

# **The Rise of General Intellect and the Meaning of Education. Reflections on the Contradictions of Cognitive Capitalism**

**Periklis Pavlidis**

Aristotle University of Thessaloniki, Greece

## **Abstract**

*In contemporary capitalist economy knowledge generating becomes part and parcel of material production and man, as the bearer of intellectual capacities, the principal productive force. In this reality, education came to mean the formation of the “general intellect”: the cultivation of mind and the development of consciousness, of its moral, aesthetic and philosophical form. At the same time the “cognitive capitalist” economy undermines and distorts “general intellect” in its effort to subordinate the workers’ intellectual activity to the imperatives of commodity production. Therefore the prospects of an authentic knowledge society can only be conceived in terms of transgression of the capitalist mode of production.*

**Key words:** cognitive capitalism, consciousness, education, general intellect, intellectual labour.

## **Introduction: The tendency to the intellectualization of labour**

A fundamental feature of modern developments in the character of labour in advanced regions of the capitalist world is the appearance and rapid expansion of the so called “post-Fordist” phenomena, the setting up of flexible production networks which use, as their integral part, the dynamic optimization of knowledge for continuing innovation in technologies and products. The cascading changes observed in the fields of science, in its technological applications and in labour relations, have led to different interpretations of the fundamental contradictions and trends of capitalist society. Of special interest, in this respect, are the theories of the post-operaismo (post-workerism) school.

Paulo Virno, referring to post-Fordist capitalism, holds that the law of value and of labour-time is going through a very deep crisis as the result of the emergence of “general intellect” which “comprises formal and informal knowledge, imagination, ethical inclinations, mentalities and ‘language games’” and represents the mental foundations of all types of economic activity (Virno, 2007, 4-5). The notion of “immaterial labour” is used in a similar way to that of “general intellect”. According to Maurizio Lazzarato, the ever-expanding - in modern capitalism - immaterial labour is “the labour that produces the informational and cultural content of the commodity” (Lazzarato, 1996, 133) and is structured in forms “that are immediately collective” (Lazzarato, 1996, 137). The expansion of immaterial labour at the start of the 1970s signals a major transformation in production, the expansion of communication technologies and the enlargement of intellectual procedures, which requires “subjectivities that are rich in knowledge” (Lazzarato, 1996, 134). Michael Hardt and Antonio Negri speak (with a big dose of exaggeration, forgetting the huge amount of manual labour which is still used for handling the means of production) about the immediately social and common character of modern labour: “all forms of labour

are today socially productive, they produce in common” (Hardt & Negri, 2004, 106). They claim that, from a quality point of view, immaterial labour prevails creating the “immaterial products, such as knowledge, information, communication, a relationship, or an emotional response” (Hardt & Negri, 2004, 108). Despite the fact that immaterial labour does not yet prevail, from a quantitative point of view, it nevertheless sets the pace for the evolution of other forms of labour, which must become intelligent, communicative, affective (Hardt & Negri, 2004, 109). It is worth noting Carlo Vercellone’s view, who qualifying capitalism as “cognitive”, claims that the determining factor of the system of social production is labour’s intellectual quality, or “diffuse intellectuality”, with the result that the capital – labour relation is marked by the prevalence of knowledge in production, by the ever growing immaterial and cognitive character of labour (Vercellone, 2007, 13-16). This causes great difficulties for the capital, reversing the real subsumption of labour under capital (Vercellone, 2007, 13-16).

It would not be possible, in the present text, to fully analyze the theories mentioned above, against several points of which one could raise critical objections<sup>1</sup>. Importantly however, these theories bring to the fore the crucial tendency for a radical upgrading of the significance of the intellect and knowledge in modern labour, for an enhancement of the latter’s social character and the major difficulties the capital encounters in the exploitation of labour thereof. This upgrading directly influences, in turn, the role of education in the formation of the labour subjects.

