knowledge the laws of valorisation of industrial capital. Following Arrow, but going beyond Arrow, we have shown that inventions and knowledge are the opposite of material goods (Corsani and Lazzarato, 2004) because material goods are tangible, indeed knowledge is understandable; material goods are appropriable, indeed the knowledge is "not appropriable". Only material goods involve inevitably an individual appropriation, because their consumption involves destruction, which makes their enjoyment by somebody else impossible. They are the "rival goods": their ownership involves the opposition of those who claim to it. They can be only "to me or to you" and the attempt to share them fails systematically in front of the nature of the object. On the other hand, material goods are exchangeable, knowledge is non exchangeable. We cannot exchange one kind of knowledge for another because, not divisible, knowledge knows no equivalent. In the economic exchange, everyone gets what he or she wants, but becomes alienated from what he possesses. In the exchange of knowledge, the one who transmits it does not lose it, he is not deprived of it by socialization, on the contrary, the value of knowledge increases through the organizational processes of dissemination and sharing. The concept of exchange is thus inadequate to explain the dissemination of knowledge. The dissemination of knowledge does not impoverish the one who possesses it, but contributes to increasing its value. So, like Rullani (2000) explains, of these peculiarities it follows that :

- Knowledge has a use-value but has no reference cost-value to determine its exchange-value: the production cost is uncertain and radically different from the cost of reproduction which tends towards zero.
- Exchange-value exists only when knowledge is disseminated, but at the same time it tends towards zero when knowledge is socialized.
- The economy of knowledge is an economy of speed: the value is not preserved over time. The valorization of knowledge involves accelerating its dissemination while preventing socialization.

So, there are two opposed effects : the multiplier effect of dissemination and the de-multiplier effect of socialization.

- The process is always uncertain : there is no optimal way of using the knowledge to extract maximum profit.
- Cognitive processes originate from different contexts and proceed in experimental ways: they do not recognize just one answer but several and so lead to variable rates of profit.
- It is not possible to reduce knowledge to real abstraction, that is the

reduction of labor to the time of labor, thanks to which Marxian capital realized the subsumption of living labor by reducing it to capital.

Thus a series of Mismatching highlighted by Enzo Rullani:

- Valorization claims speed against the slow time of creative process. So we have, on one hand, the process of social acceleration analyzed by Hartmut Rosa (2005), and on the other one, the attempts to avoid the time of creative process in the whirlwind of a motionless and frenetic world (Bureau and Corsani, 2012).
- Knowledge generates value if it is disseminated but its appropriation is reduced. To maintain its value means increasing its rarity, most notably by the system of intellectual property rights.
- Given the uncertainty which weighs upon any process of creation, reducing risk means investing less in new knowledge. If, because of a lack of dissemination/socialisation there are no guarantees of the return on investment, new investments are not realized, and, it would follow, waste and sub-accumulation.

So, if workplace flexibility and new management aim to solve temporal contradictions and mismatching, far from being a scheme of permanent innovation, cognitive capitalism is counter-productive, in the sense of Gilles Deleuze and Felix Guattari (1972/1973) : because it inhibits (by intellectual property rights) and limits (by sub-accumulation) the productive forces and, at the same time, filters into them to appropriate them.

## **2. Neoliberal cognitive capitalism**

How does cognitive capitalism filter into productive forces to appropriate them? Industrial capitalism was only able to emerge due to the institutional innovations introduced by the liberal State. Also, the transition towards cognitive capitalism is inseparable from the "great transformation" which established the neoliberal conceptions of relations between economy, society and the State. Liberalism, as explained by Michel Foucault (2004), is a "mode of government" of society, not a mode of economic governance. So, historical capitalism, cannot be understood just in relation to capital and its logic of valorization. It is necessary to take into account the institutional transformations which open to capitalism its full potential.

In the *Great Transformation* Karl Polanyi ([1944], 1983) shows how throughout the nineteenth century implementing the auto-regulating market requires excessive interventionism. The State legislates on property, establishes rules so that the market can exist and function. The State creates the institutions of society based on the law of the market and on wage-

labor, against all the social forces which resist it. Polanyi had already very well grasped what many seem to ignore even today, namely, that liberalism is not equivalent to *laissez-faire* and is not the opposite of interventionism. During the thirties, the development of the market economy engenders social and political consequences, in particular the rise of fascism, which led Polanyi to announce the death of liberalism, that is, the "great transformation".

But liberalism had not died. "Why did he make this error of diagnosis?" Pierre Dardot and Christian Laval (2009) wonder. "We can make the hypothesis that he underestimated one of the main aspects of liberalism which he had highlighted nevertheless himself. [...] among the various forms of state interventionism, there are two of it which went opposing : the interventions of *market's creation* and those of *society's protection* , the "movement" and " counter movement ". But it is a third kind, about which he speaks more quickly : the interventions of *market's functioning*. [...] these interventions intended to assure the market's autoregulation try to make respect the principles of competition which has to govern it" (Dardot and Laval, 2009: 150). So, freedom and *laissez-faire* can be sacrificed to promote competition.

In the thirties and forties, liberalism had not died but was reinvented with Keynes (The New Liberalism) on the one hand and the ordo-liberals (Neo-Liberalism) on the other hand. The perspectives were divergent but the enemy was common: the October Revolution and fascism.

Both envisaged the intervention of the State, but the form was different. Both conceptions diverge essentially on one point: competition. Since the end of the seventies, neoliberalism has superseded new liberalism. Neoliberalism, according to Michel Foucault, prefigures the reversal of relations between economy and society, and by so doing, radically reconfigures the role, the place and the very nature of the State. Society has to be produced in function of the logic of the economy. In other words, society as a whole must be subjected to criteria of economic rationality (and profitability). Still, Foucault adds, what is important is not really a "market society" but a society "subjected to the dynamics of competition". Society must be formatted according to the model of the enterprise. Finally, Foucault writes, it is "the multiplication of the form-enterprise within the social body that is at the core of neoliberal politics" (Foucault, 2004: 154).

We are going to consider here two major consequences of these politics: the loss of autonomy of institutions and the implosion of the wage/labor relationship.

1/ The loss of autonomy of institutions

Following Foucault, Wendy Brown (2007) coins the neologism of “de-democratisation”, in order to name the ongoing process defined by the contradictory combination of neoliberal and neo-conservative rationalities. The dis-activation of Western liberal democracies, according to Wendy Brown, is a sign of the progressive loss of the relative autonomy of certain institutions (the legal system, the police, the public sphere) in their reciprocal relations and also in their relation to the market under the yolk of neoliberal rationality.

But the first concerned institution is certainly that of money : Since the seventies, institutional reforms have led to a " privatization of money ". The trend was established by the so-called "independence of the central banks" which allowed to remove monetary creation from social pressure and put it in the service of the market. The development of financial markets, the inflating debts of States resulting in the crisis of sovereign debts constitute the "economic" product of this process, the loss of autonomy of monetary financial institutions, its "political" aim.

But we can also say the same of the other institutions : universities, schools, research centers, cultural institutions, and hospitals. The formal autonomy of these institutions, promoted by modernization reforms, relegate these institutions towards their dependence upon markets. But more important, all these institutions, even when they are not privatized, are summoned to behave like enterprise to respond to criteria of profitability, to submit themselves to competitive dynamics.

The actualization of neoliberal policies manifests itself in the progressive individualization of collective consumptions (notably in the health, education, and academic research fields). These fields, which concern the biological and social reproduction of populations, have to submit to capitalist calculations. The sectors and knowledge who play a major role in neoliberal cognitive capitalism emerge precisely from these institutional transformations.

Biotechnologies, the health industry, culture, communication, as well as education and job formation are now at the very core of economic dynamics. In fact, these are sectors whose importance is growing considerably in the global economy, and they mobilize very considerable flows of capital in today’s financial markets. The “health” and “care” industries, the “body” industries, the communication and cultural industries, the education industries, are the bread and butter of neoliberal cognitive capitalism.

The knowledge underlying neoliberal cognitive capitalism, therefore, does not essentially target man and his instruments of production, it is not the one that is incorporated in these instruments as in Marx’s fixed capital. Not

only do the relation between science, technology and industry not follow a linear path, but, more importantly, the relation between knowledge and capital accumulation does not pass anymore (or at least not only) through the mediation of fixed asset. We are not producing “goods”, but “living beings”, lives, bodies, organs and also ways of life. The passage from liberal industrial capitalism to neoliberal cognitive capitalism can therefore be understood as a re-orienting of production, from goods to social and biological life.

This mutation implies a variety of consequences. First of all, the thesis of science’s autonomy (from capital) is no longer defensible. And we need to talk of “technoscience” if we want to account for the crumbling down of all possible separation between science and politics, science and society, science and culture. The relations of “knowledge-power” explored by Michel Foucault, which are at the very core of scientific practices, are now directly tied to production relations and to the conflicts that traverse them. Coming from a different approach, Kaushik Sunder Rajan (2006) talks about “bio-capitalism” and analyzes the importance of the so-called “life-sciences”. He shows on a global scale the processes of social and scientific co-production, and the relation between life-sciences and the regimes of political economy. He also finds in the re-orientation of capital toward the life-sciences a new phase in the history of capitalism. The technologies founding this new capitalism are genetics and biotechnology as well as communication, vision and perception technologies, while information technology is mingling with biology in the creation of lives and subjectivities.

## 2/ The implosion of the wage/labor relationship

If we follow neoliberal logic, as Michel Foucault said, “social policy will have to aim not at the redistribution of income, but at the increasingly generalized capitalization of all social classes” (Foucault, 2004: 149). Reforming the social welfare system went exactly to this direction: individual capitalization is taking the place of the mutualization of risk and of the socialization of wage. From the neoliberal perspective, growth alone can guarantee that each and everyone of us be protected from risk. Growth depends on the individual’s effort to constitute and valorize his own “human capital”. So, to work becomes to produce oneself (Gorz, 2003) in a competitive way of life. The deregulation of labor markets and the individualization of wage reflect this logic. The consequence is drastically growing disparities, but, more important still, that credit takes the place of the salary for some, stock options take the place of the salary for others.

As Wendy Brown (2003) argues, following Michel Foucault, neoliberal

rationality is not an ontology. Neo-liberalism is constructivist : its aim is to build a society modeled by according competitive logic among individuals conceived as “human capital”. The State, far from disappearing, is summoned to intentionally produce the neoliberal subject. The citizen is free, but simply in so far as he is responsible for his own well being. The treatment of the poor and of the unemployed seems the perfect elucidation of Brown’s argument: neoliberalism makes the poor and the unemployed responsible for their situation. The moralization of behaviors is what legitimizes the mechanisms of what is now called “workfare”. Still, as Brown says, if in a system of domination freedom is in fact the instrument of such domination, in a neoliberal context freedom is an instrument of control thanks to the moralization of freedom’s consequences.

But neoliberalism is not an ideology. The notion of ideology, explained Felix Guattari (2007), does not help to understand the productive function of subjectivity. So, the political viability of the neoliberal project does not depend solely on the production of power, it also rests on new machines for producing subjectivities because, as Guattari used to say, the production of subjectivity is at the basis of any production whatsoever.

The different mechanisms regulating salary-based savings and participation/involvement extend the reach of the new “subjectivity factory”, where the neoliberal subject replaces the consuming subject with the “self-entrepreneurial” subject. In other words, we are fostering the production of a subjectivity corresponding to an entrepreneurial image of the self.

In this perspective, global finance appear as a very important machine in the subjectivity factory, it works towards the implosion of the wage/labor relationship. At the same time, it creates a new subject : the “entrepreneur of the self” was mobilized in the valorization of its capital, human capital, that is, a metamorphosis of living labor.

### **3. The becoming-rent of profit and the figure of the salaried-rentier**

The new information and communication technologies have encouraged the dream of an economy of sharing and abundance. If it is true that the discourse on knowledge economy feeds off the Utopian dream of a completely de-materialized economy, an economy founded on knowledge, on the free and generalized “cooperation between brains”, we have to acknowledge, following Carlo Vercellone (2008), that what is hiding behind the myth of free access is in fact rent, which is the form taken by profit in cognitive capitalism. The becoming rent of profit, according to him, constitutes the general trend of all economy. Vercellone analyzes the mutations of contemporary capitalism essentially from the point of view of



a radical mutation in the ways of extracting plus-value, and he shows that the autonomy of the cooperation -living labor involved in the production of knowledge-, is in fact controlled by a capital that is increasingly exterior to this cooperation. This is why Vercellone talks of a becoming-rent of profit. In other words, capital seems to be increasingly exterior to the productive cooperation of the collective labor force, which now extends to living space and time. In this sense, capital presents itself as the power of appropriating, under the guise of rent, socially produced wealth. If profit was the form of income associated to capital's productive function (the creation of plus-value), rent can be understood as an income deriving from ownership but not from activity, and in this sense it can be conceived as parasitic.

But who is the parasite, and how does it appropriate the rent? Matteo Pasquinelli (2008) suggests that we take into consideration the relations between material and immaterial production, because there is, in fact, a materiality of immaterial knowledge and of its virtual spaces of circulation. The place of relation between material and immaterial is the place where rent is created, and therefore the space of antagonism. Rent would therefore be the hidden face of the common constituted by the networks, and it can be extracted in a dynamic manner, through more or less temporary and mobile micro-monopolies. One of the forms assumed by rent in contemporary capitalism is the "cognitive rent" associated to intellectual property. From a purely analytical point of view, as we showed, knowledge does not follow the laws of the market. Its market valorization cannot derive, therefore, from some intrinsic nature, but from a juridical system, from legal norms. It is only an apparent paradox, therefore, that just when the economical discourse insists more than ever on the role of knowledge in economical growth, and when the political discourse posits as its primary goal a knowledge-based society, the number of patents – one among other forms of intellectual property – is increasing exponentially and the juridical systems is multiplying its mechanisms of control.

Neoliberalism, as we already said, needs a multiplicity of mechanisms in order to produce the market, and in fact a whole society founded on competition. The intrinsic characteristics of knowledge, its very nature as public, or even common good, would prevent the very existence of a competitive market – which is dependent on the interplay of inequalities – force capital to conceive mechanisms (the system of intellectual property) that can make such a market possible. But rent does not appear only as cognitive rent. We also have to consider, as Pasquinelli says, the rent derived from technology, that is from the informational technologies that establish a monopoly on the medias, the transmission waves, different standards, software and virtual spaces. The rent derived from technology is created at different levels (electric materials, hardware, software), and is

grounded in the exploitation of material and immaterial spaces, and not only in knowledge.

The increased dominance of financial processes in economy runs parallel to the emergence of another type of rent, the purely financial one. This is what finally gives shape to the figure of the “salaried rentier” emerging, as we said, from a double process: the “individualization of salary” and the “socialization of capital”. The individualization does not simply derive from the way in which contracts are negotiated, but from the dynamics of the dismantling of social welfare: the individualization/privatization of collective consumption, and the privatization/capitalization – according to the logic of individual insurance – of the protection against work and life risks. The “socialization of capital” is the other face of the dismantling of social welfare, and can be understood as the essential machine in the contemporary production of subjectivity.

I will try to demonstrate this point utilizing a model of growth elaborated in the 1960s, when economic growth was a major object of study for economists. Those who took their inspiration both from Keynes and classical economy and who strictly tied growth to the redistribution of income, elaborated models of growth according to an equilibrium conceived on the basis of the Kalecki theorem, which can be enunciated as follows: capitalists earn what they spend, while workers spend what they earn. Still, a problem arises when, in certain historical configurations of capitalism, certain workers do not spend all that they earn or, in other words, a salary is not fixed at the level of subsistence and the workers save part of it. As Luigi Pasinetti (1962/63) notices, when an individual saves part of his revenue, he is also the owner of these savings, which implies that the capital belongs to both capitalists and workers. Having saved, not only the salaried workers own, directly or indirectly, a part of capital, but they also have the right to a revenue, i.e. the interest. With this kind of reasoning, Pasinetti opens up a double approach to the distribution of income: on the one hand, there is the distribution of salaries and profits, and on the other hand the one occurring between workers and capitalists. In this system, what is the role played by the salaried-saver?

Christian Marazzi (1998) has demonstrated that the fact of having re-oriented collective savings towards the stock market – which is very evident in the case of the American economy, where pension funds have increased enormously – not only constitutes a way of making old people work, but also implies an overcoming of the fundamental separation between savings and investments. In other words, the revenue of the salaried-saver has a double nature: it is both interest – a form of rent deriving from the ownership of capital-money – and profit, to the extent

that this saving becomes immediately an investment. The revenue of the salaried-saver will depend directly from the plus-value that capital will extract and appropriate as profit. It is no longer determined by interest rates, which was the normal form of revenue for the classical form of bank deposits, but by profit rates. And what are Pension Funds or Real Estate Funds if not this possibility (which is sometimes a constraint, even if paradoxically it gets people into debt) offered to even very small investors to place their funds in the stock market through a sharing of the risks, which are formally minimized by the diversification of portfolios and the advantages of real estate investments? What is “mutual”, now, are the risks of capital.

Pasinetti’s model, in this sense, was very clairvoyant with respect to the metamorphosis undergone by the form “capital”, the figures of the “capitalist” and of the “salaried worker”, and also by the categories of rent and profit. It is therefore appropriate to revisit his model, and in particular the results to which he arrived: the fact that salaried workers save part of their salary influences the distribution of revenues between capitalists and workers, since the latter receive not only their salary but also part of the profits, but does not influence at all the distribution of income between salaries and profits. In other words, the fact that salaried workers save changes the distribution of profits between capitalists and workers, but not the distribution of salaries and profits. This means that their lives are subjected to a mechanism that overwhelms them and that they cannot control at all. It is as if the workers had been delegated by the capitalists to finance investments. But the investment decisions are still made by the capitalists. The worker-savers take part of the profits (or of the losses), but they have not got the power to decide about production organization and production finality. They remain outside the deciding processes. Because of this, they find themselves in what Christian Marazzi calls a “schizophrenic” position. They are both “accomplices” and “enemies”. The mechanisms aimed at the development of financial participation and stock ownership on the part of the salaried workers go exactly in the same direction, and it is in these terms that the neoliberal *new deal* can be defined.

The different mechanisms regulating salary-based savings and participation/involvement extend the reach of the new “subjectivity factory”, where the neoliberal subject replaces the consuming subject with the “self-entrepreneurial” subject. In other words, we are fostering the production of a subjectivity corresponding to an entrepreneurial image of the self completely determined by the “becoming-capitalist” of salaried workers.

In conclusion, we can advance the hypothesis that in neoliberal cognitive capitalism, understood as the arrangement of a mode of capital valorization and a mode of government, society based on wage/labor relations is condemned to disappear, giving way to an entrepreneurial society.

Labor market deregulation and individualization of wage formation led to the precariousness of work relations and growing wage disparities. Consequences include the development of indebtedness and what may be termed as private deficit spending : credit replacing wage.

The shift of wage towards stock options and the shift of household savings towards the stock markets, more particularly, the development of pension funds contributed to transforming the nature of wage which organized retirement funds and unemployment benefits in the form of social insurance. Individual capitalization has replaced solidarity systems. The *homo oeconomicus* of the first liberalism becomes the self-enterprising. In this perspective global finance can be understood as a vector of neoliberal subjectivity. It produces a new subject -the salaried rentier - but it also produces a new form of alienation.

Following Marx, capitalism is a particular monetary economy, a system in which money is not an intermediary but its very aim. So, the specific product of the capitalist mode of production is absolute value, that is, money. Absolute value means that the specific product of the capitalist mode of production is abstract wealth in itself. Absolute value, Claudio Napoleoni said, is madness, but it is the madness of reality, not of Marxian analysis (Napoleoni, 1985). It is money as absolute value that founds the concept of alienation in Marx. Marx thinks of alienation as domination of the subject by the object, and as common to everybody, but, as C. Napoleoni highlighted, he could not see the deep break that this implies with previous history: the two classes are different functions of a same reality that dominates and exploits them both. Value, as absolute value, is an abstract social bond that dominates us all, although social positions of power are different (Napoleoni, 2002).

What constitutes the force of capitalist subjectivity – wrote Félix Guattari – is that it concerns both, the oppressors and the oppressed. But Guattari hypothesizes also that subjectivity oscillates between two extremes: “a relation of alienation and oppression, whereby the individual submits to a received subjectivity, and a relation of expression and creation, whereby the individual re-appropriates the components of subjectivity, producing a process of singularization”. (Guattari and Rolnik, 2007, p.63)

In fact, the social forces which resist are not missing, they express themselves on at least two planes, macro and micro-political.

On the macro-political plane, I am thinking of all movements which defend

welfare institutions and fight for the independence of institutions of education, culture, research, public health, etc.

On the micro-political plane, I am thinking of these concrete utopias which are being invented all around the world in the shape of fablabs and hackerspace, and which, by taking into account the principles of free soft, have extended it to the domain of the hard, to collectively re-appropriate the knowledge, to create new use-value against exchange-value, to invent cooperation *versus* competitive logics.

## NOTES

1. Félix Guattari, Suely Rolnik, *Micropolitiques*, Les Empêcheurs de Penser en Rond, 2007, p.63

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## IS THE CUP OF STRUGGLE ON THE BATTLE OF INTELLECTUAL PROPERTY RIGHTS HALF FULL OR HALF VOID? A QUESTION OF METHOD AND SOME CONCRETE CONSEQUENCES

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**ABSTRACT.** Current literature has underscored new enclosures of the commons be they traditional or new. The default of these critic of cognitive capitalism is not their lack of accuracy. But one has to stress the priority of the movement of disclosure that has become a fundamental condition of value. Open knowledge, open data, open culture, crowd design and platforms in the cloud are showing that no bottom up innovation is possible without creation of new institution and new rights. The appropriation of digital revolution by multitude cannot be reduced to a colonization of new frontiers for capitalism. It involves, the destruction of the "terra nullius" principle that was the very base is of *coloniality* of the power of capitalism since the first European globalization in the 1500-1700 '. It embraces new forms of subjectivity and organization, hence a true alternative culture.

**Keywords:** new enclosures, new disclosures, cognitive capitalism, "terra nullius"

### **1. Crawling new enclosures**

Current literature about economy of culture and knowledge, has dwelled upon new enclosures of the commons (Midnight Notes Collective, 1990; Barlow, 1996; Lessig, 2001; Moulier Boutang, 2005; Benkler, 2006; Hardt and Negri, 2009) be they traditional (analogical) or new (digital). Economic sustainability of



intangibles goods like science, knowledge, literature, music, plays and any artefacts was created through two main devices: on the one hand, subvention of works and/ or artists, inventors, authors, composers or direct return from market sales; on the second hand, privilege, i.e.-e temporary monopoly to the maker of the work be it the artist or the intermediate like the printer or the publisher of the book or the diffusion networks, the seller of the masterpieces (gallery) or the performer of the music, of the play. With the extension of art, literature, culture, the spill over of knowledge and education, and the increasing incorporation of science into industrial processes, allied with technical ability to reproduce products, direct sale on the market as well as monopoly of trade of material goods, has become insufficient to provide enough revenue for authors and inventors. From the end of the 1500' to the 1900', an institutional device was built that originates all forms of intellectual property rights and organized them into a three fold economic model: a) the patent model; b) the copyright; c) the brand model. These models shared two features in common: 1) the distinction between the intangible good (invention, authorship, word and logo) and its material medium or format. As soon as technical means of reproduction (printing, painting, performing of music, photo, TV, tape recorder, Xerox machine) have appeared, selling the "original copy" on the market has become inadequate. If the price on the market of a cultural or scientific good was supposed to reflex the material component of the copy and the labor incorporated in order to manufacture it, the work of the inventor, the artist or writer was disappearing as such with the first copy or reproduction. Counterfeit, plagiarism, could provide a speedier rate of diffusion in society and a great commercial success in the market that characterizes innovation, but not the survival of creators, inventors, unless they be integrally subsidized. The inventors paid as research and teachers as civil servants, the artist or writers endowed by public funding or sponsors.

The recognition of invention or creation through approved authorship, patent or brand for a given period was a convention progressively settled in Europe and later in the other continents although this movement was not linear at all: for example the US, the Netherlands started to refuse copyright even they became after champions of the execution of intellectual property rights, and drugs were not patented in France until the 1970'. Generics are still disputed. The conceit of IPR does not belong to the classical property *in rem* from the Roman code. For example, the property of the medium of a painting allows transferability of the work as a material good, but forbid any damaging of the medium that would

compromise the authorship rights, and contrive the owner of the medium to share any revenue driven from commercial use of any reproduction.

A fundamental feature is that this regime of IPR was relying upon a large consensus of industrial sectors and state and was enjoying also a more successful protection due to the technical difficulty to copy and to cheat than an intense scrutiny of all operations in the market. Enforcement of IPR was initially difficult in music and popular arts (craft industry was never regulated by IPR but by various forms of corporation regulating the number of the makers and their access to market) but sooner or later sectors of activities where traditional knowledge was important, became swallowed by big industry and normalized in the 1800', whilst Japan, India, Thailand, Brazil, Russia, China were obliged to join IPR conventions in the 1900'.

A second feature is that each attempt to challenge IPR enforcement, generally after the coming out of a technical invention allowing to escape the legal apparatus, was soon followed by a new writing of the law and more refined naming and translation of IPR.

Digitalization and transport of information in all part of the Web at a very low cost introduced a revolution as important as Gutenberg invention of printing in Western countries for what regards the statute of: a) reproduction; b) monopoly of circulation; c) authority that tackle with monopoly in interpretation; d) and finally authorship in science and culture.

The shrewdness or the trick (it depends of the point of view you adopt) of the IPR system had been to re-create scarcity in knowledge, culture and science just as the British landlords has made rare fertile land, pasture and forest that could provide food, heating, and stuff to tenants in the countryside by enclosures<sup>1</sup>. Knowledge good, culture and science present almost all the characteristics of public good (indivisibility *in se* or organized indivisibility<sup>2</sup>, non rivalry) so that their transformation into marketable goods is not feasible unless to create an artificial and temporary monopoly that gives to the "tenant" of the IPR, the right to sue any attempt to reproduce it, or incorporate it into a new product for sale.

Each technical innovation in the analogical world has produced some disclosure in a way or in another. Writing, alphabet, painting, printing, photography, cinema, phonograph, photocopy has enlarged. Sometimes technical devices were added to

bridle the extent of the disclosure, but there were counter-offensives. For example, censorship and legal deposit were instituted to counterbalance challenge of authority by multitudes equipped with new technology.

However, in the history, no disclosure of the size of what has produced the digital revolution has ever existed. Why? 1. In analogical world, copying can easily be departed from the original since the later is always better than the copy whereas in digital, a sequence of zero and one, there is no difference between them, unless you have metadata on the time of registration. Detecting the cheating becomes. 2. Any digitalized data can be reproduced and sent at an almost zero cost (save the time spent by the sender to compose the message). Digital world restores abundance that had been destroyed partly or fully by industrial organization of scarcity of commons in order to promote marketability of knowledge goods. The consequences are an increasing crisis in enforcement of IPR, the diffusion at a mass level of new behaviours among geeks, hackers and click generation that is young people having known none of the ancient world of copyright. Let us give two examples of this: 1) the rapid development of listening music for free, that is gratuitously by downloading of digitalized music, films, videos; 2) the extension of the culture and practise of free software and not only of open source; in the former, you protect the new domain of free and gratuitous contents by making it compulsory to keep open contents and their format (the software and the OS) whereas I the later, the open source, you leave the user free to close again the format<sup>3</sup>.

The deepness of the crisis of enforcement of the IPR of industrial capitalism has been underscore by many authors who predicted the unavoidable character of this revolution. In fact all the market model for intangible goods (patent, brand and copyright) was threatened in its heart and this produced a violent reply like a counterrevolution. Bill Gates repeatedly accused geeks, hackers of being pirates and the “new communist”. As soon as the end of the 1995 with the extension of the Web, and soon of the capacity to download more and more contents with the broad band and high speed internet, cultural industries complained about spoiling of the market: more control were asked in each country and by the same time the strategy of generalization of the IPR at a world level was launched by the United States with the Marrakech agreement, and the Doha negotiation. As earlier than 1988-90, United States had made huge pressures on Brazil not to develop a clone of a Mac personal computer that had been copied by the Brazilian engineers since

Apple had not protected the patents in this country. In the Doha round, the US tried to obstacle treatment of aides through generic drugs. Neo liberalism has shown then that free trade was narrowly linked to stronger enforcement of IPR: digital right management devices, retaliation against countries like India that had been always reluctant to patent plants liked neem (trials for bio piracy). One of the most interesting episodes of the battle for the new enclosures was the battle initiated by Microsoft to shift the statute of software from copyright to patent because it was easier to enforce against its rival in proprietary software as well as free software. Although this battle was won in the US and Japan, it failed in Europe at the European Union Parliament.

At a global level, the first dot.com crisis of 2001-2002 was provoked by a failed attempt to make the Internet a realm of merchant exchanges inflating a bubble that burst with the Vivendi collapse. The second great offensive against the Web was launched with Acta (preceded by Hadopi in France and to be followed by Lopsi in the US) that has attempted to restore the power of the Nation states in the Internet: the motives alleged were always the struggle against criminality (mafia, paedophilia) and terrorism, but lobbies of the cultural industry and pharmaceutical industries were never far in the second row.

The external increasing pressure on this virtual realm of which John Barlow had proclaimed the Independence, were enhanced by a twofold internal transformation: on the one hand, the Chinese domain had increased up to reach half a billion users and the state control was heavy; on the other, commercial use of the Web became well spread as well as the invasion of political communication through web sites, blogs, social networks (from *Second life* game to *Face Book*). The Internet and the Web fifteen year after its creation appeared so re-enclosed, so trivial, so commercial and transformed into a mean of control of Big Brother that historical pioneers like Geert Lovink invited hackers to retreat into a second Internet, to a sort of flight or Exodus (Lovink, 2007). Is the transformation of the digital revolution leading us to the already observed normalization of private property rights and improvement of the apparatus of control like in the previous technological changes? This is not for sure. This thesis is rather simplistic to our opinion. It forgets half of the story.

In a first part of this paper, the whole process of the new enclosures is examined and compared with the old ones. In the 1300'-1500', enclosures were the reaction

of landowners to a movement of desertion of the village. Nowadays, new enclosures are a counter reaction to a powerful disclosure that is produced by both cognitive capitalism and the antagonism of creative workers and the whole multitude. In the second part, we explain how pollination plays a paradigmatic role in cognitive capitalism and why disclosure is a necessary condition for extracting surplus value from the invention force. Social networks, collaborative platforms, web 2.0 capture of positive externalities of interaction are the new means of production to put creative multitude at work and extract or predate a significative part of human pollination. In the conclusive and last part of the paper, we argue that unlike previous forms of capitalism (mercantilism, industrial) cognitive capitalism is obliged to revise the juridical principle called “terra nullius”. In order to produce value, it must acknowledge that such principle destroys the new commons of pollination, but to extract surplus value and fight massive disclosure it must recreate a certain amount of new enclosures through new forms of intellectual property rights.

## **2. Limits of this diagnosis of new enclosures**

In what respect this portrait of the trend of new capitalism is leading astray. Empirical observations of facts of enclosures or attempts to do so cannot be denied. But what can be inferred from these observations depends largely on the interpretation of the global framework. If you maintain that we are still under a regime of industrial capitalism, that extracting value obeys the same rules than in the XIX' century, you bring in a parallel between theses new enclosures and the former ones. Renaissance and the hope of radical Enlightening were soon repressed by absolutist state (Anderson, 1974), enclosed by the codification of absolute “bourgeois” property (Macpherson, 1962) and the very peculiar form of *pastoral power* (M. Foucault) over women through trial and the pyre of witches (Federici, 2004). Matteo Pasquinelli's brilliant analysis (Pasquinelli, 2008) has been deeply influenced by Georges Kafentzis and Silvia Federici (Midnight Notes Collective, 1990) who started their seminal work about enclosures by what was happening in the Third World countries in the 1970-1980'.

The problem posed by such analysis is not that it conveys a rather pessimistic view. After all, history is not an office of consolation neither a school of cynicism. The question is rather that not all the episodes are retraced and narrated, especially

when they deal with successes although this argument can be returned to the sender. Is the reverse optimistic view of liberation through the use of the opportunities provided by new technology, not the half full bottle and as partial as the negative perspective of primitive accumulation as a long enumeration of thefts and crimes to serfdom? The more accurate objection to the pessimistic view is about the reduction of nowadays capitalism to industrial capitalism whereas we should consider it as a new and singular form of capitalism, what we have called *cognitive capitalism* (Moulier Boutang, 2012). What difference does it make? In order to understand the “battle of enclosures” (and not only its alleged result the “enclosures”), which represents the most important and newest forms of conflicts within cognitive capitalism, and not any more within industrial capitalism, one has to stress two considerations of both method and historical substance: 1) the priority of the movement of disclosure before the movement or enclosure; 2) the absolute and internal need for this kind of capitalism, cognitive capitalism, to create these spaces of liberty and new digital commons as a fundamental and inescapable condition for extracting value.

The historical and methodological anteriority of disclosure and common space over enclosures is quite obvious. To enclose something you need to admit it was previously disclosed or open i.e. available for the people. Research about the enclosure movement in England has shown that common lands managed by the village communities were the rule. Rodney Hilton in his great book *Deserted Villages* (1951) has found evidences that the enclosures were a very long duration movement. Parliamentary enclosures observed by Marx in the XVII', XVIII' and mid XIX' were only the very tail of the comet. Before, the greatest part of the enclosure was the result of a complex social movement (the *piecemeal enclosure*) combined with change in the system of cultivation (Moulier Boutang, 1998, p. 296). Mechanism like the industrial reserve army is not at work. The search for more liberty produced in the XI' to the XIV' a true flight towards town and thereby desertion of villages. The pull factor was more powerful and active than the push and passive component of the mobility. The landlords have had to negotiate enclosures with the peasants. The common space of the countryside was abandoned by the population because of the disclosure of *another* and *new* space of liberty, the city where people could get rid of the serfdom, and access to the care and shelter for disabled and old.

In the second historical example, the disclosure of knowledge and science with Gutenberg's invention<sup>4</sup>, we see how greatest access to knowledge good has created a crisis of legitimacy of the old intermediate (the Church) in its authority and prepared the new commons of the Humanism and later the Enlightening. If we go back to the digital disclosure, we may draw the parallel: old cultural devices born with the Gutenberg revolution, like printed books, that were part of old commons are enduring a sort of piecemeal enclosure: traditional culture had suffered a first desertion with the birth of mass culture; it suffers now a second desertion because democratisation in each technological invention, mass collaboration and sharing of cultural contents through multimedia is offering a *greater* space for liberty. If this movement is not taken into account, the progressive face of the digital revolution disappears.

The second historical and methodological point to be made is that cognitive capitalism is not anymore old industrial capitalism. Extraction of economic value relies upon capture of positive externalities from pollination by human interactivity. What suffers more and more exploitation now, is the invention force rather than the labor force, and collective intelligence in digital networks. Regarding immaterial labor, knowledge, and science incorporated in product, processes, procedures that were codified in patent, copyright or brand are now reduced by the digital revolution to trivial data. Thus these intangible are devaluated and economic value has shifted to up stream conditions of production of these intangibles, their halo that cannot be codified such as the activity of learning, paying selective attention, delivering care, achieving invention and innovation. But to show up, collective intelligence innovation need new free spaces where human bees can pollinate, they need new commons, the commons that digital disclosure of knowledge has revealed. Human pollination to develop itself must have its disposal platforms. A too hasty merchandizing of these platforms will threaten participation and interaction of the multitude. For the economic model of cognitive capitalism, accumulation of means of production has a meaning in so far it allows catching a part of human pollination that exceed by far the economic value of he output of production. The economic value of pollination by the bees in nature (restricted only to merchant production) is worth 974 billions US\$ whilst their commercial output in honey and wax is only one billion<sup>5</sup>. The tremendous difference between industrial capitalism and cognitive capitalism lies in the fact that the former needed to destroy the ancient commons in order to transform independent worker into proletariat whereas the later

requires disclosure and constitution of a new kind of commons. Reducing the auto sufficient communities to misery was the condition for more wealth and productivity for cramming population in towns. The situation of the modern enclosures is just the reverse: keeping the digital commons open is the very condition for collecting collective intelligence and the greatest part of positives externalities.

### **3. What is really new in the pollination model of cognitive capitalism?**

However this process is not a gala dinner. On the contrary, it is highly contradictory because as soon as cognitive capitalism establishes its dependence of the new commons of knowledge and of intellectual capital, it discovers two bad news: First bad news, innovation springs always outside of itself: *commonism* (we prefer this terminology to the highly disputed *communism*) has become its own inescapable condition. Second bad news: scarcity is not fatal, private enclosure only the condition for marketing intellectual and intangible goods, and not the condition of wealth. The trend of these new Commons makes it much harder to justify monetary restriction to access. The nightmare of gratuitousness seriously challenges the survival of capitalism “tout court”.

On the one hand cognitive capitalism has to fight against the old mentality of industrial enclosures that threatens the very lucrative perspective of exploiting the pollination power of the multitude. Some episodes like Google Books initiative that started in 2004, or Android more recently has shown that the firm of Mountains View stands on the side of the disclosures of the old enclosures of the copyright that are still the basis of the cultural industries. On the other hand, the biggest corporations of cognitive capitalism fights with big vigour competitors from the open knowledge culture and contribution economy that threaten its quasi monopoly in search engines (*Google Street* versus *Open street view*, distribution of on line music iTunes versus Deezer, Spotify, Quobuz).

Appropriation of the pollination commons has used the old monopolies in distribution, access (films, telephone and TV companies) to bridle the multitude propensity to enjoy knowledge and cultural goods like public goods, a propensity that has grown up with the massive extension of behaviour in the access, the consume of cultural goods. Although frequent admonitions of professional



economist of the culture industry who warn that gratuitousness does not exist<sup>6</sup>, political demand for gratuitous access to the Internet has been acknowledged.

By a strange return to the antics, the first disclosure of the printed culture, the problem of the funding of cultural quasi public good has returned to public subsidizing or a flat tax like the solution proposed by Philippe Aigrain and the Quadrature du Net<sup>7</sup> for non market solutions and to indirect market model by publicity. However the use of publicity by cognitive capitalism does not overlap the traditional of publicity invented in the 1950 to solve the problem of the funding of the radio and the commercial TV. Steve Ballmer did not see how Google could work: “what are they selling, he asked, I see no product?” It is often argued that Google can provide gratuitous service to the user of it users by selling its audience (the number of clickers on its search engine) to advertisers like the Web1.0 or the old model of publicity. But Google’s model is more sophisticated and is relying on Web 2.0 devices: in the initial and fundamental common there is an implicit exchange between the user of the search engine (the click worker) and Google. The customer who does not pay money for the service he gets, is giving for free to the firm of Mountains View his personal data as shown up in the connection. And much has been written about this involuntary cession of private data (a sort of generalized and permanent cookies). In this respect, more strict conditions about privacy enforced by the CNIL (National commission for Liberty in Digital issue) will limit the initial Eldorado of Big Data. But there is another kind of resource that the users of Google or any on line free platform (for music, cinema, design) is exchanging without asking money, it is his interactivity with other people (what is particularly the case in social networks, like Face book). This interactivity of the multitude is the human corresponding to bee’s pollination. It does not produces marketable goods as such (sold as such in the market) but it is: a) first the basis for all kind of markets in the future; b) the condition of existence of an ecosystem of innovation by collective intelligence.

Open knowledge, open data, open culture illustrated by the rapid development of cloud sourcing, crowd design of platforms of economy of contribution are showing that there could not be bottom up innovation without creation of new institution and new rights and finally the shaping of new compromises. Hence the result of

the appropriation of digital revolution by multitudes cannot be reduced to a simple colonization of new frontiers for capitalist extraction of value.

Piracy of cognitive capitalism is not a zero sum game because it goes with the discovery of a new continent of value. Let us go back to our paradigm of pollination (human interaction): in the old continent of value, intensively exploited by industrial capitalism and under the pressure of a very high competition between actors, get a piece of the one billion of total value of the sphere of output is not an easy game. In the new Eldorado of externalities, intangibles of second grade, the capture of only 10% of pollination value (974 billion US\$) yields 9,7 billion. This is the reason why the stock capitalization of cognitive capitalism (Apple, Google, Cisco, Amazon, Face Book) is reaching submits whilst capitalization of industrial firms (GM,) is downsizing rapidly. This kind of capitalism makes alliance with many start up, geeks, hackers, even if one can observe tensions and predictable and complex fractures between the contribution economy (Wikipedia, Open Streets view, free software movement, Open Knowledge, Open Data) and open source movement, (Google, Android, Face Book, Linkedin, Viadeo) or proprietary ecosystem like Apple, Amazon, Cisco, Thalès, Dassault system etc.). In this respect the precise regime or configuration of cognitive capitalism once stabilized will depend strictly on the degree of conflicts on the enclosure/disclosure battlefield.

What they share in common is that they need the greatest digital commons to maximize their profit, unlike traditional cultural industries, traditional economy whose economic model is incompatible with any radical disclosure although they can agree half-heartedly to cosmetic aggiornamento of the copyright.

What divide them is competition, capture of pollination into exclusive ecosystems enforced by a very high learning cost so that exit becomes more and more difficult. In the ongoing competition firms that try to represent or mimicry the preference of the multitude for gratuitous access, free circulation are enjoying a serious advantage over the still proprietary systems like Apple, Amazon. The later is making much more money in the cloud industry than in selling books even in a digitalized device. However even Google has shown quite exclusive and enclosing when its CEO Eric Schmitt recently has protested against the opening of the drone technology to the public by the US government because it could in the future (like

Open Streets View) threaten its *de facto* monopole over big data on mapping of real estate or personal data.

#### **4. The harmful character of the “terra nullius” principle**

The competition between capitalists does not exempt us of examining the following question: Is the cognitive capitalism as a system of capture of the pollination power of the multitude, bearable and sustainable?

The main argument developed by those who stand for an instability of cognitive capitalism because of its predatory instinct to rely upon gratuitous work of click workers (an performance superior to the absolute surplus value of the old capitalism) does not seem to stand because through various devices the new labor (pollinating activities) has started a struggle for recognition of its productive character. We interpret the increasing claim for a basic income<sup>8</sup> as the symptom of this new component of the cost of global labor (as producing outcome and not only input). The limits reached by Google and the social networks in the use of the privacy, in the length they detained big data, in the definition of the cybercitizen and worker’s property when they put data on the cloud, indicate that the age of absolute digital surplus-value is probably coming to an end. Diffidence towards various calls to contribute for free on line is growing. New compromises will have to emerge to keep the level of participation of the multitude high and productive.

A second obstacle to the sustainability of cognitive capitalism by disclosure/enclosure deserves much more attention because it focuses over a crucial point that brings us back to the early enclosures and commons in history. We have argued in the beginning of this paper, that antic commons were present at the very beginning of primitive accumulation. Hence emerging capitalism has had to destroy them by enclosures. How this was possible? By murder, violence, theft says Marx. But the process of expropriation of the commons was a very long and resistible one. The merchant (the man in écus) and the landlords had to negotiate piecemeal enclosures and face flight for cities. In Europe it took four hundred years to be achieved, and what post colonial studies after A. Gunder Franck and several contributions among them my own research have shown is that such a process was made possible only by a detour by the Americas and the slavery system. Outside Europe, expropriation was much more drastic and quickly made:

“If it were done when 'tis done, then 'twere well/It were done quickly“ (Shakespeare, Mac Beth). Not only by weapons and genocide, was this achieved, but very legally by the application of a principle on which the whole process of primitive accumulation has been resting: the *terra nullius* principle.

Such principle says that in the absence of written and state disposition attesting individual property or tenancy, the land is declared open, disclosed like a deserted island. The king can be granted eminent property and therefore can attribute it to colonists. The persons or the hurt communities could not appeal against this expropriation. Naturally this prejudice goes with the implicit idea that the only complete form of property is individual and obeys a fusion in a bundle of *usus*, *fructus* and *abusus* (complete transferability). Common or public written property are defined as imperfect forms no to speak of common law rules to appropriate goods, resources and intangibles that are omitted and made invisible, unaccountable.

When one examines the domain of intellectual property built up under industrial capitalism, we find the same pattern of thinking: what is not patented, branded or copyrighted under private appropriation is imperfect. Echoing the *terra nullius* principle, we encounter the public domain where goods are falling after their full life. The public domain is not defined by specific rules but by the fact that any private person can use it as he wishes. In the digital kingdom of software, what is not proprietary falls into the open source (the code being disclosed) that stands for a source of positive externalities and can be enclosed again in order to create new private period for copyrights and/or copyrights.

The free software movement by Richard Stallman has rejected any enclosure on software, but it has added a specific condition that the open source does not respect : compulsory transmission in the statute of the code. What has required the use of the Commons must remain a common resource and should not be re enclosed into proprietary software.

Open source is similar to the *terra nullius* principle. It allows the use of any resources coming from the public or common domain without restriction. For what regards the copyright one books, images, art production, the creative commons following the spirit of Stallman has reversed this traditional vision. In the copyright, no copy is allowed without payment except the five exception of the “fair use”(private copy, quotation, caricature, teaching and research). In the

creative commons, the right to copy is the default regime, the exception regards commercial transaction. Recognition of the role of the common property or rule of appropriation as the default regime means that private modes of appropriation have to respect the original commons, at least not to destroy them, or, much better to foster the conditions of its reproduction.

What is worth to notice, is that as a result of a long juridical fight by Aboriginal People, the “*terra nullius*” principle has been rebuked by the main Supreme courts in Brazil, Canada, US, Australia, New Zealand in a strict parallel of the requalification of the modern slavery and slave trade as a crime against Humanity. Revocation of the *terra nullius* principle means that members of traditional communities have been harmed and deprived from their rights to use land, natural resources, crafts, language, and culture. A process of reparation should therefore be re-open (restitution of land to the community, authorship for artistic designs and painting that have been appropriated and patented by clothing industries). Last but not least, revocation of *terra nullius* principle complete the ecological principal attribution of rights to natural entities like the biotope, the biodiversity. Open source or public domain applied to nature preserved or to the patrimonial of seeds worked off by peasants since the Neolithic revolution, is the best ally of biopiracy (Shiva, 1992).