Here we should note that the debate on the prospects of a “cognitive society”, from a marxist point of view concerns the detection of the basic trends in the development of labour, of the essential contradictions of modern capitalism and the conditions-

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<sup>1</sup>I consider highly problematic the concept of "multitude" that Michael Hardt and Antonio Negri have suggested. Presenting "multitude" as “an open and inclusive concept”, “an open and expansive network” in which “differences can be expressed freely and equally” (Hardt & Negri, 2004, xiii-xv) Michael Hardt and Antonio Negri fail to define it elementary. "Multitude" is everything and yet nothing concrete. Michael Hardt and Antonio Negri downplay the notion of the working class whose essential opposition to the capital constitutes the determinate relationship of the bourgeois society. Thus, they get away from the cause of class struggle and from the fundamental historical purpose of emancipating labour from the power of capital. For this reason “Empire”, an equally vague social entity, appears in their thought as the opponent to the “multitude”, while the projected objective of the social struggle is the abstract notion of democracy which, devoid of a certain class content, refers to a typical petit-bourgeois perception of state power. The notion of “immaterial labour” introduced by Lazzarato, Hardt and Negri, is equally vague, almost meaningless, and distracts us from the essential distinction between manual and intellectual labour.

In relation to a crucial for post-operaismo notion of autonomy, which refers to the new qualities of the workers as bearers of intellectual activities in post-Fordist economy, I would like to point out that the content of this autonomy may be technical-organizational but not a social-class one. From the moment that we are not dealing with a fully automated production system, so as for intellectual labour to be immediately productive, the latter will have to hook up with the great volume of manual labour which sets the means of production in motion. Intellectual labour is productive only to the extent that it is part of the total socially necessary labour, and as such, is connected with the still large scale of manual labour. Under these circumstances, and for as long as the workers are not in possession of the means of production (for as long as these means are not in a social-socialist ownership), the connection between the workers (manual and intellectual) and the means of production and among the workers themselves as well, is achieved by the capital, acting as an alienated from the wage workers social bond, via the exchange of the wage for the commodity of “labour power”. From this point of view, I conceive the real autonomy of knowledge workers vis a vis the capitalist class, as the liberation of the whole working class from the capitalist mode of production.

possibilities for building an alternative emancipated from class relations and class exploitation socialist society. Departing from that point of view in this paper we are going to deal with the impact the upgrading of the intellectual character of labour in education, while at the same time, attempting to trace the contradictions which govern modern capitalism to the point that the latter tends to become “cognitive”. We shall focus particularly on the Marxian idea of “general intellect”, the content of which we shall try to specify.

### **General intellect and its cultivation**

In the history of humanity, the status of education in social division of labour has been equivalent to the role of the intellect and knowledge in production and to the degree of development of labour’s intellectual character. The most fundamental aspect of education, its most important social dimension consists in the formation of labour’s subject. The humans become par excellence subjects of labour as bearers of knowledge and intellectual abilities and therefore as organizers and directors of production forces and processes. The limited role of education in pre-industrial societies is accounted for by the extremely limited role of science and intellectual activity in the functioning of the production system and to the fact that the vast majority of the workers represent an amount of physical powers used as means for implementing productive aims which are alien to them. In the social formations preceding industrial capitalism, labour was as a rule manual. The use of manual tools required physical effort rather than intellectual activity and mind development. An elementary level of empirical knowledge was sufficient for the necessary labour - related actions, for the construction and use of the manual tools. Young people’s professional training had the character of an apprenticeship, that is, transmission of empirical knowledge to the apprentice by the adults at the work place. Humans learned while working, given that the use of manual tools, apart from some elementary experience, did not require an organized, systematic and methodic training of their personal resources.

The coupling between intellectual labour and material production began with the industrial revolution which initiated the ever-expanding use of scientific knowledge in the planning, production and operation of the means of production. Certainly, at first, there was a great distance separating scientific research from the technological application of its results. However, from the outset there was a constant trend towards reducing this distance. In the system of industrial capitalism however, workers in their great majority are the servants of machines and their activity is restricted to elementary and repetitive movements. Thus, the training of workers in industrial capitalism followed the same pattern and is characterized by the fact it provides the majority of them with a basic level of knowledge, such as reading, writing and elementary mathematics, completed with a necessary vocational training, which is what was required for them to be used as a homogenous and exchangeable human power in the production system.

But in the 20<sup>th</sup> century, the capitalist mode of production entered the stage of an unprecedented intensive development which is closely linked with the dynamic transformation of science into a force of production, with the decisive role scientific research played in technology development, in the organization and restructuring of the character of labour. In the decades of 70’s and 80’s the intensive development of

capitalism is marked by the beginning of informatisation and complex automation of production. These crucial processes coincide with the perspective pointed out by K. Marx in relation to the development of the intellectual character of labour, insofar as the “general social knowledge has become a direct force of production” and “the conditions of the process of social life itself have come under the control of the general intellect and been transformed in accordance with it” (Marx, 1973, 706). The function of general intellect equals to what K. Marx calls “universal labour”: Universal labour is all scientific work, all discovery and invention. It is brought about partly by the cooperation of men now living, but partly also by building on earlier work (Marx, 1981, 199).