Economic foundations of the refusal of the *terra nullius* principle as well as the open source movement, have been argued by Elinor Östrom (1990) : to manage a fragile and complex system of living resources, only collective action can build sophisticate dispositive. Private property rules are too simplistic to satisfy constraints. Resources of pollination, that is positives externalities need a set of conditions to be reproduced otherwise they are only pirated by cognitive capitalism until their complete exhaustion: in the pollination paradigm, care of the bees, no use of poisonous fertilizers or pesticides, freedom of circulation.

Overuse of intellectual property rights to enclose, to forbid access or limited to a monetary exchange impoverishes the ancient commons and the new ones. It kills innovation, complex interaction as surely than the Gaucho, Regent and Cruiser are major agents of the Colony Collapse Disease.

## NOTES

1. We are speaking of the second enclosures, not the spontaneous deserted villages in the 1300'-1500'. See Moulier Boutang (1998), p. 296-300.

2. Ostrom, (1990), p. 182-210

3. Moulier Boutang, (2003), p. 114-126.

4. No need to add that the true invention of printing character was Chinese much before. Gutenberg as a true innovator introduced it in the context of alphabetical writing.

5. See Moulier Boutang, (2010). If the bees were to disappear (this possibility is not anymore a fiction with the colony collapse disease) 33% of the total agricultural output amounted in 2010 to 4% of the world total GDP (60 trillions of US\$) and would be lost. These figures do not include the contribution of pollination by the bees of preserved nature and the global biotope.

6. See Blomssel, (2007) , and Lescure, (2012). Note that the latter is a Report to the French Government.

7. See Aigrain, (2008) and his blog <http://paigrain.debatpublic.net>

8. See <http://www.basicincome.org/bien/>

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## **CONSUMPTION IN COGNITIVE CAPITALISM: COMMODITY RIOTS AND THE DICTATORSHIP OF THE PROLETARIAT OF CONSUMPTION**

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**ABSTRACT.** We challenge the prevalent opinion that consumption does not seem to matter as much as production and defy the fetishism of industrial work. We explore the implications of the premise that under conditions of cognitive capitalism consumption dictates what production does, when and how. We explain that in a post-industrial global society and economy fashion, branding, instant gratification of desires, and ephemeral consumer tastes govern production and consumption. The London (commodity) riots of August 2011 send us a warning that consumption and cognitive capitalism are asphyxiating in the structures and norms of industrial capitalism that are still in place.

**Keywords:** cognitive capitalism, consumption, autonomist Marxism, London riots, commodity-form.



## 1. Introduction

In the introduction to the book *Radical Thought in Italy* (Virno and Hardt, 1996), the editors – somewhat apologetically – explain that ‘the Italian mode of thinking revolutionary politics’ has ‘seldom develop[ed] the critique of the commodity ... as a major theme,’ since such analysis ‘run[s] the risk of falling into a kind of asceticism that would predicate revolutionary struggle on a denial of the pleasures offered by capitalist society’. In contrast, revolutionary thinking in Italy,

Involves no such denial, but rather the adoption and appropriation of the *pleasures* of capitalist society as our own, intensifying them as shared collective wealth... *Revolution is a desiring machine*... Communism rather will emerge out of the heart of capitalism as a social form that not only answers the basic human needs of all but also *heightens and intensifies our desires*. (Virno and Hardt, 1996: 7 – emphasis added).

We draw inspiration and courage from these lines to attempt to make that link; to bring together autonomist Marxism with analysis of consumption of commodities and to discuss commodities and their consumption in contemporary cognitive capitalism not in a rejectionist, austere, strict anti-capitalist manner, but rather in a way that shows the joy, desire, fun, sex-appeal, a new kind of ‘mystical character’ that commodities and consumption have in our capitalist society. Our ‘laboratory’ and ground for inspiration in searching for the significance of consumption was the department stores and fashion boutiques of London (not the factory, nor the library). It was there that we were transfixed by the joyfulness, youthfulness, and immense intimacy of commodities offered for consumption; but also felt the starkness, if not outright hostility, that (some) Marxists often regard consumption with.

In this paper, we aim to take a step further the discussion on the commodity-form and commodities in cognitive capitalism (Boutang, 2007; Paulré, 2008; Vercellone, 2005) that we started elsewhere (Tsogas, 2012; Tsogas, et al, 2013). We instigate an examination of consumption of commodities and scrutinize the influence of cognitive capitalism. We attempt to challenge the prevalent belief that consumption – on the

question of first and last things – does not seem to matter as much as production. We explore the conditions and circumstances in cognitive capitalism under which consumption not only *does* matter but, in fact, commands over production; it dictates what, where, and how much is produced, and when consumption suffocates in the confines of industrial capitalism, we suggest that it desperately tries to break out, either peacefully (through cyberspace) or even violently (in commodity riots).

## **2. Consumption in cognitive capitalism**

On the deduction that immaterial and affective labor (Hardt and Negri, 1994; 2000; 2005; 2009; Lazzarato, 1996; Negri, 2008; Virno, 2004) add immaterial qualities to a commodity, which could have a disproportionate effect on its retail value (Tsogas, 2012; Tsogas, et al, 2013), we put forward a *negation of value creation in cognitive capitalism*. In classic Marxist analysis, value is created in production and destroyed in consumption. In cognitive capitalism, we stipulate, consumption not only does not destroy production, but, in fact, it guides and precedes it; as knowledge comes before creation, creation can exist in the space that knowledge has allocated for it. What, in other words, we declare here is that the Tayloristic/Fordist model of production followed by consumption is long dead.

### *Benetton and cognitive capitalism*

The fashion label Benetton delivered the first fatal blow in the mid to late 1980s. Under the guidance of Prof. Bruno Zuccaro and by using the, then, newly emerged computer communications protocols as well as bar codes on products, they managed to connect – in a truly radical and revolutionary way – consumption with production (Mantle, 1999). When a customer was buying a Benetton product, the information about the event and conditions of sale (time, place, price) as well as the characteristics of the product itself (color, size, style, etc) were wired through a bar code scanning device located at the till, down a telephone line. These signals

reached not only company headquarters, but, most decisively – and this is the revolutionary innovation that Benetton initiated – the production units. There, robots and IT-led systems would be able to produce exactly and only what is being demanded, at the quantities, styles, features, etc that are being desired by consumers and – even better – at a fraction of the time needed otherwise. What is produced is only what is known to be selling. Thus, for the very first time in manufacturing, production was directed by consumption. Within 3 to 6 days, Benetton stores anywhere in the world could be supplied with what is actually selling, (Zuccaro, 1990). From that moment onwards, consumption took the upper hand and has consistently been dictating its will to production. Never again heaps of ‘stuff’ are to be made waiting and hoping for a buyer to find them; or as Prof. Bruno Zuccaro put it: *‘first we sell the clothes, then we make them’* (Mantle, 1999: 145 – emphasis added).

We must emphasize here that it was the (knowledge and affect-led) fashion industry and not, for example, car manufacturing – the favorite subject *par excellence* of many academic streams – that conceived and implemented these revolutionary changes, taking full advantage of the state-of-the-art technology. Unfortunately, in the years that followed, hardly any research into and appreciation of the Benetton model came to light. Haunted by the fetishism of the factory and driven by the specter of a Marxism that perceived the ‘industrial worker’ (and only him) as the agent of revolution, academic research in business and social sciences mostly shunned away fashion and retailing as unworthy of concentration. In recent years, Zara – again a fashion producer and retailer – adopted and expanded further Zuccaro’s IT-led production system and pioneered what is termed as ‘fast fashion’. Both companies have chosen to operate on a vertically integrated cluster, where almost everything they do (from design and administrative functions to production and distribution) is located in one place and from where (most) products are flown and distributed across shops worldwide. This model contrasts with the global supply chain that other fashion labels have adopted (with Nike being a typical and routinely cited example).

### *Consumption before production*

What, thus, transpires is that in cognitive capitalism commodities may only come to life (often through the blood and tears of exploited workers) when – and because of – a particular outlet for their desire, adoration and consumption has arose and calls for them to come into existence. We – our cognition – is that outlet. It is anticipated consumption (our cognitive states, formed as they are) that dictate what, how, where, when, how much, by whom, etc. will be produced. Consequently, production largely conforms to the demands that consumption puts upon it (a dominance of cognition over matter). In other words, it is the knowledge, feelings and emotions of people, whom as producers make commodities that are directed to our knowledge, feelings and emotions, as consumers. The cognitive state of the consumer interacts with the cognitive state of the producer. Consequently, value is being embedded in commodities as they materialize through their production processes, and not later, for example at a shop window or through some advertising campaign, that could transform them into something (more) desirable (Tsogas, et al, 2013). Commodities in cognitive capitalism are born–affective, desirable, sexy and made-to-sell, and do not become later.

### **3. The (amazing and bewildering) commodity in cognitive capitalism**

‘Great clothes often begin with a feeling, a vision, a memory ... perhaps a song lyric or a scene from a classic movie’ (The Gap 2010).

A commodity in cognitive capitalism is no longer a ‘thing’; it has a soul, a personality carefully cultivated to match that of the perspective buyer, a history, a mind, and a culture enshrined into it by the immaterial workers that created it. Thus, ‘the mysterious character of the commodity-form’ (as Marx described) in cognitive capitalism reflects not only the social relationships that exist among those who worked in their production (as it did in industrial capitalism), but also the exceptional and numerous cognitive qualities that are embedded in it, through us: the sex appeal, the ability to generate desire, evoke feelings, complement the identity of an

individual, become a visual display of individuality, status, even mood, and so many others. *The commodity in cognitive capitalism becomes biopolitical*; it contains life, it is made up of life, it reflects life back – it gives life. It is happy and cheerful (even if blood and sweat were shed for its production, it is still gleaming with happiness). Commodities in cognitive capitalism don't just speak, they sing like sirens! (see graph 1).

Graph 1: The siren-like desirability of the commodity-form in cognitive capitalism



Source: Extract from a print advertisement in the *London Evening Standard*, 11 November 2009.

One can only resist – if at all – by suffering tied up at the mast, like an Odysseus, or when has been ordered to disable her senses<sup>1</sup>. Certainly, the social relations of production have not disappeared and some will continue to draw attention to that little ‘monster,’ born out of the blood and sweat of workers that is hidden beneath of what they see as a glitzy, meaningless exterior.

#### **4. The new plateaus of consumption in cognitive capitalism**

Consumption is so overwhelmingly powerful that not only creates the space for production to materialize, but it also transcends that production space and thrusts itself into new plateaus.

First, it moves from the production space of the ‘genuine’ to the plateau of the ‘fake’. The production space of the ‘genuine’ is organized and regulated, where laws function, brands ‘really’ exist, factories legally operate, and governments collect taxes. The plateau of the ‘fake’ is seemingly disorganized, beyond the reach of law, or outright ‘illegal’, without boundaries, but nonetheless a place where many people earn a living. This is the domain of pure consumption-led production. Here, consumption goes beyond the (inadequate) actual capacity of industrial capitalism and the regulated economy to satisfy the thirst of label-hungry, recognition-seeking, commodity-worshipping consumers (but with less disposable incomes...). Consumption engulfs the ‘informal’ economy to provide these consumers with ‘high quality fakes’. The skyrocketing production of various high quality counterfeit products demonstrates, in this extra-ordinary way, not only the significance of brand names for people, but also our insatiable appetite for a fashionable, status-defining accessory, a piece of clothing, or a lifestyle defining product. Certainly, if brand logos did not appeal as much to consumers, there would not have been such an exposition in the counterfeit market. Those who cannot afford the ‘genuine’ would knowingly seek and purchase the ‘fake’. For them, the ‘fake’ becomes the very real that can be acquired; not an inferior item, but very much the real thing.

But, consumption is not content with ‘fakes’. Whenever it can, it uses as little physical production and form as possible. Physical production is messy; it involves dealing with the most unpredictable and upsetting issues: people to start with and politics, dirty factories, managers with big egos, geographies, and politicians fixated with protecting their border, etc, etc. Consumption avoids the materialization of its existence, and can do so with great success when given the opportunity, by linking directly (with no intermediaries) the producer with the consumer. The legendary Napster and others who imitated and followed him have all but destroyed the very *raison d'être* of some once-upon-a-time powerful industries: music and movie entertainment. Consumption through the technological means of internet technologies can reach the consumer directly with as little need as possible for a form of materialization. Music and movies can be enjoyed directly through a network onto a computer screen, without even the need of ownership or possession.

#### *Commodity riots and the dictatorship of the proletariat of consumption*

Consumption can also violently burst out of the confinement imposed upon it by industrial capitalism to dictate to those who cannot consume enough a more direct relationship. In the land that the Industrial Revolution begun and where once the Luddites destroyed machines, in August 2011, we witnessed a different kind of riots; some very cognitive-capitalism riots. The violence – at times seemingly blind – was not directed at destroying the means and super-structure of production; the objects of repression of the proletariat (what ‘traditional’ Marxists would expect to witness), nor was it focused directly against authority and the power of the state (any clashes with police were a by-product of the dynamic of the riot). It did not have any political objectives, nor was it organized by any (party, union or revolutionary organization) hierarchy. Riot(er)s self-organized through social-networks and direct exchanges of knowledge, feelings and emotions (anger, resentment, or just the joy of vandalism).

The gangs of these negated Luddites of consumption did not destroy machines in factories (these are, after all, no-where to be seen, nowadays, in the urban landscapes). Their violence was a violence of consumption.

They ‘liberated’ the objects of consumer desire from the confines of stores and warehouses. They grabbed and looted what they saw as deserving theirs and, after all, made *for* them: the cool sneakers, the plasma TVs, the trendy clothes, the Xboxes, PlayStations and mobile phones; and when these run out, everything else they could get their hands on.

Other explanations of these riots fail to understand this cause. But, by putting forward the exegesis of consumption as an all-powerful and mighty drive to acquire and a call to possess, we bring in some lucidity to the matter. Some might warn that the riots are a sign of the threat to society posed by (over)consumption and we, thus, need to return (somehow) to more ‘traditional’ values. We suggest that the (commodity) riots of August 2011 are a warning sign that consumption and cognitive capitalism are asphyxiating in a structures and norms of industrial capitalism that are still in place. Shouldn’t we be thinking more along the ‘Italian mode of revolutionary politics’ by adopting and appropriating (literally or metaphorically) all the pleasures that the capitalist society can offer us, and in doing so intensifying and heightening our desires? After all, in a society of abundance, like ours, everyone who desires a PlayStation or a plasma TV, should have one!

We feel that we are right at the beginning of not only a new era, but also of a huge highway of knowledge that we need to grasp. Paraphrasing Žižek (2011), we advocate that the situation is indeed catastrophic, but not serious! (It is catastrophic for those who strive for outdated forms, but not serious for those who want to seize the future).

## NOTES

1. When the sensual deprivation under ‘existing socialism’ ended millions of little shops, kiosks, and stalls blossomed all over Eastern Europe, offering a myriad of wonderful object (from lingerie and adult entertainment goods to techno gadgets) that served primarily one purpose: to make life more sensual; happier and cosier.



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## **COGNITIVE BIO-CAPITALISM, SOCIAL (RE)PRODUCTION AND THE PRECARITY TRAP: WHY NOT BASIC INCOME?**

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**ABSTRACT.** Nowadays, there is a link between the theoretical framework which defines the current economic and organizational paradigm (we call it "cognitive-biocapitalism") and the issue of "social (re)production". This latter was already analyzed and investigated by the materialist feminism of the Seventies, but it needs to be updated. The link we intend to shed light on rests upon the fact that contemporary social reproduction takes the form of productive valorization, and it should therefore be analyzed not only from an economic point of view, but also from a sociological and psychological one. In fact, social reproduction is nothing else than the form assumed by contemporary production as a whole, in a metropolitan context where the city is the new factory and in which precarity becomes the main organizational form of the labor market, and human faculties as well as life time are ceaselessly commodified. This paper aims at analyzing the link between "productive" social reproduction (better said: "social (re)production") and the central role played by precarity as a generalized, structural and living condition. The rising of a "precarity trap" is the way through which social reproduction is valorized, and we argue that basic income could be the answer to the multifarious social problematics it raises.

**Keywords:** valorization, cognitive capitalism, social reproduction, precarity trap.

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## **1. Introduction**

In this paper, starting from our previous studies (Fumagalli, 2007; Morini 2010; Fumagalli and Morini 2010, 2012), our aim is to analyze the characteristics of cognitive-biocapitalism (par. 2) in order to focus on two aspects which are strictly correlated: the increasingly central role played by social (re)production (par. 3), and the precarity trap (par. 4). The first issue (together with financialization) has become paradigmatic of the new type of labor organization in the present accumulation and valorization paradigm. This latter deeply affects different activities, which in turn are connected to the process of commodification of arts, culture and life. The second fundamental aspect concerns the typical form of labor relations which, in a time of crisis, becomes a sort of social and disciplinary instrument, eventually bound to transform itself into a trap. We conclude by arguing that the introduction of a basic income could be a useful tool (certainly amongst others) to counterbalance the precarity trap and the exploitation of contemporary social (re)production. As such, from a political perspective basic income is strongly opposed by the present hierarchical structure of power (par. 5).

## **2. Characteristics of cognitive biocapitalism**

In cognitive biocapitalism, finance, knowledge, and relations are the driving force of accumulation. Finance is the pulsating heart; knowledge is the brain; relational activities are the nervous system. Cognitive biocapitalism is a single body, within which the “real” sphere cannot be separated from the financial one, nor can the productive sphere be separated from the unproductive, or labor time from life time, or production from reproduction and consumption...

We can say that in cognitive biocapitalism, financial markets directly influence and condition the process of accumulation and valorization<sup>1</sup>.

Financial markets thus exercise biopower (Lucarelli, 2010: 119–138). Hence, in cognitive biocapitalism, we observe the “becoming-rent” of profit (Negri and Vercellone, 2007; Vercellone, 2010; Marazzi, 2010: chapter 3). Rent is the main tool for capturing both surplus value and the de-socialization/privatization of what is common to all. The meaning and key role of this becoming-rent of profit can be appreciated at two levels. On the one hand, this process is evident at the level of the social

organization of production and of the distribution of income: the criteria underlying the traditional distinction between profit and rent become less and less pertinent. The confusion affecting the frontiers between rent and profit finds one of its expressions in the way in which financial power remodels the very criteria of corporate governance with the sole aim of creating value for the shareholder. The new governance of contemporary enterprises is increasingly grounded on a type of management whose fundamental performance is exercising financial and speculative functions while delegating to employed workers the real functions of the organization of production. On the other hand, the competitiveness of a company is largely dependent on external ones rather than on internal ones. This means that, in order to be competitive, corporation must gain the ability to capture productive surpluses which result from a territory's cognitive resources.

Capital, then, freely benefits from the collective knowledge of society, as if it were a gift of nature. In other words, the valorization process takes place not only inside the production cycle, but depends more and more on the capacity of expropriation of the external social cooperation, namely on a rent. It is from this perspective that we use the expression: "becoming-rent of profit". It indicates the actual form of privatizing what is *common*<sup>2</sup>, gaining income from the creation of a purely artificial scarcity of resources. It is the *common* that links together, in a single logic, the rent stemming from real estate speculation and the rent created by financial markets—which, since the beginning of the 1980s, has played a major role in the fiscal crisis and the dismantling of welfare state institutions due to privatization of currency and public debt. Thus, the becoming-rent of profit derives from the attempt to privatize knowledge and life (bios). This is achieved through a politics promoting the reinforcement of intellectual property rights so that the cost of numerous commodities is kept artificially high, although their reproduction costs are extremely low or even close to zero.

That is the consequence of the fact that value production is no longer solely founded on material production. Productive activities are increasingly based on immaterial elements, that is to say, on intangible raw materials, which are very difficult to measure and quantify, and that emerge directly from the utilization of the relational, sentimental, and cerebral faculties of human beings. The process of valorization loses, in this way, the measuring unit which was usually connected to material production. With the advent of cognitive biocapitalism, valorization tends to attach itself to different forms of labor, which go beyond official labor time, and increasingly overlap one's whole lifetime. Today, the value of labor at the basis of biocapitalistic accumulation is also the value of

knowledge, of affects, and of relationships; it is the value of the imaginary and the symbolic.

Even the division of labor takes on cognitive characteristics and is therefore based on the differential access and use of multifarious forms of knowledge. Knowledge can be divided into four levels: information, codified knowledge, tacit knowledge, and culture (or systemic knowledge). All of these are characterized by unilateral relations of dependence. Information is the basic level of knowledge that is increasingly incorporated into machine elements. Codified knowledge is a specialized knowledge (know-how) that derives from tacit knowledge but which is transmitted through standardized procedures, with machines as intermediaries, where the bearer can be substituted at any moment, having no contractual power whatsoever. Tacit knowledge (know-that) can be based on personal learning processes or from specific investments in research and development (R&D), due to intellectual property rights; furthermore, at least until the codification process occurs, it can be transmitted only through a human being, thus possibly generating forms of enclosures. Those who possess tacit knowledge, which is relevant for the productive process, have therefore a higher contractual power, and define the hierarchical structure of labor and production.

However, no matter how relevant it can be, tacit knowledge is bound to transform itself – sooner or later – into codified knowledge, and thus to lose value. Culture can be defined as the set of knowledge that allows an individual to perform the intellectual function, that is to say, the ability to act critically and creatively, namely in a way which is not immediately subsumed to the logic of biocapitalist valorization. As a consequence, culture is dangerous for the reproducibility of the socioeconomic system and also constitutes a surplus that exceeds control.

In cognitive biocapitalism, the condition of the labor force goes hand in hand with mobility and the predominance of individual contracting/bargaining (precarity). The reason for this is that nomadic individualities are put to work, and the primacy of private rights over workers' rights brings about a transformation of the contribution of individualities—especially if characterized by cognitive, relational, and affective activities—into contractual individualism. Labor relations based on precarious conditions, that is to say, the temporal limit and spatial mobility of labor, represent the basic paradigm within which the relationship between capital and labor takes place. Thus, precarity becomes a structural, existential, and generalized condition. Moreover, an essential character of cognitive biocapitalism is the dematerialization of fixed capital, and the transfer of its productive and organizational functions to the living body of the workforce.

This process acts as the ground upon which one of the new capitalist paradoxes is rooted: the contradiction between the increased centrality of cognitive labor as a lever for the production of wealth and, at the same time, the devaluation of that labor as far as salary and professional status are concerned. This paradox is inherent in Marazzi's definition of the "anthropogenic" character of contemporary capitalistic production<sup>3</sup>. In cognitive biocapitalism, living beings contain within themselves the functions of both fixed and variable capital, that is, of both the material and machine-like forms of labor belonging to the past and the current form of living labor: bios. That is particularly true in those industries related to wealth, learning, body care and people care (children and the elderly) services. It is not by chance that today, notwithstanding the crisis, these industries are the only ones which are able to grow.

Nowadays the separation between abstract labor and concrete labor is not as clear as it was in industrial-Fordist capitalism. First, what Marx used to call concrete labor, or labor producing use value, can today be renamed *creative labor*<sup>4</sup>. This term allows us to better understand the cerebral contribution which is inherent in such activity, while the term *concrete labor*, although conceptually synonymical, refers more to the realm of *making* than to that of *thinking*, with a closer allusion to craftsmanship proper (Fumagalli, 2013).

In cognitive biocapitalism, life itself is put to work and produces value. Thus, the labor theory of value should be renamed as a life theory of value (Fumagalli and Morini, 2009). This redefinition occurs through the valorization of individuals' differences. These differences, in their uniqueness, make possible the relational activities that are the basis of the social cooperation producing the "general intellect"<sup>5</sup>. In addition to general differences based on race, gender, and so on, we also need to consider difference *tout court*, which is valorized without any relation to the anthropological characteristics that define it. What today is starting to be segmented and divided are the cerebral differences, that is to say, individualities. Spatial and biological differences, gender and race in particular, can at most be instruments for the immediate disciplining of the social body. The worrisome emerging tendency, however, is represented by the constitution of a human subjectivity characterized by the contradictory conflict between creative actions and cerebral standardization. In other words, the risk is the creation of a sort of bionic being, capable of managing the anthropogenic process of production. These elements suggest a world where individuality is erased but individualism is exalted. Cognitive biocapitalism is bioeconomic production: it is bioeconomy.

Since life itself turns into value, differences become value (Morini 2010). The traditional binary dichotomies inherited from industrial-Fordist

capitalism are no longer topical. We are witnessing the overcoming of the separation between life time and labor time. As soon as labor activities are inscribed in the existential faculties of individuals, it becomes impossible to define a temporal barrier between labor and non-labor time. Even if this distinction can nominally continue to exist on a formal, juridical level, the difference between life, labor, and work no longer exists. This is due also to new language- and communication-technologies: life appears to be completely subsumed under work and labor.

Moreover, we are witnessing the overcoming of the separation between work-place and life-space. The multiple forms of bio-labor refer to nomadic working activities, where mobility is a primary requisite. This phenomenon leads to the definition of non-places of labor, as opposed to classic forms of domestication. In this case, indeed, we should not talk about a convergence of labor-place and life-space but, rather, about the expropriation of the workplace and of all possible consequences that this process might have on work identity. We are witnessing the overcoming of the separation between production and reproduction<sup>6</sup>. This is the first consequence of life becoming work. When we talk about life, we do not only mean it as directly oriented towards productive activities, but also to the social reproduction of life itself, a clear example of which is the almost exclusively female character of care-taking work. Having said this, we can state that the erasure of this distinction implies the partial overcoming of specific gender differences and poses the issue of difference *tout court* (Morini, 2010). In conclusion, we are witnessing the overcoming of the separation between production, circulation, and consumption. The act of consumption is, at the same time, a participation to public opinion, an act of communication, and self-marketing. In this sense, consumption allows the further valorization of commodities.

It follows that the income distributive rules need to be revised. In cognitive biocapitalism, basic income is the compensation for work and active life absorbed in the valorization process, just as wages are the remuneration of labor. The idea of basic income is based on the concept of compensation or remuneration and not of support or assistance (subsidies, transfer payments, etc.). The logic that justifies its existence is then completely opposed to the doxastic interpretation of the current situation, that is, to measures that would guarantee a continuity of revenue in a temporary, conditioned way<sup>7</sup>. In the present context of cognitive biocapitalism, wealth is divided between those whose life becomes value (all residents, regardless of citizenship, etc.), on the one hand, and all those (much fewer) who create value from the private appropriation of the *common* or who profit from productive and service-related activities. As a consequence, basic income is, by definition, unconditioned and perpetual



(for the duration of one's life). In other words, basic income is nothing other, today, than the equivalent of salary in the Fordist era (Fumagalli, 2009).

It follows that in cognitive biocapitalism, the most adequate structure of welfare is the *commonfare*, or welfare of the common (Fumagalli, 2007, 2008). *Commonfare* is based on two important concepts: on the one hand, we have the guarantee of continuity of unconditioned income, regardless of labor conditions and professional, social, and citizenship status. This concept is complementary to any other form of direct income, as compensation for the productive social cooperation that forms the basis of value creation, currently expropriated for private rent and profit. On the other hand, we have access to the common and to common goods - material and immaterial goods that allows full participation in social life by way of the free fruition of common natural/environmental goods (water, air, the environment) and immaterial common goods (knowledge, mobility, socialization, currency, primary social services).

### **3. Social (re)production**

The concept of social reproduction is paradigmatic of cognitive biocapitalism. It includes the main novelties of the new accumulation and valorization paradigm, by considering a wide range of activities, from care, health, education to knowledge and culture diffusion. And, as already mentioned, all these activities have become productive. Social (re)production is at the same time a collective and individual activity, since it simultaneously deals with individual learning and social relations.

It is not by chance that in the Fordist paradigm reproduction has been neglected and construed solely as the antithesis of "productive" labor. Productive labor occurs outside, on the market, in the public space of a city, in the factory; reproductive labor is developed inside, within a room, away from the streets: it is therefore the shadow of productive labor, the realm of which production represents the content. Marxist feminism in the 1970's and 1980's had already provided explanations about the origin of this shadiness. Lucia Chisté, Alisa Del Re and Edvige Forti (1979), Maria Rosa Dalla Costa and Selma James (1972), Silvia Federici (1980) and Leopoldina Fortunati (1981), around that time, denounced the existence of this unbalanced binomial, originating in the sexual division of labor and in the sexual contract which establishes a crystallized hierarchy, that is, the fact that only productive labor can grant the right to citizenship.

This "productive labor" finds its support in a broadly multidisciplinary ideological construction, which cuts across classes and is shared by both religious and lay ethics. From the protestant-Calvinist ethics

the notion was transposed to political economy, to finally become common sense, a norm of behavior, a pivotal piece of our society's imaginary. Since Adam Smith ([1776] 2008), "external" labor, directed to the "market", together with capital (as fruit of the labor activity), has been considered the productive factor par excellence. All the rest of labor becomes eclipsed, as it does not generate value - one claims - and therefore has no value. We are well aware of that since, in summary, according to Karl Marx's theory of value, productive labor is that which lends its labor to the production of commodities and tangible merchandise which have an exchange value (Marx 1969). Conversely, non-productive labor, since it is not attached or incorporated into any physical object, adds no value to anything: it is the labor of domestic workers, and that is the women's reproductive labor.

But even Marx realized that the desire for surplus at the basis of the capitalist process keeps in itself a possibility of crisis and dissolution. This is so because the superficial balance of the process of valorization, the triumph of the metamorphosis of commodities is constructed upon the eternal suppression of human needs and on a contradiction which is continuously dissimulated but remains fundamental: "once the weave that ties together commodities and money is temporarily loosened, the result is a rupture from which the fundamental contradictions of capitalist life emerge" (Caffentzis, 1996: 183). As Georges Bataille ([1948] 2003) claimed, the capitalist accumulation is based on portions of unfulfilled desire, in other words, on the rupture of the social ties which must be torn apart to become linked to the intrinsic contradictions of the goods.

The enigma of reproduction lies in its being "a hidden phase of the capitalist accumulation", but also in the fact that it is always inseparably linked to the cycles of the exchange process which bind goods and money, revealing the deep and inescapable truth of the social reproduction process.

Today we can say that social (re)production becomes the visible core of the present "primitive accumulation" as a condition for the diffusion of cognitive bio-capitalism<sup>8</sup>.

It's not surprising, in fact, that the centrality of social reproduction has been made evident by Michel Foucault when he cast light on capitalism as a system that develops life, i.e., biopower: "This biopower has, without any doubt, been one of the indispensable factors in the development of capitalism, which could only be consolidated through the controlled introduction of the bodies in the production apparatus, thanks to an adaptation of the phenomena of populations to the economic processes. But it has asked more than that: it demanded the promotion of the growth of both, their reinforcement and their utility and ductility. It also demanded the introduction of methods of power susceptible to greater forces,

attitudes, life in general without turning more difficult their subjection" (Foucault [1976] 1991: 124).

The "entry of life into history", which Foucault discusses ([1976] 1991: 125), helps us in identifying a theory of social reproduction which questions once and for all the alleged subordination of the spheres of life external to the market with regard to the internal ones. From this perspective, the possible links between the theories inherent to relational-cognitive bio-capitalism and the issue of social reproduction must be stressed. It is an interesting, dramatically contemporary and heavily tensed passage, which becomes concrete in the overt becoming of the social aspect of production which must be analyzed resorting not only to economic laws but also to psychoanalysis and current events. In this context Maria Rosa Dalla Costa (1974), Leopoldina Fortunati and Silvia Federici (1984) and other feminists who, from the mid-1970's onwards, focused on the issue of labor invisibility – recognizing that the most important source of social surplus is unpaid labor – provide some powerful insights.

Obviously, this vision is confirmed today, in the generalization of the free character of labor made explicit by the generalization of the processes of precarization of labor. Symbolically, those processes transfer the entirety of the current economic process to a sort of "economy of working at home": the comprehensive restructuring of work implies that labor acquires many of the features typical of female work, except that it can now be equally carried out by men and women. This opens up the concrete possibility of being used as a reserve army of labor, more similar to servants than to workers, subjected to paid and unpaid labor time, regardless of the agreed-upon work schedules. This transformation supposes large-scale downgrading of jobs. The domestic work economy means that "the factory, the home and the market are integrated in a completely novel relationship, and that the women's positions are crucial and must be analyzed with regard to the differences between women and with regard to the meaning the relations between men and women take in different contexts" (Haraway, 1995 : 63).

In a broader sense, taking into account the whole life, we can say that reproduction is a weave, a net formed by cultural factors stemming from the mere act of living. And nowadays those cultural factors take on a special meaning at the level of exchange, contaminating use value. In the process of exchange, use value (that is, the utility a certain product has to an individual), is transformed into exchange value (the value a product has when exchanged in the market). Whereas use value is directly associated to the relation of men with that which they "shall use", the capitalist value of goods is realized in the exchange, that is, in that social process which is at the basis of its production and which allows different types of products of

human labor to be commensurable. The crucial issue lies precisely here, in this transition, in the transformation of linguistic-relational products into commodities, in the shifting of relations into commodities. This is where the epochal change of the productive paradigm which we are experiencing lies: what becomes obvious is that the entire economic process nowadays is founded on the “becoming-commodity of the human”, confirming the thesis of the “workerist” feminism with regard to the generalization of the production of surplus. And as the becoming-production of reproduction is established, we also need an update of the labor theory of value. It must be stressed that concrete labor (labor qualitatively defined, which produces some sort of use value), which constitutes the sole property of the free worker, becomes so fully embedded in the productive process that it is transformed into surplus. And since the productive process excludes the ownership of the means of production by the capitalist (we, ourselves, are the means of production), we could venture to say that the transformation of the (linguistic-relational) commodities into money takes the shape of income rather than that of profit. And perhaps one should add that if we do not become collectively aware of the amplitude and the seriousness of those processes and devices, capital will end up by actually taking over us completely, by maximizing its interest through the living matter and the ways of living.

Words and messages, just like physical objects, do not exist in nature, but are rather produced by men. The concept that simultaneously permeates all of those elements which seem to be separate ("material production" versus "linguistic or immaterial production"), is the notion of labor. In fact, if material commodities are quite different from linguistic or relational products, the labor from which they result is in essence the same, since the notion of labor refers to men and women, in their complexity and unity, at the same time. If anything, so far, the concept of labor has excluded the so-called reproductive labor. As we have already pointed out, earlier on the scope of industrial capitalism was the production of manufactured commodities, and the type of organization associated with it required the formal marginalization of reproduction. Today, however, this exclusion is all but functional. The scheme has collapsed; nothing remains of the old days. Recalling Rossi Landi (2003: 63) : “Man is a working and talking animal who sets himself apart from all others by producing tools and words”.

#### **4. Precarity trap and the new industrial reserve army**

The total amount of employed precarious workers within the labor market in Italy is about 4 million (more than 20% of the total workforce). Those

workers are more concentrated in the service sectors. The average remuneration is less than 1,000 euros per month, 25,3% lower than stable workers performing the same working activity. However, if we also consider the existential precarity – related to the opportunities to build a family, to be autonomous, and to plan a life project – that amount reach the astonishing figure of 7 million. This situation is worsened by the difficulty experienced by precarious people in getting a stable job. Of over 100 precarious young people entering the job market, in 2009 only 16 succeeded in becoming permanent workers (10 lower than the previous year)<sup>9</sup>. This situation is more diffused in education, health and care sectors, and in the public administration<sup>10</sup>.

We face four different situations which correspond to different subjectivities: precarious workers who are not able to reach a stable and certain working activity (*discouraged* inactive but potentially active people); Neet young workers, who are neither unemployed nor discouraged, but constantly live a precarious existence; the certified unemployed workers; traditional employed workers with a stable job but psychologically precarious since they perfectly know that it suffice a downsizing, outsourcing or restructuring process to lose their labor conditions. This fact explains why precarity is today a generalized conditions (Morini, 2012 : 175-198).

It is starting from these premises that we now introduce the concept of *precarity trap*, an expression that can convey different meanings.

One definition of the precarity trap refers to a sort of vicious circle which leads individuals to the impossibility to exit precarious conditions due to the high costs of finding a stable job. Living on the basis of precarious conditions means having to cover significant expenses – which, in economics, are called “transaction costs” (time spent applying for benefits, temporary job loss and search for new activities, time and cost of learning new tasks, management of all the other activities, e.g. child care, in the context of a new job) (Standing, 2011). Such transaction costs may very well gobble up one's largest share of income, and this can lead to a sort of precarity trap.

Another broader definition has to do with the fact that living in the precariat means experiencing the full cogency of the risk society at an individual level. From this point of view, the precarity trap is the result of the lack of a comprehensive social security policy – most often this issue is seen as a merely conjunctural phenomenon. In some recent studies (Murrava and Gollmitzer, 2012: 419-438), starting from the observation that precarious labor is more diffused in advanced service and creative industries, it is argued that creative economic policies could be a panacea for the economic downturn and could lead to the overcoming of precarity.

Existing policy instruments are mostly uncoordinated but can be divided into four categories: 'education and training'; 'awards and contests'; 'business support'; 'social security policies'. It must be noted that the greatest emphasis is placed on the first three categories. Escaping the precarity trap – existence without security as typically experienced by many cultural workers – requires a rehabilitated notion of 'flexicurity' that includes both exceptional, sub-sectoral, and generalist strategies to support cultural workers. Therefore, only a more holistic policy framework – that uses a rights-based perspective and emphasizes social security measures – could be valid.

In these two interpretations, precarity traps can be solved by the opportune implementation of adequate policies. However, according to our analysis, precarity is a structural and generalized phenomenon. It follows that it could be eliminated only if a drastic modification of labor market dynamics occurs. Hence, the precarity trap also possesses a physiological dimension, which is crucial especially in the short term. This dimension is constantly "fueled" by the peculiarities of the existing labor activity, based on the exploitation of life faculties and subjectivities of human beings.

In our opinion the precarity trap is the result of the existence of a new type of the industrial reserve army. The traditional definition of the industrial reserve army is based on the idea that unemployment acts as a pressure towards the employees by reducing their bargaining power. Let us recall Kalecki's famous essay on the political origins of unemployment (Kalecki, 1943), in which the Polish economist argues that in a system based on industrial relations it is quite convenient for the entrepreneurial class to give up to the optimization of profit (which will lead to full employment) to artificially create a pool of unemployed, whose function is to reduce Trade Unions' bargaining power. This assumption makes sense if the distinction between labor and non-labor time (i.e. between employed and unemployed) is clear and precise, as it was during the Fordist period. But today, in the era of bio-cognitive capitalism, this distinction tends to vanish and the modality of labor control will increasingly tend to be based on income blackmailing and on the individualization of working relations. As we have already argued, that is the main reason why the precarious condition is generalized and structural. And it is precisely this precarious condition, individually perceived in a different, distorted way, which nourishes and defines the new industrial reserve army: an industrial reserve army no longer situated outside the labor market, but directly inside it.

It follows that there are good political reasons to keep a certain amount of precarity, despite any public and official declaration, just as in Fordist free market was not "convenient" to reach a full employment situation (partially achieved only with the implementation of public policies). In other words,

the precarity trap plays today the same role played in the last century by the unemployment trap. There is, however, a fundamental difference, that makes the current situation even worse. In fact, today, precarity is added to unemployment with an anti-cyclical dynamics. In a recovery stage, as it was the case in first half of the last decade, before the big financial-economic crisis of 2007, unemployment could decrease and be turned into precarity, whilst in recession phase, as is the current one, the opposite occurs: precarious workers are the first to become unemployed, assuming the appearance of discouraged or Neet. In any case, the biopolitical device through which the workforce is subsumed is guaranteed together with the crisis of traditional Trade Unions and the fall of social claims and conflicts.

## **5. Social (re)production, precarity trap and basic income**

One possible tool (surely not the only one) to overcome the precarity trap is the introduction of a basic income. We conceive of basic income as the provision of a certain monetary amount to meet deadlines, to perpetually ensure a decent life, regardless of the working performance. Basic income must have two fundamental characteristics: it must be universal and unconditional, i.e. it must be considered as an inalienable human right. In other words, it should be given to all human beings in a non-discriminatory way (independently from gender, race, religion, income). The mere fact "existing" is enough to be entitled to basic income. Hence, such a measure is not subject to any form of constraint or condition (i.e. it does not require the beneficiary to take particular responsibilities and/or to conform to particular behaviors). The two attributes – universality and unconditionality – clarify many misunderstandings. The concept of income falls exclusively within the sphere of the redistribution, once given the level of total wealth: it is an instrument of welfare. All redistributive measures that refer either to the employment status (unemployment or precarity, which is insufficient to guarantee a minimum income) or to the obligation to make contractual commitments, even if detached from working performance (such as the Rma in France<sup>11</sup>), are discriminatory and do not conform to the status of "inalienable individual right".

Basic income is the most suitable distribution (not redistribution) variable of cognitive bio-capitalism. In a context in which life is not only enslaved to labor, but is directly put to work, it becomes clear that basic income is the remuneration for a productive existence. Thus, it is a "primary" income<sup>12</sup>.

It is no coincidence that actual labor time tends to "overflow" the labor contract, thereby eliminating the distinction between labor and non-labor,

or between income and wage. Basic income is therefore defined by two components: the first component is purely a wage, calculated on the basis of the life-performance that immediately translates into labor-performance (labor time certificated and remunerated, but also life time oriented toward education, activity reporting, and reproductive activity). The second component (in addition to the first) is a form of income which results from the distribution of social wealth to each individual. This income comes out from social cooperation and territorial productivity. This second component is today entirely expropriated by profits and financial – as well as real estate – rent.

From this point of view, basic income is not only a welfare benefit, a subsistence payment, or a tool against poverty. Of course, it can also be effective reducing poverty, but in the sphere of production basic income is above all the remuneration for a previously performed productive activity, which is currently not certified neither by laws nor by bargaining dynamics. In other words, basic income is *the remuneration for social (re)production*, which is the basis of the general intellect growth.

Basic income, in theory, can function as income stabilization and uncertainty reduction. Furthermore, it can enhance the learning process and ultimately foster capital accumulation, according to the following scheme (Lucarelli and Fumagalli, 2008: 88):

Basic income      → social (re)production↑      → general intellect↑      →  
 productivity↑      → accumulation↑

However, almost the entirety of social actors are opposed to the introduction of basic income. Trade unions because they have not yet fully understood the current transformation of labor, as well as the new mode of valorization. Moreover, they fear losing touch with their social basis and, above all, they are still linked to an ethical conception of wage labor (i.e. the so-called work ethic)<sup>13</sup>. Entrepreneurial associations, assuming a different attitude than the conservative one chosen by most unions, consider the introduction of basic income as potentially dangerous for the maintenance of labor discipline. Indeed, from their point of view, they are right. The introduction of basic income, in fact, can be considered as a potential counter-power that undermines the current system of subordination and blackmailing in which the precarious multitude is constrained (Fumagalli, 2005). In fact, to act of ensuring a stable and continuous income regardless of labor activity means the reduction of worker's blackmailing. This blackmailing is imposed by contractual individualism and by the need to work for a living. Basic income can lead to exercise the "right to choose one's own work" (instead of the traditional



"right to work", whatever it may be). This is an element that could shake the foundations of hierarchical and social control in cognitive bio-capitalism. At the same time, the partial or total removal of income blackmailing can potentially foster a process of recomposition of the precarious multitude. We say "potentially" because such recomposition is not automatic; rather, it depends on the subjectivity of involved individuals<sup>14</sup>. The consequence of basic income, in any case, would be a lesser degree of blackmailing exposition: workers would be less available to supinely accept negative labor conditions. Secondly – and this is an even more important factor, although most often misunderstood – basic income presupposes that a portion of the social wealth produced by the general intellect and by the structure of cooperation returns to its "producers". This means a reduction in profit margins which rest on the exploitation of social cooperation and common goods, unless immaterial productivity gains, generated by more stable and satisfying income conditions, are not able to compensate for this reduction.

In cognitive bio-capitalism, the claim for basic income can therefore be considered analogous to the claim for higher wages in the era of industrial-Fordist capitalism. In Fordism, a wage increase or a high wage policy – according to the happy expression coined by Keynes – could have two effects: to undermine the productive system if this increase was not bearable by the existing cost-structure and technological conditions (thus opening up the possibility of going beyond the capitalist system itself); to ensure full employment growth with the consequential increase in revenues and profits. The Fordist social pact was indeed aimed at promoting the second alternative through a disciplinary mechanism and the social control guaranteed by the nation-state.

Unlike a wage increase, however, the introduction of basic income would bear only partially on firms' costs, since it would be covered by local, national or supranational public authorities. In other words, the financing of the basic income depends on the existing tax structure.

In cognitive bio-capitalism, a new social pact could therefore consist of basic income and, thus, be compatible with a tax constraint – as yet to be defined. In other words, basic income does not necessarily result in a change of control over the relations and hierarchies in the labor market<sup>15</sup>.

But nothing can ensure this compatibility: the potential role of monetary counter-power (i.e. the independence from income blackmailing) and of counter-cultural production (the possibility to choose and not to suffer from negative working conditions, as well as the re-appropriation of part of the social wealth) depends on the perception and the subjectivity that constitute the precarious multitude. Such perception and subjectivity are, by definition, not controllable. From this point of view, basic income can

become subversive and affect the exploitation ratio and the production of surplus value in cognitive bio-capitalism.

On this basis, it can now be clear that the introduction of basic income can be a valuable tool to avoid the precarity trap. There are various reasons that lead to this conclusion:

1. The dominant framework for economic policy has always argued that for economic growth to occur an increase in competitiveness was necessary, especially in the context of globalization. To do this, production costs must be reduced while labor flexibility and mobility must be augmented. Only once this effect is achieved (first step), it will be possible to adapt to new labor conditions and social security, improving living conditions and social well-being (second step). It's the same approach which today states that in order to overcome the European debt crisis austerity policies are unavoidable. Only by accepting sacrifices now you can enjoy the benefits in the future. But we know that this second step (the benefits) will never come. Just as austerity policies create economic recession, in the last twenty-five years flexibility policies created precarity, with negative effects with regards to the competitiveness of the economic system as a whole. This is the origin of the precarity trap, and the Italian case (as in other countries, primarily Spain) clearly confirms such an analysis. It is necessary to reverse this policy, by inverting the temporality of the two steps. First, measures to remunerate social (re)production and support social security must be enacted, and only afterwards labor flexibility can be increased. Given the current characters of the precariat (namely the contemporary form of the industrial reserve army within the labor market), the introduction of basic income becomes, among others measures, an appropriate means to promote economic growth as well as social equality, in such a way that an escape from the precarity trap can finally be envisaged.
2. Basic income reduces uncertainty and allows workers to experience a higher degree of freedom in choosing the desired labor. Is it likely that anyone will want to do less fatiguing work and be less considered? Not necessarily. Every job performance has its specificity and its remuneration to make it more or less acceptable, more or less appealing. The guarantee of income, reducing the supply of people willing to accept low-paid, alienating and exhausting jobs, puts enterprises at a crossroads: either they pay more those who perform these fatiguing tasks, or they adopt more complex technologies and organizational solutions instead. There were similar objections at the time of the debates about the reduction of the working day to 8 hours:

the result was not only an improvement of labor conditions, but also a relevant growth due to the necessity to modernize production systems.

3. A poverty trap is "any self-reinforcing mechanism which causes poverty to persist" (Azariadis and Stachurski, 2005: 326). If poverty persists from generation to generation, the trap begins to progressively reinforce itself unless steps are not taken to break the vicious circle. In the traditional literature, the poverty trap describes a structural condition from which people cannot rescue themselves despite their best efforts. The poverty trap is different from the "welfare trap"<sup>16</sup>, or "unemployment trap" (Petrongolo, 2008). This latter, in this context and by contrast, refers to the barrier created by social grants that (it is said) ends up representing perverse incentives. One of the most common criticisms to the hypothesis of basic income has to do with the persistence of the poverty trap. The argument runs as follows: the payment of a grant to the unemployed can rationally lead them to prefer to remain unemployed rather than to re-enter the labor market, with a consequent lack of efficiency in the economic system. Therefore, a wide mainstream literature tries to demonstrate how an increase in welfare benefits, especially when unconditional (as the proper definition of basic income requires), is one of the causes of voluntary unemployment, which would negatively affect the optimal, "natural" equilibrium<sup>17</sup>. But the empirical results are controversial. In the current situation, facing precarity as a structural condition, this kind of argument is almost irrelevant. The mismatch, in fact, is not between the choice between working and not working, but between a precarious job and a desired one. If, in cognitive bio-capitalism, life is put to work (no matter whether directly or indirectly) and then valorized, then the concept of unemployment radically changes. The unemployed today is no longer the one who is inactive, in the sense of unproductive (from a capitalistic point of view), but rather the one who performs a productive activity which is not certified as such, and therefore is not paid for.

Precarity is blackmailing and perversely induces the workforce to control itself. Precarity is the death of culture and knowledge activity. The precarity trap is the consequence of this. It is the way to keep people under ignorance. We are in a opposite situation to that of the welfare trap, whose existence could make sense (if it ever did) in the Fordist era. If at the time, the welfare trap could arise from the existence of social security policies, today's precarity trap is the result of the absence of policies promoting social security and of the pressure to keep brains under control.

## NOTES

1. See Fumagalli and Mezzadra (2010: 237–239). For an in-depth analysis of the evolution of financial markets and the role of the monetary and credit markets, see Fumagalli (2007: chapter 1).

2. For a discussion of the concept of the *common*, see Hardt and Negri (2009).

3. See Marazzi (2000: 107–126). In particular p. 109, where we find the definition of the anthropogenetic model of production: “A model of production of man by means of man, in which the possibility of cumulative and endogenous growth is due, above all, to the development of the education sector (investment in human capital), the health sector (demographic evolution, biotechnologies) and the cultural sector (innovation, communication, creativity)”.

4. Holloway writes in a manuscript presented at the Uninomade Seminar in Bologna (11-12 March 2006): “The center of class struggle is located here: it is a struggle between creative action and abstract labor. In the past, we always thought of class struggle as a struggle between labor and capital, thus understanding labor as abstract, wage-earning labor. As a consequence, the working class was defined as the class of wage-earners. This is wrong. Wage-earning labor and capital are two theses mutually completing, the former being a stage of the latter. Doubtlessly, there is a conflict between wage-earning labor and capital, but it is rather superficial: a conflict on salary levels, on work conditions, on the length of the work day. All these things are important, but they presuppose the existence of capital. The real threat to capital does not come from abstract labor, but from useful labor or creative action, because it is the latter that is radically opposed to capital, that is, to its own abstraction. Creative action says ‘No, we will not let capital control us; we need to do what we think is necessary or desirable’.”

5. According to Marx (1973), the general intellect – i.e. knowledge as the main productive force – fully coincides with fixed capital – i.e. the ‘scientific power’ objectified in the system of machinery. In cognitive bio-capitalism, as Virno (2001 : 181-185) notes, things are different: “conceptual and logical schemas play a decisive role and cannot be reduced to fixed capital in so far as they are inseparable from the interaction of a plurality of living subjects. The ‘general intellect’ includes formal and informal knowledge, imagination, ethical tendencies, mentalities and ‘language games’ ” (English translation from Italian by Arianna Bove). From this point of view, the ‘general intellect’ is the core of the anthropogenic model of production.

6. See par. 3.

7. An example of such measures is the French *Revenu minimum d'activité* (RMA) – and analogous apparatuses – which simply function as social shock absorbers and promote the return to work.

8. We prefer the term “primitive accumulation”, instead of “original accumulation” (even if these terms are often considered synonymous) because the process of valorizing social (re)production is a sort of primitive expropriation, as intended by Marx . He writes: “The discovery of gold and silver in America, the extirpation, enslavement and entombment in mines of the indigenous population of that continent, the beginnings of the conquest and plunder of India, and the conversion of Africa into a preserve for the commercial hunting of black-skins, are

all things which characterize the dawn of the era of capitalist production. These idyllic proceedings are the chief moments of primitive accumulation." (see K. Marx. Capital, vol. 1, "Chapter XXXI, Genesis of the Industrial Capitalist," in Marx/Engels Collected Works, vol. 35 (London: Lawrence & Wishart, 2005), 738. <http://www.marxists.org/archive/marx/works/1867-c1/ch31.htm>). The valorization of social (re)production can nowadays be seen as the further step of this "primitive accumulation", a step which is adequate to cognitive-biocapitalism. On this topics, see also Mezzadra, "Attualità della preistoria. Per una rilettura del capitolo 24 del primo libro del Capitale, «La cosiddetta accumulazione originaria»", <http://www.uninomade.org/per-una-rilettura-del-capitolo-24-del-capitale/> and Harvey (2005).

9. This percentage lowers to less than 10% in the metropolitan areas, as for example in Milan. See Fumagalli and Intelligence Precaria (2011: 229-250).

10. These data are extracted by the Annual Report on Labor Market, released by the CNEL: See: [http://www.cnel.it/53?shadow\\_documenti=18534](http://www.cnel.it/53?shadow_documenti=18534)

11. Rma stands for Revenue Minimum d'Activité. In France, it designates a form of income granted to those unemployed who participate in a back-to-work scheme. Since 2008, it has substituted the Rmi, Revenue Minimum d'Insertion

12. Primary income is the direct income which derives from income distribution among productive inputs. On the contrary, secondary or indirect income comes out from public intervention in terms of welfare or fiscal policy, after income distribution has already occurred. It is a second level distribution, defined as redistribution level, to distinguish it from first level distribution or distribution level. See Vercellone (2006).

13. There are numerous pronouncements that are common to several European trade unions, leftist parties and even relevant newspapers. It is enough to analyse the Congress of the ETUC (European Trade Union Confederation), or the French and German trade unions in order to have a confirmation. Even in Italy the situation does not change. The same applies to the area of the radical left, as represented by the Trockist parties, Attac and Le Monde Diplomatique in France, and by the left of CGIL, the Communist Refoundation Party (PRC). and *Il manifesto* in Italy. With a few exceptions, however remarkable they may be, even antagonist unions and most antagonist groups oppose the principles of basic income, considering it a reformist tool, unable to undermine the essence of the capitalist exploitation ratio. However, other subjects are in favour of basic income: some groups operating in the Social Centers movement in Italy; some European journals, such as Multitudes in France, and Posse and Infoxa in Italy and, more recently, the UniNomade 2.0 Network ([www.uninomade.org](http://www.uninomade.org)). Only recently, for example, the slogans "right to income" or "reclaim the money" have been fully accepted by the EuroMayDay, the most visible demonstration of the precariat in Europe, which takes place every year in Milan on May 1st. In this context, it is of fundamental importance the birth in 2009 of the association called Basic Income Network – Italy ([www.bin-italy.org](http://www.bin-italy.org)), and of the Saint Precarious icon (see: [www.precaria.org](http://www.precaria.org)), and of the journal *Quaderni di San Precario* (<http://quaderni.sanprecario.info>).

14. We agree with Guy Standing's reflections on the risks that the precarious condition can lead to dangerous results, if the individualistic and corporative ideology becomes a majority. Such risks include social dumping and racist political

positions. It seems to us that the only antidote is a “politics of paradise”! See. G. Standing, 2011.

15. For a more detailed discussion, see thesis n. 9 in “Nothing will ever be the same”, in Fumagalli and Mezzadra (2010: 254-259). See also Fumagalli and Negri (2008).

16. According to mainstream economic theory, a welfare trap is an example of the perverse incentive: the welfare recipient has an incentive to avoid raising his own productivity because the resulting income gain is not enough to compensate for the (increased) work effort. Actually, it can be more convenient in presence of income subsidies not to become employable, if the cost-benefit analysis is negative.

17. See for a survey of the literature, among others, Gwartney, Stroup, Sobel and Macpherson (2011).

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## **RACE AND KNOWLEDGE IN CONTEMPORARY CAPITALISM**

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**ABSTRACT:** What does racism mean and how does racism work in contemporary capitalism? Or, which new and unique articulations are today assumed by racialization and cognitization of work? Trying to answer these questions means to deeply investigate both capitalist valorization and the processes through which the labor market is organized. Moreover, it brings to the fore the production of hierarchies and forms of subordination which cross and structure relations of production as well as social relationships. Today the lines of fracture and segmentation across living labor have redefined their coordinates: both the idea of so-called immaterial labor – prerogative of a white middle-class, predominantly male and well-paid – and the idea of so-called material labor – low wage and low skill, prerogative of the racialized work force – have ceased to be dominant images, although along the color line persist heavy hierarchies and forms of discrimination. It is the very notion of skill that makes no longer any sense when precarity becomes a structural datum of contemporary capitalism and when the boundaries between production and reproduction become thinner and thinner, until they disappear altogether. By investigating the dynamics across the Italian labor market in a time of crisis, the paper proposes an articulation of the concepts of race and knowledge as an analytical grid to rethink the categories through which we have so far read and interpreted both labor and its transformations.

**Keywords:** racialization, cognitization of labor, precarity

## 1. Introduction

How does labor change in contemporary capitalism? Which new coordinates for labor organization do emerge? Against the background of the profound transformations occurred to global capitalism in the last decades on the Twentieth century, we witnessed the progressive development of new laboring figures, especially women and migrants. In the first case, this is the outcome of decades of struggle inside and outside the families of Western capitalism; in the second, the reference is to the anti-colonial struggles, to the processes of de-colonization, and to ever-increasing labor mobility which has accompanied globalization. As a consequence, a new overarching capitalist re-organization has taken place, one such that – with different intensities and modulations – the specific differences embodied in these new figures become value-drivers. Thus, gender and race – conceived of as social constructions and certainly not as biological differences – are today devices of labor management and organization, terrains for the creation of social hierarchies and for the segmentation and de-structuration of the workforce. In this sense we talk about genderization and racialization.

How do genderization and in particular (for what concerns this paper) racialization work in the context of the hypothesis of cognitive capitalism, where knowledge is turned into the crucial element of capitalist production? To answer to this question – as well as to the previous ones – the essay will propose (par. 2) an introductory discussion of the transformations to which the forms of labor and production are going through. Moreover, the processes of racialization of cognitive labor will be taken into account. Subsequently (par. 3) race and knowledge are assumed as specific – if different – devices of contemporary capitalist valorization, as tools of organization and regulation of the labor market. As a paradigmatic example of such transformations, the vicissitudes of a young Dominican nurse in the Italian job market unmask the processes of differential (or subordinated) inclusion as well as functional specialization which are typical of racialized labor (par. 4). Here the *racialized gender* is articulated with knowledge as simultaneously agent of inclusion – although subordinated – and terrain of marginalization and discrimination. Thus knowledge, just as race, is turned into a machine of segmentation and subordination in cognitive capitalism. From this perspective, the concept of cognitization of labor is introduced (par. 5). When knowledge ceases to describe talent, skills, and abilities – which is to say the contents of labor – and becomes instead the measure of exploitation and the productive agent of new hierarchies. In the conclusions the essay highlights the necessity to emphasize the inevitable articulation of race and knowledge within

contemporary capitalistic production as a possibility to comprehensively understand the transformations of labor and production, in such a way that the concept of *international division of labor* will need to be rethought.

## 2. A new Image of Labor

In the global economic crisis, the image of labor we were used to ends up assuming new co-ordinates. Both the idea of so-called immaterial labor – prerogative of a white middle-class, predominantly male and well-paid – and the idea of so-called material labor – low wage and low skill, prerogative of the racialized work force – have ceased to be dominant images, although along the color line persist heavy hierarchies and forms of discrimination. Precariousness, by now a structural feature of contemporary capitalism, hits transversally the different figures of living labor. University researchers, musicians, art critics, IT workers, but also financial brokers and real estate agents have assumed precariousness as a fundamental character of their life and labor experiences<sup>1</sup>. They learnt how to reconcile specifically intellectual labor with other forms of subordinated labor, especially in sectors such as services and maintenance.

Even the student, paradigmatic figure of intellectual production, traditionally situated in the “not-yet” of productive labor – a soon-to-be worker, it was said – is nowadays a worker *tout court*. She is already a worker – as Marc Bousquet (2008) argued – who conciliate academic education with shifts at the call-center or at a restaurant. Thus, she is not an intellectual laborer to come, but rather an actual and immediate worker, deskilled and underpaid<sup>2</sup>. Moreover, it is certainly true that in the past – at least with regard to the United States – those students who had to work in order to pay for their education were mostly African American and Latinos<sup>3</sup>, which is to say racialized subjects. However, it is worth underlining that today's crisis massively affect white American students too, and this shows that processes of *déclassement* and precarization of the new laboring figures are transversal with regard to race. Analogously, many migrant and racialized workers, or the so-called “second generations” in Italy, combine repetitive and often exhausting working shifts in productive sectors marked by a high rate of exploitation to their engagement with post-secondary education. All this represents a further indicator of processes of precarization and deskilling pertaining intellectual

production. Furthermore, other forms of labor, most notably affective and caring labor, are affected by similar transformations. Such mutations pose the cognitive dimension of care (relationality, linguistic skills, affection) in a close relationship with processes of racialization of labor. Once relegated in the domestic context and outside the productive sphere, affective and caring labor is today fully internalized within the wage labor market, and thus produces new hierarchies which internal to gender and often built upon the terrain of race<sup>4</sup>.

Given these transformations we can advance the hypothesis that the cognitive dimension of labor – the constant recourse to relational and affective capabilities, to language and knowledge in its general sense – currently affects the composition of labor as a whole and creates devices of hierarchization with regard to race. Conversely, racialized labor, in particular migrant labour, has ceased to be fully confined to the lower levels of productive hierarchies, in so-called material labor. The experience of Indian electrical engineers in the Silicon Valley is just the most famous of numerous examples we might report. As a consequence, the transformations of contemporary living labor simultaneously show unitary processes and the existence of differences – often significant – which traverse the social composition of labor. A racialized migrant is not comparable with a white cognitive worker facing processes of deskilling and *déclassement*. Analogously, a financial broker – as precarious as she may be – cannot be compared with a precarious researcher in Italian universities; in turn, all these figures cannot be made equal to logistic or commodity sorting workers, be them migrant or not, just as they cannot be compared to female workers in the caring sector, be them migrant or not.

The different position occupied by each figure within the relations of production – and within the ever-topical colonized/colonizer dialectic – clearly describes a hierarchized, heterogeneous and dissonant system of perspectives, expectations and life as well as work opportunities. What remains constant is precariousness as a primary *datum*, the endless deskilling of working performances and education degrees (which, in the case of migrant workers, lose relevance and effectiveness in the process of crossing national borders) that are linked to the increasing pauperization of contemporary living labor.

In this context labor and exploitation co-ordinates are redefined while processes of labor racialization and genderization become central elements of production (Curcio, 2010) – a proof of this, amongst others, is the constant demand for migrant labor which in Italy, for example, has led to the act of indemnity for care-givers in 2009 – and, as such, can be conceived of as key-tools to interpret production and labor transformations. More generally, it can be affirmed that migrant racialized (and often genderized) labor, as well as the dynamics which traverse such processes, become a paradigmatic dimension of productive changes: a mirror of labor *sans phrase* that reflects transformations which affect everyone.

By assuming the centrality of race within contemporary capitalist valorization and its tight intertwining with knowledge, we intend to emphasize the processes of labor racialization and cognitization which shape contemporary labor markets. This means bringing to the foreground the processes of hierarchization which affect productive and social relations in the present, opening up the possibility for a new direction in the reading of labor and production changes. In other words, the articulation of race and knowledge assumes a crucial role to manage and organize productive transformations, to articulate *dispositifs* of segmentation and hierarchization which are internal to the composition of labor. From this perspective, racialization is linked discourses and practices – be them institutional or otherwise – which are oriented to the construction of economic as well a cultural processes of essentialization and discrimination (Curcio and Mellino, 2010). As explicitly remarked by Frantz Fanon, such dynamics aims at the subordination of a social group by another social group. Correspondingly, labor cognitization recalls the centrality assumed by knowledge, and more comprehensively by cognitive processes, as measure of exploitation, of division of labor, and of hierarchy-building from the standpoints of class and wage regulation. Thus, a new image of labor should be traced starting from an analytical grid centred around the articulation of race and knowledge in contemporary capitalism. Such a grid, in fact, allows to grasp at the same time the transformations of production and the emerging forms of labor organization.

### 3. Race at Work in the Knowledge Market

Productive transformations and the so-called shift from Fordism to Post-Fordism are marked by two parallel processes. On the one hand, the most intimate human capabilities – which is to say knowledge, the practical experience learnt in the course of life – are put to work. On the other hand, the valorization of race as the outcome of processes of globalization and mass migration, and even before of processes of decolonization and anti-colonial resistance which have opened a still wide flow of labor between former colonies and mother countries (in Europe this is surely the case in France and England, whereas more recent and intimately linked to globalization is the ever-increasing issue of migration in Italy<sup>5</sup>). Today race and knowledge, although from different paradigms, works together in the process of capitalist valorization: grasping their nexus or, in other words, investigating their intimate “articulation”<sup>6</sup> means take a step further in understanding contemporary capitalism and its functioning.

With specific regard to knowledge, starting from the last decades of the XX century a wide literature has emphasized the putting to work of relational capabilities, of affection and language to advance the hypothesis of cognitive capitalism to highlight a paradigm shift in the productive model<sup>7</sup>. From this perspective a new system of production emerges: whereas the fundamental variables of the capitalist system persist (profit, wage, extraction of surplus value), a new structure of labor appears, along with new sources of valorization and property linked to knowledge production (Vercellone, 2006). Similarly, the concept of “feminization of labor” (Morini, 2010) arises to underline the inclusion within productive circuits of those subjective attitudes historically and normatively attributed to women. Affection and relational capacities, sure, but also flexibility, multitasking and the gratuitous character which has always characterize feminine labor are today paradigmatic of production as a whole. Consider for example the huge business constituted by stages and internships performed by graduate and undergraduate students, or flexibility as a capacity to ceaselessly enter into and exit from different tasks (a capacity which radically marks the life and labor experience of precarious workers). Furthermore, think of care – a dimension that cannot be set aside to understand contemporary working conditions – which is required in sectors

as diverse as services and call-centres. Again, consider the huge amount of knowledge required today on the job market, especially that capability to manage very different skills which has traditionally been associated with women – rudiments of physics and medicine (to assist sick persons), of mathematics and economics (to organize expenses), of cutting and sewing.

In this framework race – which has long functioned as a managing tool for labor organization and has played the role of crucial element of capitalist accumulation processes in the overseas British colonies between the XVII and the XVIII centuries – assumes a new centrality within the new productive paradigm. As a wide literature has emphasized, the whole history of capitalism has been marked by processes of stigmatization, subordination, and exploitation of racialized labour,<sup>8</sup> a veritable *race management* which has constantly reshaped the forms of marginalization and exploitation in the course of capitalistic transitions (Roediger, 2008). The novelty we face today is that both subordination and exploitation of racialized labor occur through processes of differential or selective inclusion of labor; in addition, such processes intersect the increasing centrality of knowledge in the dominant productive model. In other words, it is a process of differentiation and segmentation of labor on a racial basis which has ceased to exclude but not to subordinate; it delineates new terrains for valorization and new configurations of relations of production as well as working hierarchies.

From this point of view, wage caring labor, largely nourished by the entry of women in the job market and nowadays, at least in Italy, mostly composed by migrant women, presents itself as a privileged observation angle to investigate the articulation of race and knowledge in contemporary capitalism, and to read the modulation of relations of production and power in the new productive paradigm. Otherwise put, race and knowledge have fully become elements of capitalist valorization through hierarchization, organization and regulation of the labor market. Thus, affective and caring labor is here assumed as a productive sector whose content is immediately cognitive and traditionally deskilled. This does not mean, however, that it is external to the putting to work of knowledge: from emotions to communicative capacities, from relational attitudes to empathy.

#### **4. Inside the Labor Market, Outside the Sphere of Rights: The Story of Altagracia**

In Italy – where the externalization of care and the inclusion of women in the labor market are actually underrepresented with regard to other European and non-European countries<sup>9</sup> – migrant women know a “privileged” access to the caring labor market. This datum is still true, notwithstanding the fact that the global economic crisis is redirecting to such a sector many Italian women expelled from the job market (Polchi, 2011). Differently from Italian women, migrant women are younger, more educated, and – under threats such as illegalization and deportation (De Genova, 2005, 2010) – they are more likely to conform to employers' expectations (Akalin, 2007). The Italian legal system tightly links residence permits to employment contracts and, as a consequence, losing a job means losing the right to live in the country. Such a condition of vulnerability makes the entirety of migrant workers especially exposed to blackmailing.

However, the migrant workers' access to the labor market is also marked by a process of racialization which promotes practices and discourses whose outcome is a hierarchized representation of *differences* – simultaneously physical and cultural, real and imagined, but always oriented towards the production of social marginalization and productive subordination. A widespread public opinion in Italy individuates in Ukrainian women solicitous caregivers, whereas both women and men from the Philippines are scrupulous housekeepers. Differently, Polish and Nigerian women are believed to be mostly sex-workers. In this framework, each of these women tend to be preferred for a given working sector. Thus, race – a social construction and surely not as a biological attribute – determines a system of opportunities, expectations and lifestyles which discipline both social and working relationship. Simultaneously, it implies mechanisms of discrimination and of exclusion from the sphere of rights.

The story of a young Dominican woman can be from this perspective particularly explanatory. Altagracia was recruited in Santo Domingo, her hometown, by an Italian company specialized in the selection of nursing staff to work in a private hospital in La Spezia<sup>10</sup>. In Italy, in the context of



processes of racialization and organization of migrant labor, workers from the Caribbean are considered to be a highly specialized workforce. Moreover, as a woman, Altagracia seems particularly fitting for caring labor and especially for filling one of the many vacant positions in the nursing sector<sup>11</sup>. So far, just an ordinary story of inclusion of migrant labor into the Italian job market. But Altagracia's story has a peculiarity: while waiting for a residence permit which would have regularized her presence in Italy, she realizes her practice has been blocked. The company of nursing selection discovers she is pregnant and decides that the welfare surplus required by maternity cannot be guaranteed to a migrant worker. As a consequence, her authorization is revoked and she loses her job as well as the right to stay in the country.

Altagracia's story presents itself as paradigmatic of the *racialized gender* functioning in the job market within contemporary production. In fact, not only it unmasks the construction of hierarchies and processes of marginalization along the color line and the mechanisms of functional specialization linked to gender; above all, it shows race (and gender) as simultaneously agent of inclusion (which situates racialized gender on the job market, although in a subordinated position) and terrain of marginalization and discrimination (as demonstrated by the exclusion from welfare protections). In particular, Altagracia's vicissitudes describe the articulation of race and knowledge which we have individuated as central for the analysis of contemporary capitalism. In fact, it is knowledge which grants to Altagracia her access to the Italian job market: the “specialistic” knowledge of nursing science on the one hand, and the normative knowledge linked to her being a woman on the other. As a racialized worker, however, Altagracia does not have a full and unconditional access to the job market. To the contrary, her working experience is characterized by subordination and lack of rights – as it is common for migrant women in the Italian job market and in particular in the sector of cheap caring labor. From this standpoint, the intrinsic articulation of race and knowledge in contemporary capitalist valorization could not be clearer. This articulation brings to the foreground the processes of racialization and cognitization which nowadays establish the job market. Moreover, it highlights the old as well as new lines of rupture and the hierarchies which traverse the labor composition (consider, as an example amongst many, those hierarchies

internal to gender which take place by means of salarization and racialization of affective as well as caring labor).

## **5. Talent, Ability, Knowledge**

Thus, the new organization of labour shows us an unmistakable matter of fact. Once become a central element of capitalist production and accumulation, knowledge is turned into a machine of segmentation and subordination. Nowadays, knowledge constitutes along with race the terrain upon which forms of labor and exploitation take place. However, I would like to specify that the cognitive dimension to which I make reference is not the outcome of a linear process which goes from manual and physical labor (in the Fordist period) to immaterial and intellectual labor (in the post-Fordist period). I do not mean to argue that exploitation belongs more to manual labor than to cognitive labor. To the contrary, intellectual and physical dimensions of labor are today continuously overlapping within the working performance, and become – in various ways and different degrees – an indispensable element of labor-power. Thus, what changes are the forms of domination by and subordination to capital.

Knowledge is not immediately an agent of freedom; it is not the compass to be followed in order to reach emancipation from capitalist blackmailing. Rather, the opposite is true. Today, knowledge is no longer the driver of upward social mobility. Universities – namely the traditional institution of knowledge production and diffusion – have become parking lots for an immediately precarious youth which cannot find a proper position in the job market. This is well-known to young Tunisians, Egyptians, and Libyans who have recently led the revolutions in North Africa. Similarly, students and precarious workers who cyclically take the European streets to oppose the systematic devaluation of universities and the increasing precarization of labor. If some analysts – amongst the many who have investigated the new productive paradigm of knowledge – could fall under the illusion that knowledge might oppose capitalist exploitation, every doubt is currently erased. In the context of the global economic crisis, knowledge is configured as the measure of exploitation, as the

instrument of segmentation, as the productive agent of new hierarchies. From this perspective, it functions exactly as race. It sets in motion processes of subordination and wage regulation – processes which can be defined as cognitization of labor, where cognitization should not be confused with the dialectic of material and intellectual labor (De Nicola, Roggero and Vecchi 2007). Moreover, again like racialization, knowledge represents the creation of discrimination and hierarchization. Thus, cognitization of labor wholly redesigns both class composition and the hierarchies of capitalist valorization.

There is more to it. In fact, knowledge is today the mirror of the job market blackmailing. As such, it has ceased to describe the contents of labor. Knowledge, talent, skills and abilities mobilized by workers within production correspond less and less to the model of the productive organization. In other words, it is not to be taken for granted that a high-skill worker – whose productivity relies on specific knowledge and sophisticated abilities – finds herself in the highest layers of working hierarchies. Similarly, her status, rights, and retribution are not necessarily in line with her background's standard. In Italy, precarious workers in the realm of academic research perfectly symbolize the processes of devaluation, deskilling and *déclassement* which affect cognitive labor. University degrees, scientific collaborations and years of teaching and research experience do not translate into stable working positions or career advancements (with economic improvements). Rather, they accompany precarious forms of life, revenue discontinuities, scarce social protections and welfare guarantees (Roggero 2011). Analogously, it is not certain that a so-called low-skill worker performing manual activities and badly paid is poorly educated or devoid of knowledge and competence. To the contrary, what should be assumed is the centrality of knowledge in contemporary production and the capacity of a diffuse intellectuality to possess a vast as well as specific knowledge. This is surely the case of those workers – especially women, and in Italy especially migrant women like Altagracia – who are employed in the care sector. They put to work a large and diversified range of knowledges in which material aspects of labor are intertwined with cognitive performances and the production of *affection* (Del Re 2008). Moreover, to maintain a reference to the Italian context, this is also the case of logistic workers (involved in differentiated processes of

circulation of commodities). These workers are mostly migrant, subjected to profound processes of racialization, and exposed to exhausting shifts and working rhythms; besides, they are often blackmailed and even physically threatened. Many of them hold a university degree issued by the country they come from or are enrolled at an Italian university. Even more importantly, however, they possess a specific and fundamental knowledge concerning the functioning of the productive/distributive cycle, as well as the mechanisms of the *just in time* capitalism. Such specific knowledge has allowed them to build successful struggles aimed at the improvement of their working conditions. Otherwise put, the co-operative production of knowledge amongst logistical workers is the device through which the capitalist command on has been interrupted in their recent struggles. As such, it is a weapon to claim better working conditions and higher wages (Curcio and Roggero 2013 a, 2013b).

These examples show how difficult it is today to recognize the characters of valued labor as opposed to those pertaining devalued labor, or to distinguish between high-skill and low-skill workers. Skill itself, a long-standing criterion of selection and distinction of labor, is now meaningless. In fact, it does not correspond so much to the working activity actually performed or to the abilities employed; rather, it configures the blackmailing imposed by the job market. In other words, it functions as the device which concentrates and divides and, as such, it establishes hierarchies and wage inequalities. Once the criterion of analytical validity is lost, the skill acquires its cogency as a device of control and hierarchization (Roggero 2011). This element is a common feature of contemporary living labor, although migrant racialized workers – subjected as they are to the primacy of whiteness and to still operating colonial apparatuses of domination and subordination – are more exposed to it.

Let us briefly come back to Altagracia's example: it is not the scientific qualification as nurse which grants her the access to the Italian job market. Rather, it is her being a racialized subject (as well as *gendered*, but this opens up a new analytical field which I choose not to investigate here)<sup>12</sup>. Her “professional” knowledge, and the specific competencies acquired in her nursing education, become the direct measurement of her exploitation, a tool for the confinement of knowledge and the *general intellect*. In other

words, it is a filter which differentially regulates the access to the job market and, by doing so, establishes hierarchies and enacts disparities.

## **6. To Conclude: Why Should We Insist on the Articulation of Race and Knowledge?**

What this reflection has emphasized so far is that productive transformations, along with the new role of race and knowledge in the hierarchized construction of the job market, have shattered the analytical categories through which we have traditionally interpreted labor. It is clear that today new forms, modalities and contents of labor are getting assembled. New hierarchies take shape while knowledge becomes the crucial regulation device which connects forms of subordination and exploitation that emerge from a colonial past. It is a new image of labor from which new productive figures emerge. All of these figures – from so-called *knowledge workers* (researchers, artists, IT employees) to caregivers and to the different articulations of so-called “material” labor – individuate the fulcrum of their activity in knowledge, fundamental means of production within the new co-ordinates of capitalist production.

Such transformations have made co-existent “advanced”, or high-skill and autonomous forms of labor with their “backward”, low-skill and semi-slavish counterparts. This pervasive heterogeneity pushes us to rethink the organization of contemporary labor. The unrestrainable mobility of labor has also shaken the traditional image of a “developed” First World as opposed to an “underdeveloped” Third World. Similarly, the concept of *international division of labor* has been put to question. In so far as knowledge becomes a diffused means of production which cuts working hierarchies, it is basically impossible to differentiate the conditions of labor power on the basis of its geographical position or national belonging. The widespread idea of a “Western post-Fordism” fuelled and sustained by a “peripheral Fordism” is today definitively set aside. Rather, we witness a re-specialization of labor on different areas. This means the formation of veritable “zoning technologies” (Ong 2006) which reconfigure themselves well beyond national borders. Within these zoning technologies is to be found a wide spectrum of different qualities which pertain to contemporary

labor power in a peculiar synchrony of times and modes of production and exploitation. Educated logistical workers, low wage university researchers and nurses without maternity leaves in the Italian National Health System – to stick to the reported examples – are exemplary and emblematic cases in point.

Thus, race and knowledge are the unmistakable devices which draw the new borders of labor and exploitation, beyond and through geographical and national frontiers. With the global economic crisis, the processes of devaluation, deskilling and pauperization which transversally affect contemporary labor power have rapidly intensified (as consequences of this we can mention the North Africa insurgency between 2010 and 2011, or the recent, large mobilizations in Greece, Spain and Portugal). It is important to stress that, although the cognitization of labor and the transformation of knowledge in a widespread exploitative device depend on the putting to work of human abilities, skills and competencies, it is nonetheless true that the processes of racialization and the construction of forms of subordination and hierarchies on the terrain of race are a constant feature in the history of capitalism. Simply, such processes find today more precise and specific articulations as devices of a subordinated inclusion within the cognitive job market. In this context, emphasizing the inevitable articulation of race and knowledge within contemporary capitalistic production allows us to sharpen the analytical tools through which productive and labor transformations can be read. In particular, it is important to grasp the co-presence of different forms, modalities and historical temporalities. Such co-presence is a defining character of today's labor and constitutes an analytical field from which new and more specific elements can be extracted. On the contrary, ignoring it means dissimulating power relations and silencing the weight of differences within contemporary labor organization and social relations.

## NOTES

1. For an updated review of the existing literature on the relationship between precarity and cognitive labor, see Armano and Murgia (2012). See also Neilson and Rossiter (2008).

2. In a brilliant study on the working of American universities, Marc Bousquet (2008) especially investigated the role of students' work in the warehouses linked to the UPS (United Parcel Service) distribution. In the context of the "Earn and Learn" agreement signed with some universities, UPS hires undergraduate students who exchange a sort of "financial aid" (generally ultra-low-coast wage) for "education benefits". This is a veritable system of exploitation of students' labor, often performed in a part-time executed through night shifts. On a different level, Gigi Roggero (2012) investigated the transformations of universities in North America and Europe (with specific regard to Italy) within an analytical framework which links the mutations of the university and the transformations of labor and production. Thus, he depicted a new figure of the student, a figure which "no longer responds to the classic figure of the worker-in-training but immediately becomes a worker, or better, a precarious worker" (ivi, 3). On the same issue, see The Edu-Factory Collective (2009), in particular The Edu-Factory Collective, All Power To Self-Education! and Vercellone C., Cognitive Capitalism and Models for the Regulation of Wage Relations: Lessons from the Anti-CPE Movement.

3. At this regard Marc Bosquet (2008) has also highlighted how UPS was named one of the "best companies for minorities" in connection with the program "Earn and Learn", since it had largely recruited its workforce among Latino students (Ivi, 130).

4. On this issue, among others, see Del Re (2012) and Curcio (2012).

5. Processes of labor racialization, however, have occurred throughout Italian history since the Unification. In fact, the construction of the first labor market on a national basis was managed through the discrimination and marginalization of Southern workers. Such a practice was newly utilized in the post-WWII economic boom. In fact, the progressive industrialization of the economic system was managed through the racialization of young Southern workers employed in Northern factories.

6. On "articulation", see Hall (1980)

7. For some important hypothesis concerning the new productive paradigms, see Marazzi (2005, 2008), Vercellone (ed. 2006, 2007), Fumagalli (2007), Morini and Fumagalli (2010), Fumagalli and Lucarelli (2007), Chicchi and Roggero (ed. 2009), Leonardi (2010).

8. On this issues, see amongst others: Du Bois (1935), Roediger (1991).

9. Italy is the European country where women work the least. Second only to Malta, Italy has an employment rate of women around 47%, to be compared with France (60%), UK (65%) and Germany (66%) - not considering Scandinavian

countries (INAIL 2010).

10. The full story can be found in Giovanni Maria Bellu (2007).

11. According to the estimates put together by the IPASVI (the professional order of this category), there would be between 40,000 and 60,000 vacant positions in the country (source: Federazione nazionale Ipasvi, 2009).

12. On the articulation of class and gender in capitalist valorization, see Anna Curcio, Gender and Race Management in Postcolonial Capitalism, in “Social Identities”, forthcoming.

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## **INSTABILITY AND UNSUSTAINABILITY OF COGNITIVE CAPITALISM: RECONSIDERATION FROM A POST- KEYNESIAN PERSPECTIVE**

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**ABSTRACT.** Cognitive capitalism is a useful concept that elucidates the state of contemporary economic system. The 2008 financial crisis that followed the global recession and the slow economic recovery illustrate the instability and unsustainability of this regime. This paper offers an examination of the macroeconomic defect of the regime from the post-Keynesian perspective on the basis of three aspects. First, it investigates weakness in demand as the regime's important feature and its primary cause of macroeconomic instability. Second, it analyzes the role of financialization and considers its significance. Third, it focuses on affective labor and examines its function in the macroeconomy.

**Keywords:** cognitive capitalism, post-Keynesian, demand, financialization, affective labor

### **1. Introduction**

The theory of cognitive capitalism is based on an economic notion that describes the current economic system and society, and that has established itself. This notion comprises many factors such as immaterial labor, the development of information technology, globalization, the vital role of knowledge in the economy, and financialization, and is affected by the multitude theory, evolutionary economics, regulation theory, and post-Keynesian theory. In the theory of cognitive capitalism, various factors have been studied, but as a macroeconomic framework, post-Keynesian

theory remains at the core. The financial crisis of 2008 that followed the worldwide recession and the slow economic recovery illustrate the macroeconomic phenomena commonly seen in the developed countries, and post-Keynesian theory has often tackled and analyzed these problems. In this paper, we reexamine the framework of cognitive capitalism from a post-Keynesian perspective on three points.

The remainder of this paper is organized as follows. In Section 2, we present an outline of cognitive capitalism and investigate especially its macroeconomic regime. In Section 3, we examine the instability of cognitive capitalism regime from a post-Keynesian perspective and show that the instability comes from weak demand and financial instability. We first consider weak demand and then investigate financialization. We do so because financialization influences the whole macroeconomy and plays a vital role. We also focus on affective labor and examine its state and function in the macroeconomy. Section 4 concludes the study.

## **2. Cognitive capitalism: an outline**

In this section, we summarize the important framework of cognitive capitalism by referring to Moulrier Boutang (2011) and Lucarelli and Fumagalli (2008)<sup>1</sup>. Although we focus mainly on the macroeconomic regime, we first discuss immaterial labor, because the transformation of labor is a premise of this new regime. We then investigate the role of knowledge in the economy because this is important in the macroeconomic regime of cognitive capitalism. We analyze the macroeconomy using the framework of regulation theory and examine its characteristics and instability.

### **2.1 The transformation of labor**

Before we examine the framework of cognitive capitalism, we first have to investigate the background of cognitive capitalism. The concept of cognitive capitalism was developed in relation to the multitude theory and has come to stay as a socio-economic framework<sup>2</sup>. Therefore, the theory of cognitive capitalism assumes the multitude theory. In multitude theory, one of the key ideas is the transformation of labor, with special emphasis on the role of immaterial labor. Immaterial labor is defined as the “labor that creates immaterial products, such as knowledge, information, communication, a relationship, or an emotional response” (Hardt and Negri, 2004, p. 108). Immaterial labor is divided into two types. The first type refers to the “labor that is primarily intellectual or linguistic, such as problem solving, symbolic and analytical tasks, and linguistic expressions”

(Hardt and Negri, 2004, p. 108). This type of labor is cognitive. For the other type of labor, see what Hardt and Negri (2004, p. 108) says: “We call the other principle form of immaterial labor ‘affective labor’. ... Affective labor, then, is labor that produces or manipulates affects such as a feeling of ease, well-being, satisfaction, excitement, or passion.” It is noteworthy that, to quote Hardt and Negri again, “[m]ost actual jobs involving immaterial labor combine these two forms. ... immaterial labor almost always mixes with material forms of labor” (2004, pp. 108, 109).

Immaterial labor, especially cognitive labor, has been realized and popularized by the development of information and communication technology; cognitive labor is closely connected with knowledge. The relationship between knowledge and labor and the influence of knowledge on the economy are examined in the next section; we note that there are two new characteristics of immaterial labor. First, the distinction between labor and leisure has become ambiguous. “In the industrial paradigm workers produced almost exclusively during the hours in the factory. When production is aimed at solving a problem, however, or creating an idea or a relationship, work time tends to expand to the entire time of life” (Hardt and Negri, 2004, p. 111). Second, the form of employment not only changed but also diversified and the distinction between the employed state and unemployed state became ambiguous (Hardt and Negri, 2004, p. 111).

## **2.2 New features of cognitive capitalism: the role of knowledge and the dynamic economies of scale**

Cognitive capitalism is based on immaterial labor, but the definition of cognitive capitalism states that it “produces knowledge by means of knowledge and produces the living by means of the living, It is immediately production of life, and thus it is bio-production. ... Insofar as invention-power (far more than physical labor power) is what is mobilized specifically by cognitive capitalism, this creates a situation in which cognitive capitalism produces knowledge and the living through the production of the population. This production of life can be called ‘bio-production’. And the power that has, as its function, the control of this ‘bio-production’ is called ‘biopower’ (Moulier Boutang, 2011, pp. 55, 56)<sup>3</sup>. In the regime of cognitive capitalism, knowledge plays an exceedingly important role; so we have to examine the function of knowledge in the macroeconomy.

Knowledge has many roles in the economy, but in cognitive capitalism knowledge has specific functions and influences the economy in specific ways because of its characteristics. Multitude theory focuses on the immaterial, but the immaterial depends on the new information and

communication technology and therefore on “digitalized data” (Moulier Boutang, 2011, p. 50). This means that knowledge is at the center of the immaterial. In recent years, innovation has become exceedingly stressed, and by nature knowledge and science have close relationship with innovation. More specifically, the “appropriation of knowledge and the use of technology are the critical variables of technological progress and innovation” (Moulier Boutang, 2011, p. 51). The appropriation of knowledge has some close relationships with the intellectual property rights and is not simple, but we will explain this later.

In the Fordist regime, the economy of scale is important in that it leads to mass production and mass consumption, but in cognitive capitalism there are two new economies of scale, the “dynamic economies of learning” and the “new spatial economies” (Lucarelli and Fumagalli, 2008, p. 78). While the dynamic economies of learning mean the process of learning by doing and usage and depend on the new information and communication technology, the new spatial economies are related to a given territory and the diffusion of knowledge. It is important to note that in the new spatial economies a territory includes not only the physical domain but also the virtual networks that are on the Internet and generated by the new information and communication technology.

Knowledge influences both the dynamic economies of learning and the economy of space and networks, but to examine the impact of knowledge we have to evaluate the diffusion of knowledge, although it is difficult to directly measure the diffusion of knowledge. However, the extent of knowledge propagation can be estimated from the “efficacy of knowledge (opportunity), the spread and multiplication of uses in the economic system (cumulativeness), and the private appropriation of knowledge (appropriability)” (Lucarelli and Fumagalli, 2008, p. 78). These four factors determine “the knowledge-learning process ( $\lambda$ ) and network economies ( $k$ ). The variable  $\lambda$  depends on the degree of cumulativeness, opportunity and appropriability. Generally, opportunity is defined as the expected rate of profit ( $P_e$ ) ... The variable  $k$  is supposed to depend on the income level ( $Y$ ) and positive externalities ( $E$ ). ...  $\lambda$  is constrained by intellectual property rights” (Lucarelli and Fumagalli, 2008, pp. 78, 79).

The macroeconomic relations centered on knowledge are summarized as follows. The investments of an economy are determined by the income of the previous period, and the knowledge-learning processes ( $\lambda$ ) and network economies ( $k$ ) are affected by the investments. The network economies are enhanced by the growth of income and effect of externalities, while the knowledge-learning processes are enhanced by the expected growth rate of profits and weakened by the powerful claims for the intellectual property rights. These two effects increase the profits and income of the economy,

and develop this virtuous circle based on knowledge in cognitive capitalism.

In cognitive capitalism, there is another important macroeconomic relation that depends on knowledge. The “cumulativeness of knowledge and the speed of its diffusion necessarily imply increasing returns to scale” (Lucarelli and Fumagalli, 2008, p. 78). The economies of learning and network increase productivity, and there is a positive relationship between productivity and investments. These new economies of scale are realized through research and development and the diffusion of knowledge; this process is called the dynamic Kaldor-Verdoon law (Lucarelli and Fumagalli, 2008, pp. 86, 87)<sup>4</sup>.

We analyze the effect of knowledge on the macroeconomy, but we have to investigate the relationship between immaterial labor and knowledge in detail. With the development of cognitive labor and knowledge, the traditional distinction between capital and labor becomes obscure (Moulier Boutang, 2011, p. 53). To evaluate the productivity of knowledge, a new division of cognitive inputs into four categories become necessary: “hardware (machinery), software (computer process), webware (attention and brain activities) and netware (networks stimulated by computer process and brain activities)” (Lucarelli and Fumagalli, 2008, p. 83)<sup>5</sup>. Webware and netware are connected with cognitive labor. More specifically, webware includes attention and brain activities; the living commodities and knowledge commodities are produced by the webware and the individual living labor, where the externality of learning acts and the returns are constant or increasing; the collective commodities and knowledge commodities are produced by a collective living labor, that is, the cognitive and cooperative division of labor using netware as input. Therefore, the returns increase as a result of the effects of network externalities.

There is a close relationship between the transformation of labor and production, especially in the changes of firm and inter-firm organizations. This transformation is caused by the development of the new information and communication technology, and changes in the role of knowledge. In post-Fordism, the labor of Fordist regime has to be changed, for example, and the Smithian division of labor has to be reexamined. As quoted by Moulier Boutang, “specialization as a function of market size loses its relevance in a world of small series of production, in an ‘economy of variety’” (Moulier Boutang, 2011, p. 52)<sup>6</sup>. A small lot of production is a way to respond to uncertainty of demand, and as a whole production system, flexible and lean production system is aimed. This new production system, of which the Toyota production system is typical, has become possible through the new information and communication technology. While this system has been developed for dealing with the uncertainty of

demand, a lean production needs flexible employment and is itself a factor of instability.

### **2.3 The accumulation regime of cognitive capitalism**

In the framework of cognitive capitalism, the cognitive aspect of economic and social mechanism is the central point and has two roles to play. The first role involves the growth of immaterial labor that includes the cognitive labor explained above. The second role relates to the knowledge that affects the whole economy. In this subsection, we analyze the macroeconomic regime based on knowledge and immaterial labor.

The peculiar macroeconomic structure of cognitive capitalism is explained through a regulation approach<sup>7</sup>. Cognitive capitalism is defined as an accumulation regime of post-Fordism. The characteristics of Fordism have to be first examined before analyzing their difference with post-Fordism. The characteristics of Fordism are as follows. First, the division of labor is based on Taylorism, which separates conception from execution, and the dominant organization is hierarchical. Second, a specific macroeconomic relationship assures the growth of effective demand through the redistribution of the benefits of rising productivity among the workers; this point will be discussed in detail later. Third, the mass production of standardized durable goods and mass consumption supported the accumulation regime and also the system of collective bargaining and welfare state form the institution that maintains the redistribution (Lucarelli and Fumagalli, 2008, p. 75).

The growth regime of Fordism, or the macroeconomic link, is composed of three channels. In the first channel, the growth of productivity through technical innovation induces a rise in real wages and consumption is stimulated by a high wage level. In the second channel, there is an expansion of investments due to increased consumption, productivity improves, and the total demand induced by increased consumption increases the outputs. In the third channel, there is an increase in demand, which improves productivity by increasing returns and economies of scale. This leads to economic growth through mass production and mass consumption.

These macroeconomic relations do not emerge automatically, but the institutions and behavior of the macro groups such as the firms and consumers regulated by the institutions effectuate the macroeconomic channels into an established form. Therefore, the macroeconomic relations are always regulated by institutions and the behavior of the macro groups. With regard to the regulation or coordination of Fordism, we note three



points. First, the reason for the wages to rise along with increases in productivity is that this mechanism was institutionalized or became a practice as a productivity-indexed wage. This wage system was supported by the collective bargaining and the compromise that materialized between labor and management. Second, when there is an increase in consumption increases and investment is stimulated, the demand will increase because the firms behave like the so-called investment functions based on the acceleration principle. Third, increases in demand induce the rise of outputs as a result of the effective operation of increasing returns and the economies of scale.

The regime of Fordism was relatively stable, but it began to tremble from the latter half of the 1960s and collapsed thoroughly, driven by the Nixon shock and the oil shock, in the early 1970s. Although these shocks are only the moment of the end of the Fordist regime, the factors of breakdown were “rising trade union conflicts, the saturation of the durable goods markets, the increasing price of raw materials” (Lucarelli and Fumagalli, 2008, p. 76).

After the impasse of the stable regime of Fordism, a regime of post Fordism was explored, but a leading system could not be established until the 1990s. Regulation theorists call this new regime the finance-led growth regime. Although the important characteristics of this regime are clearly based on finance, its main macroeconomic channels also comprise the new dynamic economies of scales based on knowledge and networks. Therefore, we call the new regime cognitive capitalism.

Cognitive capitalism is not only a finance-led system but also it has a new macroeconomic channel of dynamic increasing returns based on knowledge and networks although it is unstable unlike Fordism. In cognitive capitalism, the economies of knowledge and networks that depend on the adoption of the new information and communication technology induce the growth of productivity, and execute the production of immaterial goods and also the generation of profits and rents<sup>8</sup>. Investments are made from the realized profits and rents, and the dynamic economies of scale operate on account of these investments and productivity rises. Thus, in this system there is a possibility of the virtuous circle.

In the Fordist regime, the distribution of increased productivity or the compromise between labor and management is the factor that regulates the macroeconomic circuit of Fordism, but this mechanism is absent in the cognitive capitalism. However, another trade-off relationship appears in this new regime. This is not a simple trade-off relationship between wages and profits but an effect of excessive claim for intellectual property rights on the increase of productivity. “The novelty of C[ognitive] C[apitalism] is that while the unfair income distribution, or that lower income level,

threatens to reduce the ability to generate knowledge, the excessive appropriability of technologies can lead to a lower diffusion of knowledge and learning” (Lucarelli and Fumagalli, 2008, p. 86). In cognitive capitalism, unlike Fordism, the institutional factor that regulates income distribution is practically absent and a scheme to settle the state of intellectual property rights is still in the formation stage and rather ambiguous.

Cognitive capitalism regime is inherently unstable on account of three reasons. First, the transformation of labor and employment causes the fragility of this regime. The increase of immaterial labor, meaning the rise of unstable employment and non-regular employees, and the decline of the collective bargaining power of Fordism weaken the relationship between productivity and wages. On the other hand, despite large increases in productivity, the outcome of the increased productivity is not distributed to the workers and income inequality tends to rise. Thus, the wages in cognitive capitalism are relatively low, and the level of consumption unstable and sluggish.

Second, the financial market plays a more crucial role in cognitive capitalism than in Fordism. In the regime of cognitive capitalism, the relationship between a rise in productivity and wages is not clear, but there is a financial macroeconomic channel that supplements unstable wage income and demand. Therefore, the “financial markets play a multiplier role on aggregate demand” (Lucarelli and Fumagalli, 2008, p. 82). The specific roles of finance are characterized by three macroeconomic channels. First, the rise of asset prices, like the stock, land, and housing prices, leads to the rise of financial returns, and also to the increase of household financial income. Then, consumption is stimulated and demand increases. Second, although the rise of asset prices stimulates investments, in contrast to Fordism, real investments can be constrained, because the volume of real investments is always compared with the volume of financial returns. Third, increases in consumption and investment induce the total demand to rise, and this could cause the profits also to rise. Thus, a virtuous circle in which the rise of asset prices corresponds to increased profits is materialized. These macroeconomic channels can be regulated by corporate governance that affects the points where a rise of asset prices produces increases of financial returns. The firms raise their dividends and tend to have a management that raises stock prices because of the increased influence of the stock markets (Boyer, 2004, Yamada, 2011).

These macroeconomic channels are unstable for the following reasons. First, the source of growth is the rise of asset market prices, but asset price inflation is not permanent and is itself unstable. Second, both the domestic financial market and also international markets affect the domestic

economy, because in recent years, owing to the liberalization of capital movements, funds from foreign countries flow into domestic markets. Therefore, any instability of the domestic and international financial markets can directly affect the whole macroeconomy. Third, financial income is polarized just as well as wage income. This means that even if the asset markets grow dynamically, the growth of consumption demand based on financial income would be small.

However, the role of finance needs to be paid attention. Although the finance-led growth regime is realized only in the U.S., and also in the U.K. to be precise, the factors that constitute a finance-led regime exist in other developed countries too<sup>9</sup>. Therefore, in the framework of cognitive capitalism, the role of finance is important, but the macroeconomic regime is not simply finance-led, and the financial macroeconomic channels are supplementary except in the U.S. (Yamada, 2011).

Third, the development of globalization has a number of influences on the macroeconomy. Outsourcing and the globalization of production are actively pursued, but the developed countries are highly dependent on the high growth rate of emerging industrial countries like BRICs. The economies of these emerging countries and part of the developed countries like Germany and Japan are export-led growth regimes. The exports of a country are largely determined by the economic activity of its trade partners. As already mentioned, globalization of finance is one of the causes of instability, but the globalization of production also causes instability of these regimes.

### **3. Reexamination of cognitive capitalism**

The outline of cognitive capitalism has been presented above, and we now reexamine the three points at issue. Cognitive capitalism is unstable as mentioned above, and is also practically unsustainable. The financial crisis of 2008 has proved the instability of this regime, originating in financial aspects especially in the U.S.; other developed countries affected by the financial crisis are even now under depression, and recovery is slow even in countries where the financial institutions are relatively sound, like Japan. Employment is unstable in cognitive capitalism because the new production system has to cope with uncertain demand, and this unstable employment enhances the disparities of income, and the level of consumption becomes vague. Income from the financial market supplements wage income, but the sustainability of the regime is weak owing to instability of the financial markets. The influence of globalization increases in comparison with Fordism, and especially in cognitive

capitalism the level of demand depends on the high growth of the emerging countries.

The causes of instability in cognitive capitalism are weak demand and financial fragility. Financial fragility is connected to financialization, which is one of the characteristics of cognitive capitalism. Although the importance of financialization is fully recognized nowadays, the role and functions of financialization in cognitive capitalism regime are not sufficiently investigated. While immaterial labor is the basis of cognitive capitalism, cognitive labor, which is included in the immaterial labor, is paid the most attention. However, affective labor is important and is related to the problem of weak demand. In the following subsections, we first, investigate the weakness of demand, then analyze financialization, and finally examine affective labor.

### **3.1 Weak demand**

Apart from the instability originating in financial markets, the cause of fragility of cognitive capitalism is “the absence of the wage-productivity nexus” (Lucarelli and Fumagalli, 2008, p. 82), leading to weak demand. While a mass production-mass consumption virtuous circle existed in Fordism and is supported by a productivity- indexed wage, mass production and mass consumption do not play leading roles in cognitive capitalism and the institutional constellation remains largely changed. The collapse of the correlation between increases in productivity and wages is clearly the main reason for the weakness of demand, but there are other factors that produce weak demand in cognitive capitalism. In this section we analyze them one by one.

First, the difficulties of mass production constitute one of the characteristics of cognitive capitalism. The diffusion of consumer durables or a more general saturation of demand indicates that the demand has become unsteady and changeable. The second factor is changes in the production and employment systems, with unstable employment increasing to cope with the fluctuations in demand, especially non-regular employment becoming a normal condition, and the diffusion of a lean production system. The wages of non-regular employment are generally restrained and low, and this necessarily leads to weak demand. The third factor leading to weak demand is the increase of income disparities. The polarization of wages has in turn two causes. One is the expansion of non-regular employment, and the other is the high remuneration of management and executives. The phenomenon of polarized wages is an issue of the wage system. More generally, in cognitive capitalism the compensation for labor is not estimated by physical productivity alone and contains some

ambiguities. Under the harsh global competition of cognitive capitalism, obscure compensation means low wages. The fourth factor is the deterioration of the institutions that complement wage income, such as income redistribution and the welfare state. Income redistribution and social securities still function, but these social expenditures are restrained owing to neo-liberal tightening policies. These tightening policies constitute the fifth factor of weak demand and are composed of not only fiscal austerity but also monetary restraint. A fiscal tightening policy tries to achieve a small government and sound finance, while the aim of the monetary policy at present is the suppression of inflation. Inflation-targeting policies have become pervasive, but it is the deflationary policy and the objective of full employment has been practically abolished<sup>10</sup>.

In cognitive capitalism, although the total demand is weak due to disintegration of the institutional constellation of Fordism that supports income, the reason for a macroeconomy to prosper seems to be that financial income and favorable exports supplement the deficiency of demand. Both the income from financial markets and export demand are unstable, and therefore the instability of the whole regime is inevitable.

### **3.2 The role and position of financialization**

Financialization is one of the characteristics of cognitive capitalism, but its role and position are rather ambiguous. Before we examine financialization in this regime, we have to reconsider the definition of financialization, because its meaning is wide and vague to a certain extent. According to Epstein, “financialization means the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of the domestic and international economies” (2005, p. 3). This definition is extensive, but there are two aspects, one quantitative and the other qualitative. With regard to financialization, the quantitative aspects are often paid attention, but the quantitative expansion of financial aspects also accompanies financial bubbles, and after a financial crisis, the financial quantitative indicators to a certain extent return to the level that existed before the bubbles (Minsky, 1982). Before the financial crisis of 2008, in some developed countries like the U.S. and the U.K., the financial sector expanded quantitatively, but in Japan after the bubble of the late 1980s, the financial sector suffered a severe blow and did not recover fully (Nishi, 2012). Although we cannot rely on quantitative indicators, financialization seems to progress. Therefore, we investigate the other aspects of financialization, that is, qualitative conditions<sup>11</sup>.

The transformation of the financial sector in cognitive capitalism is analyzed in the “financial economy of production” (Fumagalli and Lucarelli, 2010). This is a framework of money and finance that can be used to compare cognitive capitalism with Fordism. This concept is developed from the theory of monetary circuit, in which the macroeconomy is explained based on bank money and credit<sup>12</sup>. In this theory, the macroeconomy is appreciated as a monetary circuit as follows. A commercial bank lends money to a firm that needs investment funds, and the firm makes outlays for investments and wages and produces goods. The wage-earners buy the goods produced with their wages, and the firm receives the proceeds of sales and repays its bank borrowing. This process shows the circuit of money that is created by the banks and used by the firm and wage earners, and finally extinguished by reflux to the bank. In this process, money is endogenous and bank money is depicted. This is a monetary system of industrial capitalism and thoroughly applicable to Fordism. Here we have the credit channel of money supply, as well as the state finance channel and the balance-of-payments channel. The state finance channel is supplied by public debts, and it plays an important role in Fordism, but the balance-of-payments channel is comparatively not important in post-Fordism.

In cognitive capitalism, financialization, that is, the increased importance of financial markets, is an essential feature, and the system of money is no longer a simple monetary economy of production. This new regime of money and finance is the financial economy of production. In the financial economy of production, there are three new characteristics. First, the development of a financial market means not only its quantitative expansion but also its increased influence on the macroeconomy as a whole. In a simple monetary economy of production in Fordism, the role of the financial markets is complementary and necessary for the closure of monetary circuit. In the monetary economy of production, if the wage-earners do not consume all their income, the residue is saved in a bank in a pure credit economy. This means that the savings of wage earners assume the form of bank deposits and the firm holds unsold goods and is not able to repay all its borrowing to the bank. If the firm issues bonds to raise its shortage of funds and the wage earners buy the bonds, the firm is able to repay the whole of its borrowing; this is executed in the financial market. In cognitive capitalism, a firm raises funds not only from the bank but also from the financial market and the wage earners depend more on consumer credit from banks and other financial institutions. Financial markets also expand due to the rise of financial investments, and firms and investors participate in the financial markets and actively trade in financial commodities.

Second, in addition to the three channels of money supply, we have the financial market channel (Fumagalli and Lucarelli, 2010, p. 32; Fumagalli and Lucarelli, 2011, p. 61). This is a channel in which the money created in the financial markets circulates. Fumagalli and Lucarelli relate the channel with “the buyout and merger of other firms by pursuing a strategy of growth and control of markets and also to avoid bothersome competitors” (Fumagalli and Lucarelli, 2010, p. 33). Although mergers and acquisitions are important purposes of funds, various investment activities are also stimulated. These financial investments usually make use of leverage, and if the investments prove successful, the firms make financial gains and money is created. New financial commodities, such as securitized commodities, are developed in the financial market vigorously, and this financial innovation creates near money that can be used expediently almost in the same way as money and consist of money supply (Minsky, 1982, Pollin, 1991, Wray, 1990)<sup>13</sup>. This channel already existed in Fordism, but it has now become an important channel in cognitive capitalism both quantitatively and qualitatively.

Third, another feature of the financial economy of production is the increased influence of the international financial market. This means that the balance-of-payment channel of money supply has come to affect the domestic economy. Especially, the investments of one country tend to be dominated by reputation of the country and the policy of the country is influenced by the international financial market. Globalization exerts an influence on both the financial market channel and state finance channel. With regard to the financial market channel, foreign investors actively enter and trade. The state finance channel is also affected by foreign investors, and this phenomenon could occasionally lead to the severe problem of sovereign debt.

The framework of the financial production economy is an analysis of financialization from the perspective of money and credit, and the role of financialization in the macroeconomic relations is not examined sufficiently. With regard to financialization Moulrier Boutang says as follows: “Finance can be said to be the only way of ‘governing’ the inherent instability, which have been known for a long time, and even if the weight gained by finance within globalisation changes the scale of problems as well as the possibilities for re-equilibration that are habitually assigned to it” (Moulrier Boutang, 2011, p. 136). Finance has come to play the role of “governing” the whole economy, and Moulrier Boutang gives several examples. First, although the production of immaterial goods and intangible assets has increased in cognitive capitalism, the evaluation of these goods is difficult. The introduction of market-value accounting is one of the means of settling, and in this method value of goods is evaluated by

the financial market. The other example is the concept of “goodwill”. Goodwill “records the positive difference between the value found in stock exchange transactions (‘fair value off the books’) and the value as determined by the accounting books (‘in the books’)” (Moulier Boutang, 2011, p. 140). In these examples, the financial market is introduced for estimating the value of what is difficult to determine.

Second, the employment system has changed significantly from Fordist regime. Wage is no longer productivity indexed, and the level of wages has come to depend on the relation between the supply and demand of the labor market. Non-regular employment has increased and the volume of atypical employment is affected by the short-term supply and demand of the labor market. In addition to non-regular employment, “para-subordinate work” has developed. “In para-subordinate waged work – or self-employment, or second-generation autonomous work – the personal relationship of subordination to the employer is eliminated; here subordination is maintained through a supply contract provision, which falls within the commercial market rather than within a labour market supervised by the labour code” (Moulier Boutang, 2011, p. 142). It seems that the increase of this new form of employment is due to the expansion of the market mechanism, and financialization is almost the same as the expanded sphere of a market, but the reason for the increase of a particular kind of contract work is not only due to the transformation of the employment system from aggravation of competition but also the difficult estimation of remuneration of work related to the next point. Third, “[t]here is, therefore, in the production of knowledge or of information goods ... a fundamental uncertainty ... Price formation then borrows the mechanism Andre Orlean has highlighted as operating in financial speculation: that of forming a common opinion among the agents. ... There is therefore a strong correlation between the formation of the value of a cognitive good and the financial assessment of a stock exchange asset” (Moulier Boutang, 2011, pp. 144, 145). As an example, Moulier Boutang mentioned the biotechnological industry, whose value is estimated in the emergent stock market, or the second market like NASDAQ, for financing deficit firms.

These examples and the roles of financialization described by Moulier Boutang are important aspects of cognitive capitalism, but financialization has an additional role of governing macroeconomic growth regime. This role is the corporate governance already mentioned. Financialization influences every part of the macroeconomy, and this phenomenon is analyzed in the framework of the financial production economy, but the state of corporate governance affects the management of firms and the determination of wages. This function of corporate governance is the same position as that of a compromise between labor and capital in Fordism and



plays a crucial role. In Fordism a compromise can result in a productivity-indexed wage and guarantees sufficient demand and mass production, but in cognitive capitalism, the function of corporate governance is wider and complex. Corporate governance can greatly influence determining the volume of dividends and wages, meaning that corporate governance sets both the channels of wage demand and financial income demand in a macroeconomic regime. Moreover, corporate governance also affects investments, because investments are made from the profits of firms and dividends are paid out of the profits. Thus, corporate governance affects the management strategy of firms, but the mode of influence differs owing to various institutional constellations and economic conditions. Therefore, an analysis of corporate governance is essential to the study of cognitive capitalism.

The reason for the development of financialization in cognitive capitalism has to be examined, but this is not easy. According to Moulier Boutang, financialization is necessary because we have to cope with instability or uncertainty in cognitive capitalism, although financialization itself is one source of instability. In the example explained above, financialization is considered as the expansion of utilization of the financial market, but in this argument financialization can be reduced to the intensification of subsumption of the market. Subsumption of the market is an important concept applicable to cognitive capitalism, but the role of financialization is not limited to this concept. The origin of financialization is related to the Foucauldian concept of “bio-politics” introduced by Negri and Moulier Boutang. “In the cognitive capitalism school of thought, flexible production and financialisation are both seen as being subordinate to the achievement of permanent innovation. ... Transformations in the role of money and funds in economies should be read, in this context, as manifestation of a new ‘governmentality’ of capitalism, to use Foucauldian vocabulary, or ‘governance,’ to use the vocabulary of the world of finance” (Moulier Boutang, 2011, p. 139). Therefore, financialization consists of the governmentality or mode of governance of cognitive capitalism, and the relation between financialization and bio-politics needs to be examined.

In cognitive capitalism, knowledge plays a crucial role in the production of physical and immaterial goods, and the humans producing knowledge tend to be focused on and become the object of power and policy. This situation is called bio-politics and bio-power which have already been explained. The reason why financialization is inevitable in the regime of bio-politics is investigated by Foucault in his *The Birth of Biopolitics* in 1978 and 1979. Foucault targeted the theory of human capital in his analysis of American neo-liberalism; in this theory, the worker is considered “a machine that produces an earnings stream... This is not a conception of labor power; it is

a conception of capital-ability which, according to various variables, receives a certain income that is a wage, an income-wage, so that the worker himself appears as a sort of enterprise for himself” (Foucault, 2008, pp. 224, 225). Therefore, the worker becomes an agent of the same quality of enterprise and makes investments. Foucault further explained this argument referring to the example of migration. “Migration is an investment; the migrant is an investor. He is an entrepreneur of himself who incurs expenses by investing to obtain some kind of improvement” (Foucault, 2008, p. 230). Thus, in a neo-liberal economy the wage earners invest for themselves and make financial calculations. This means that in cognitive capitalism individuals are necessarily involved in financialization. Therefore, not only entrepreneurs and rentiers but also wage earners behave like investors and internalize financial calculations.

### **3.3 Cognitive labor and affective labor**

The important characteristic of cognitive capitalism is the magnification of immaterial labor. Cognitive labor, which comprises immaterial labor, is related to knowledge and plays a vital role in the production system that uses knowledge, whereas affective labor is actually important in the economy. An increase in affective labor is connected with the rise of non-regular employment and low-wage labor and therefore becomes the cause of income disparities. The division of labor has changed due to the transformation of labor, but the division of labor itself is not simple in cognitive capitalism. In Fordism, the “classic sequence of conception/production/marketing” (Moulier Boutang, 2011, p. 52) existed, and this process roughly corresponds to the division of labor. The task of conception is executed by cognitive labor, and production is practiced by physical labor. This division also corresponds to the distinction of skilled and unskilled labor, and the task of marketing is carried out by affective labor. Whereas in Fordism the process of production and type of labor are related, in cognitive capitalism, except for simple unskilled physical labor, each process of production has the factor of immaterial labor in varying degrees. The cognitive aspects and affective aspects of immaterial labor are not separated clearly, and most of the labor therefore becomes affective labor.

Although affective labor is important in cognitive capitalism, it seems that the theory of cognitive capitalism mainly focuses on cognitive labor and has a rather optimistic view of the state of labor. According to Federici, “Compared with assembly-line work, ‘affective labor’ may appear more creative, as workers must engage in a constant re-articulation/reinvention of their subjectivity, choose how much of their ‘selves’ to give to the job,

mediate conflicting interests. But they must do so under the pressure of precarious labor conditions, an intense pace of work, and a neo-Taylorist rationalization and regimentation of work that one would have imagined foregone with the decline of the Fordist regime” (Federici, 2011, p. 68). In cognitive capitalism, cognitive labor is also clearly unstable, but as a macroeconomic regime, the burden of coordination lies heavily on affective labor. For example, the precariousness of affective labor is one of the causes of weak demand. The state of affective labor and the relationship between affective labor and the employment system need further studies in detail.

#### **4. Conclusions**

In this paper, we examined the regime of cognitive capitalism mainly from a post- Keynesian perspective. Our conclusions are threefold.

First, one of the causes of instability in cognitive capitalism is the weakness of demand, and we examined this in detail. The main factor of weak demand in a macroeconomic regime is the lack of an adequate wage-productivity nexus, resulting in relatively low wages and therefore a low level of demand. Although the coordination of wages is important in a macroeconomic regime, weakness of demand can be brought in by many factors, such as saturation of demand, the increase of non-regular employment, polarization of wages, the regression of welfare states, and tightening policies. Financial income and export demand can supplement a weak demand, but these sources are themselves unstable and unreliable and the instability of the whole macroeconomic regime could rather become amplified.

Second, another cause of instability in cognitive capitalism is financialization. We reconsidered the role and position of financialization in this study, because the function of financialization is rather wide and vague. Financialization has both quantitative and qualitative aspects, but although the quantitative aspect is related to the financial bubble and crises, financialization cannot always be estimated by using quantitative indicators. In order to examine the qualitative aspect, we first analyzed the framework of the financial economy of production. The characteristics of financialization is that, first, not only the firm sector but also the household sector involves the financial market and the financial investments has become active; second, the financial market channel as a money supply channel tends to play an important role; and third, the influence of the international financial market increases. These new features are related to the monetary and financial economy, and the place of financialization in the macroeconomic regime is the corporate governance that affects the

firms' behavior through the stock market. The corporate governance functions not only the same role of a compromise between labor and capital in the Fordism regime, but also influences the whole strategy of firms. Financialization has a crucial role to play in cognitive capitalism because, according to Moulier Boutang, financialization is the governing position of the economy, and, according to Foucault, even a worker becomes an enterprise and an investor who invests for himself and exercises financial thinking.

Third, affective labor is important in cognitive capitalism, but this has not been paid sufficient attention compared to cognitive labor. In cognitive capitalism, most labor has some affective aspects, but affective labor is connected with non-regular employment and a low level of wages. Precariousness of labor is often pointed out in cognitive capitalism, but affective labor is typically precarious labor and also the cause of weak demand.

## NOTES

1. For cognitive capitalism, see Moulier Boutang (2011), Fumagalli and Lucarelli (2007, 2010), Lucarelli and Fumagalli (2008), Peters and Bulut (2011), and Cvijanovic et al. (2010).

2. For multitude theory, see Hardt and Negri (2000, 2004, 2009), Marazzi (2008, 2011), Fumagalli and Mezzadra (2010), and Virno (2004, 2008).

3. For "invention-power", see Lazzarato (2004).

4. The law of Kaldor-Verdoon gives the positive correlation between labor productivity and volume of output. The English translation of Verdoon's original paper is contained in McCombie et al. (2002).

5. In Moulier Boutang (2011), "wetware" is used for "webware." In this classification network is added to the classification of hardware, software, and wetware in Nelson and Romer (1998). The original definition is as follows: "Hardware includes all the nonhuman objects used in production – both capital goods such as equipment and structures and natural resources such as land and raw materials. Wetware, the things that are stored in the "wet" computer of the human brain, includes both the human capital that mainstream economists have studied and the tacit knowledge that evolutionary theorists, cognitive scientists, and philosophers have emphasized. By contrast, software represents knowledge or information that can be stored in a form that exists outside the brain" (Nelson and Romer, 1998, p. 51).

6. For "economy of variety", see (Boyer, 2004).

7. For a regulation approach, see Boyer (2004).

8. In cognitive capitalism, the distinction between rents and profits becomes ambiguous. For the importance of rent, see Marazzi (2011) and Vercellone (2010).

9. In developed countries, at least corporate governance has been intensified and its influence on the management of firms is strengthened.

10. For a critique of monetary policy including inflation targeting, see Lavoie and Seccareccia (2004), Arestis et al. (2005), and Epstein and Yelden (2009a). In particular, Epstein and Yelden (2009b) indicate the deflationary nature of inflation targeting.

11. In the qualitative studies of financialization, Lazzarato (2012) emphasizes the role of debt and it is interesting, but we focus on the role of financialization in macroeconomy.

12. For monetary circuit theory, see Rochon (1999) and Graziani (2003).

13. This phenomenon is called “financial innovation” and analyzed by Minsky (1982) and structuralists like Wray (1990) and Pollin (1991), who introduced this phenomenon into the endogenous money supply theory. Therefore, “financial economy of production” seems to be a structuralist version of the theory of monetary circuit.

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## **COGNITIVE-CULTURAL PRODUCTION, DIGITAL LABOUR AND THE NEW FRONTIERS OF KNOWLEDGE. A CONVERSATION WITH ALLEN J. SCOTT**

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**ABSTRACT.** What is the role played by cognitive-cultural production? What are the meanings and the stakes of the “feminization” of labor? What is the meaning of “Digital Taylorism”? Is the metropolis today a functional substitute for the factory in the context of industrial capitalism? What is the role of universities in cultural-cognitive capitalism? Is there a contradictory relationship between knowledge-based economy and cognitive capitalism? Stefano Lucarelli, Michael A. Peters and Carlo Vercellone interview Allen J. Scott .

**Keywords:** cognitive-cultural capitalism, digital Taylorism, affective labor, creative class, knowledge externalities, creative class, André Gorz.



Stefano Lucarelli, Michael A. Peters and Carlo Vercellone: *In what sense can we say there has been a shift from industrial capitalism to a capitalism grounded on knowledge and the immaterial? From this perspective, what is the role played by cognitive-cultural production?*

Allen J. Scott: Over much of the twentieth century, the economies of the more advanced capitalist countries were dominated by large-scale materials-intensive manufacturing industries forming the basis of Fordist society (or “Late Capitalism” as it was optimistically known in some quarters). Even so, both knowledge and immaterial labor were of considerable significance in the Fordist economy, and were central to its peculiar top-down logic of technological innovation and change based on independent scientific research whose results – via corporate R&D – were then incorporated into practical applications on the shop floor.

The deep crisis conditions of the 1970s combined with the accelerating shift of productive capital from core to peripheral countries essentially eviscerated Fordism as an economic system, and, among other things, ravaged the large metropolitan areas that had grown up on the basis of its productive energies. In its place, there emerged over the 1980s and 1990s a so-called post-Fordist economy focused on rapidly-expanding sectors like high-technology industry, financial and business services, media, fashion, cultural products, and a host of allied branches of production (Amin, 1994). As this was happening, production technologies were increasingly being transformed by advances in digital technologies of computation, data storage, and communication. This turn of events has had two dramatic and still continuing effects in the arena of production. One of these involves the substitution of computers for standardized or algorithmic forms of work (both mental and manual), thus driving huge segments of human labor out of existence. The other revolves around the marked capacity of computers to supplement and potentiate the inventive and creative capacities of workers, leading to significant transformations in the modes of employment that typify the upper fraction of the labor force. Richard Florida refers to this fraction as the “creative class” (Florida, 2002); Robert

Reich uses the more sober and in the end more satisfactory phrase “symbolic analysts” (Reich, 1992).

As a corollary of these trends, one of the more striking developments in much of contemporary capitalism is the erosion of the old dominant blue-collar/white-collar division of labor and social stratification and its replacement by a widely polarized (though never fully binary) structure made up of symbolic analysts on the one side and low-wage service workers or what we might call “a new servile class” on the other. This restratification is notably apparent in major global cities, particularly in the Global North, but also in some parts of the Global South, and it is all the more in evidence given the decline of routine manufacturing activities in these cities (Roy, 2011; Scott, 2011). The symbolic analyst side of this division of labor is composed of workers who are called upon to deploy advanced forms of human capital such as deductive reasoning capacities, technical insight, leadership, communication abilities, cultural awareness, and visual imagination -- in other words, more or less creative capacities -- in the work-place. At the same time, it would be a grave error to suppose that the new servile class is devoid of inventive and creative capacities, even if its members lack formal qualifications. The work of the new servile class is focused on tasks like child care, cleaning, hotel and restaurant work, personal service, paramedical assistance, property maintenance, taxi driving, infrastructure repair, etc. In brief, the labor of this group of workers is devoted above all to serving the direct and indirect needs of the upper stratum of the labor force and to ensuring that the urban system remains functionally supportive of work and life in general in the new capitalism. These tasks almost always demand styles of discretionary decision-making and behavior that contrast sharply with the standardized, routine jobs performed by “hands” on the assembly line (Scott, 2011).

A defining feature of the new economy, then, is that it involves widely-ranging mobilization of the cerebral and affective (or cognitive and cultural) assets of the labor force. For this reason, I refer to the peculiar version of economy and society that is emerging at the present time as *cognitive-cultural capitalism* (Scott, 2008). This expression has the advantage over the term “post-fordism” (which designates only what it is not) of pointing to the expanding foundations of work in today’s society in

science, knowledge, information, calculation, personality, imaginative capacity, and artistic sensibility, and it has the advantage over “cognitive capitalism” of explicitly recognizing that cultural dispositions and cultural outputs function as major components of the production system at large.

Stefano Lucarelli, Michael A. Peters and Carlo Vercellone: *You define contemporary capitalism as cognitive-cultural, hence emphasizing the cultural dimension beside the cognitive dimension: Why is this so?*

Allen J. Scott: Much of contemporary capitalism is indeed based on forms of human capital that involve cognitive capacity, which I take to be focused on forms of ratiocination like analyzing, organizing, observing, planning, and memorizing. A related but still somewhat distinctive form of human capital involves the *cultural* capacities and endowments of the labor force, which are more focused on things like empathy, feeling, the capacity for care, intuition, and modes of social interaction. Contemporary capitalism actively exploits both of these registers of work, not only in the case of symbolic analysts but also in the case of the new servile class. Correspondingly, the products of capitalist enterprise play to ever greater extent on the semiotic, aesthetic and libidinal dimensions of consumption. This tendency is notably marked in cultural production sectors like music, film, television, electronic games, and fashion, but also in sectors with more utilitarian outputs (like cars, furniture, office gadgetry, or kitchen appliances) where competitive strategy is increasingly focused on product differentiation involving not only higher standards of functional performance but also on eliciting diverse kinds of emotive response and providing the consumer with opportunities for social display. The cultural dimension also comes strongly into play in those frequent situations in contemporary capitalism that entail direct human interaction and that therefore call for high levels of performative skill. To exemplify the point, just consider cases like contract negotiations between managers with different experiential backgrounds, or a banker seeking to explain the details of a complex financial instrument to an investor, or a hotel clerk offering a simulacrum of friendly warmth to a guest. The feminist literature

has been especially helpful in drawing attention to this feature of the contemporary workplace.

Stefano Lucarelli, Michael A. Peters and Carlo Vercellone: *One of the essential elements in the growth of the cognitive dimension of labor is linked to what has been defined by Cristina Morini, amongst others, as "becoming-woman of labor" ["feminization of labor"]* (Morini, 2007). *In your opinion, what are the meanings and the stakes of this mutation and, in particular, what is its impact on the new segmentation of cognitive labor?*

Allen J. Scott: The “becoming-woman of labor” is an awkward term that is used in two main senses. One is to signify the increasing incorporation of women into the employment system even though the differential assignment of men and women to certain tasks still remains a fact of life at all levels of the labor force in the new economy. The other is to highlight the changing nature of the labor process where personal skills and assets that have traditionally been considered to be attributes of women’s work outside the sphere of commodity production have now become highly valued within the capitalist workplace. By the same token, proficiency in communication, social interaction, and affective response, are now essential to many types of employment. Cristina Morini also correlates the becoming-woman of labor with the escalating precarity of work in general, and not just with the part-time and temporary employment segments that were formerly associated with women and other marginal low-wage workers. Today, precarity is spreading rapidly from the lower reaches of the labor market to the higher, so that even formally qualified workers who can command high wages are increasingly subject to a regime of employment instability. This is conspicuously the case in project-oriented work (which is diffusing apace throughout the cognitive-cultural economy) where workers are hired for the duration of a particular undertaking such as a film, an advertising assignment, a research contract, an architectural venture, etc., and are then let go. To be sure, symbolic analysts and members of the new servile class have very different capacities for dealing with employment instabilities, and individuals in the former group often command resources in terms of financial assets and interpersonal networks

that make it relatively easy for them to negotiate their job-related insecurities. In contemporary society, it is not uncommon to come across cognitive-cultural workers who have carried networking to a semi-routinized habit of life, reflecting not only their chronic demands for information about employment opportunities but also the urge to consolidate their reputations and to display their person-specific human capital. Perhaps this urge is also partly responsible for the deeply-rooted narcissism that seems to characterize so many of the members of this social fraction. Symptomatically, this syndrome is nowhere more marked than in the modern university.

Stefano Lucarelli, Michael A. Peters and Carlo Vercellone: *If we examine the dynamic of cultural-cognitive capitalism in its historical development the range of service occupations involving both aesthetic and semiotic attributes have displayed a marked tendency to exhibit ever-increasing computerization and digitization often leading to forms of digital Taylorism. How should we understand this developmental tendency and how do we distinguish between these two and other varieties of digital labor?*

Allen J. Scott: “Digital Taylorism” is a term that is often used to designate the substitution of computers for the work of managerial, professional and technical workers, with deskilling as a consequence (Brown, Lauder and Ashton, 2012). This kind of transfer most certainly occurs on a huge scale, and this is all of a piece with the dynamic of cognitive-cultural capitalism, as indicated earlier. However, although digitization results in extensive deskilling, an enormous amount of *reskilling* also goes on in today’s economy (Scott, 1993). The occupation of draughtsman, for example, has now almost entirely disappeared, but this state of affairs is more than offset by the rise in allied high-skill activities involving computer graphics, imaging techniques, geographic information systems, and so on. Similarly, accounts clerks are being steadily replaced by various kinds of budget and financial analysts with at least some familiarity with the higher accounting. More generally, as Levy and Murnane (2004) have shown in *The New Division of Labor*, digitization has brought on a vast expansion of skilled

cognitive and cultural labor even as it has been responsible for the destruction of whole segments of the employment system.

Another form of digital Taylorism occurs where employers exercise control over the work of their employees by means of computerized supervision. Workers can be closely monitored for things like the number of keystrokes they make per hour, the content of their e-mail messages, the amount of time that they spend visiting sites not directly connected with their work, and so on. I do not have data on the extent of this kind of monitoring, but I imagine that it is fairly common in today's workplace, particularly in the lower reaches of the symbolic analyst fraction. At the same time, I doubt very strongly that this kind of Taylorism is likely to become pervasive, at least in any heavy-handed way. The whole point about digitization in the cognitive-cultural economy is that it tends to reduce the quotient of purely piecemeal labor in the workplace so that employees can engage in more "creative" pursuits involving open-ended work tasks and significant injections of their subjectivity into the labor process. The managerial imperative in these circumstances is not to circumscribe workers' sense of their own ingenuity and skill but to widen their range of self-expression and their commitment to self-exploitation by means of soft human relations (Scott, 1997). So we might say that to the degree that digital Taylorism prevails in the guise of invasive labor control, to the same degree is cognitive-cultural capitalism failing to achieve its full productive capacity.

Stefano Lucarelli, Michael A. Peters and Carlo Vercellone: *In your analysis, you make a distinction amongst three different and successive regimes of accumulation and urbanization. Can we say, as for example Antonio Negri (Hardt and Negri, 2009: 250 f. ) does, that the metropolis as a form of organization of cognitive and cultural labor has become a functional substitute for the factory in the context of industrial capitalism?*

Allen J. Scott: Elsewhere, I have made the point that capitalist accumulation shapes urbanization processes, but that urbanization in turn is a necessary condition for the social reproduction of capitalism. Urbanization is thus an intrinsic moment in any meaningful analysis of the dynamics of accumulation. Indeed, there is no historical or geographical

form of capitalism that is not accompanied by at least some degree of urbanization. I have proposed a tripartite historical-geographic schema of these reflexive relationships as follows (1) the nineteenth century factory and workshop system, with its most advanced urban expression occurring in the burgeoning manufacturing towns of Britain at that time, (2) mass production and the distended twentieth century metropolitan growth centers of North America and Western Europe, and (3) cognitive-cultural capitalism and the emerging international network of high-technology, financial, commercial, media, and cultural centers based for the most part – but not exclusively -- in major global cities (with one of its more peculiar declensions in both theory and practical policy-making being the “creative city”). This schema is unquestionably oversimplified, but it has the virtue of focusing on some reasonably paradigmatic instances (Scott, 2007).

I certainly understand Negri’s point about the metropolis becoming a sort of substitute for the factory in the current era, but I would want to restate this idea so that it is more sensitive to current research in urban geography. To begin with, we need to note that in the changing historical relationships between capitalism and urbanization there has always been an urban commons that has functioned in support of the production system (Scott, 2012: 24). In another vocabulary, these relationships involve deep connections between the *internal* operations of the individual production unit and its *external* milieu including the common pool resources of the city (Aydalot, 1986; Camagni, 1991). These resources themselves can be described by reference to three major dimensions, each of which is a source of localized externalities or “agglomeration economies.” First, cities are typically sites in which many specialized but complementary firms are concentrated, thus making it possible for flexible, cost-effective social divisions of labor to operate locally. Second, the networks that shore up these social divisions of labor often function as conduits through which large amounts of information flow, thus stimulating informal learning and innovation processes. Third, workers, who are necessarily located in proximity to employment, gather together in differentiated neighborhoods marked by complex varieties of socialization and cultural development that (in part) reflect and sustain their activities in the workplace. These three points must be complemented by an important fourth observation to the effect that production and social life in the city are sustained by

institutional arrangements and capital-intensive infrastructures that tend to reinforce patterns of geographic concentration. The dense milieu of the city, then, comprises multiple externalities that were already characterized in general terms by the economist Alfred Marshall toward the end of the nineteenth century as localized “atmosphere” (Becattini, 1989). Throughout the history of capitalism atmosphere in this sense has been an important source of productivity and profitability in urban areas, though to be sure, there is a special subtlety in this relationship in the cognitive-cultural city of the twenty-first century where there is an increasingly intimate relationship between the built forms, cultural facilities, and leisure opportunities of the urban environment and the social reproduction of the upper fractions of the labor force.

In capitalism, then, the city and its complement of production activities in private firms have always existed in shifting reflexive relationship to one another. The city can never be a comprehensive substitute for these activities. But it is the source of externalities that for various reasons resist enclosure by private interests. For this and other reasons, the city is a *sui generis* domain of collective order endemically subject to political management and contestation.

Stefano Lucarelli, Michael A. Peters and Carlo Vercellone: *What is the role of universities in cultural-cognitive capitalism especially in newly established global forms that involve multi-campus transnationalism and forms of open science and education (Peters, 2010; Roggero, 2012)?*

Allen J. Scott: Obviously, universities and allied institutions of education and research are absolutely central to cognitive-cultural capitalism. Science is essential, as it always has been in capitalism, though in the cognitive-cultural order special importance must be accorded to new fields like microelectronics, computer and communications engineering, software development, biotechnology, and the like. Basic science, moreover, remains radically open, despite numerous attempts to assert private or quasi-private ownership over selected spheres of research activity. Even neoclassical economists recognize the pervasive leakiness or market failure



of the knowledge system, though this way of putting matters certainly concedes far too much to markets as a universal normative benchmark. Universities and allied institutions are also the training grounds of the scientists, engineers, medical personnel, technicians, managers, financial analysts, lawyers, writers, artists, actors, musicians, etc., who constitute the productive backbone of the cognitive-cultural economy. By the same token, the old patrician model of academic scholarship in institutions of advanced education is receding rapidly before a new model based on vocational training and the professionalization of different branches of learning. In North American universities, the professional schools (most especially business schools) have been in the vanguard of this process of reinvention leading to the steady erosion of educational goals focused on cultural breadth, critical consciousness, and intellectual independence in favor of practical expertise and instant employability. In response to this development, universities are also acting more and more aggressively as revenue-earning centers in their own right, and, like multinational corporations, are rapidly consolidating this function by means of ever-intensifying global outreach focusing both on the recruitment of foreign students to the home campus and the location of branch-plant campuses in other countries.

Stefano Lucarelli, Michael A. Peters and Carlo Vercellone: *Some theorists of cognitive capitalism highlight the deep contradictions which oppose its basic logics to the development of an economy based on knowledge (Vercellone, 2007; Monnier and Vercellone, 2011; Lucarelli and Vercellone, 2011). In particular, André Gorz goes as far as to affirm that cognitive capitalism is the impossibility of capitalism itself once it encounters a certain threshold of development (Gorz, 2004; Vercellone, 2009). How do you see, in your research, this contradictory relationship between knowledge-based economy and cognitive capitalism?*

Allen J. Scott: Gorz's thesis about the anticipated deliquescence of capitalism derives from Marx's cryptic comments on "general intellect." As I understand it, the thesis unfolds on the foundation of two initial propositions, both of which are entirely acceptable in so far as they go. One

is that knowledge exists beyond the boundaries of the market; the other is that as scientific and technological knowledge expands, production in turn becomes increasingly automated. Beyond these propositions, the argument becomes more controversial. Gorz (2003) claims that an economy based exclusively or almost exclusively on knowledge is no longer subject to the law of value and is therefore unable to function as an overall system of privatized units of productive activity. Hence, he contends that as the workforce becomes dominated more and more by immaterial (cognitive and cultural) labor, capitalism will give way to various kinds of cooperative networks and the self-management of workers. A socially guaranteed (post-capitalist?) wage will allegedly consolidate this trend by freeing individuals from the need to valorize their labor in the market-place.

I am out of sympathy with this line of thought. True enough, we have moved into an era in which knowledge has become an ever more essential component of production and in which enormous bodies of economically-useful information, ideas, and cultural expression circulate freely through cyberspace. Even as a purely knowledge-driven entity, however, the capitalist firm remains a secure fountainhead of privatized profits by reason of its status as a concrete finite amalgam of investment capital, organization, labor processes, marketing activities, and managerial control. Equally, the power of firms to produce sellable outputs is in no way compromised by the growing significance of the knowledge system in capitalism, particularly given their ability *to transform cognitive and cultural inputs (including knowledge externalities) into scarce and firm-specific (Chamberlinian) exchange values* (Chamberlin, 1933). I know that some theorists argue that the turn to cognitive-cultural production implies the obsolescence of the law of value as a fundamental regulator of economic outcomes, and that capitalism cannot survive under these circumstances (Vercellone, 2010). My response is to say that the turn to cognitive-cultural capitalism makes it all the easier for us finally to abandon the law of value and to see it for the metaphysical illusion that it always has been. This comment, by the way, is not an attempt to jettison the allied concepts of labor alienation, the exploitation of workers (including the self-exploitation of cognitive and cultural workers), and the appropriation of the surplus by capitalist enterprise. As a matter of fact, appropriation of the surplus by capitalist enterprise assumes new

dimensions in cognitive-cultural capitalism because the corresponding form of market competition – i.e. Chamberlinian competition – enables rising numbers of producers to extract rents on final outputs due to firm-specific product specifications that, in addition, can be protected by means of trademarks, patents, copyright, and AOC labelling.

Finally, and as already noted, the advent of cognitive-cultural capitalism signals a new era in which commodity production radically extends its range of operation, and starts to take overall command of aesthetic, semiotic, and libidinal forms of expression. Cognitive-cultural capitalism thus heralds the impending subsumption of life as a whole to the needs and purposes of capitalism. This emerging order of things is one in which knowledge, technology, economy, information, and culture blend together into an increasingly interdependent system constituting the entire social context of the subject. As Hardt and Negri (2009) put it, “today, finally, the biopolitical city is emerging.” Capitalism still has a long road to travel before it finally gives up the ghost.

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