Intellectual labour, as universal, relies on general human intellect, on the use of language codes, aesthetic forms, concepts, scientific knowledge. It is carried out by means of “tools” which can be used simultaneously by each individual separately and at the same time belong to all human beings, without ever being alienated by their agents. These “tools” compose the universal wealth of humanity. General intellect is of a social character par excellence. Its formation and development is the work of all humanity, present and past. General intellect is linked with the development of sociality, with the shaping and maturing of social ties among humans. The rise of the general intellect signifies the possibility and the prospect of replacement (under the proper, socialist relations of production) within the production process of the worker’s physical forces by their predominantly cultural-social forces, the prospect of overcoming the separation between physical and intellectual labour, between labour and culture. Workers, as the bearers of general intellect, can be a productive force only as culturally developed personalities. K. Marx traced this tendency noting that the worker

steps to the side of the production process instead of being its chief actor. In this transformation, it is neither the direct human labour he himself performs, nor the time during which he works, but rather the appropriation of his own general productive power, his understanding of nature and his mastery over it by virtue of his presence as a social body – it is, in a word, the development of the social individual which appears as the great foundation-stone of production and of wealth (Marx, 1973, 705).

To the extent that the general intellect tends to become the main production force, the social importance of education is also being upgraded. The latter is becoming the privileged space for the systematic transmission of knowledge as well as that for the nurturing of the general intellect. It is not an accident, that in the developed countries of the globalized capitalist system there is always talk about the necessity for permanent contact with knowledge and life long learning for all. At the same time there is an incremental increase in the number of educational institutes and students.

But what does education mean in the sense of cultivation of the general intellect? Of course it means acquisition of fundamental knowledge about the human world, society and its natural environment. As, however, genuine learning does not consist merely of information memorizing, but is interconnected with specific mental processes of analysis, reflection and understanding of that information, learning is intertwined with exercising and cultivating of the mind. Therefore, the cultivation of the general intellect is connected with the development of the mind’s cognitive capacity so as to be in a position to move beyond sense experience and the

phenomenality of things, to penetrate into their inner relationships, to grasp the determining links between their different sides, to understand the causes for their appearance, evolution and transformation and, of course, to discern the prospects for this transformation. This is about the cultivation of the Reason, the dialectical thought.

At this point however, it should be pointed out that the specificity of education lies in the fact that the humans not only acquire knowledge and mental capacities, but are also conscious of this fact and take active part in the educational processes. Humans as consciousness - bearing agents, know, not merely the objects which are independent from their mind, but also themselves as subjects – consciousness bearing agents, and as such, they do not merely possess knowledge but they can reflect on it deliberately as well, exercise their critical faculty on the content of knowledge and the cognitive process which led them to it, as well as on the ways their intellect operates. On the one hand, consciousness means knowledge and understanding of the world and of the self as an object. On the other, it means knowledge and understanding of the self as a subject, and finally, understanding of the social ties between the self-subject and the other humans -subjects<sup>2</sup>. Such an understanding of the self is identical to the awareness of his sociality, the social essence of every individuality. It means also the ability to reflect upon the social consequences of every individual's acts, feelings and thoughts, so that he/she is in a position to assume responsibility for the objectives and content of his/her life. It can be said that a developed consciousness characterizes the individual who is in a position to reflect from a social view point on his/her life and activity and to grasp the social significance of the manifestations of his/hers existence. I consider therefore, that the general intellect which refers to the specific “means” of intellectual labour, ought to be interpreted as social consciousness. Humans know and reflect upon the world in their quality of a consciousness-bearing agents. Social consciousness is the general, par excellence, “means” of intellectual labour, which, at the same time, is the “property” of every distinct individuality and of humanity at large.

Every human being as a consciousness-bearing agent and to the extent that he/she acts consciously is defined as personality. According to V.A Vazjulin's definition “Personality is the human as an internal unity between the social and the individual...” (Vazjulin, 1988, 195). Personality, in its most developed form, refers to the individual whose vital activity emanates from the understanding of his innermost and necessary tie with the other human beings and is a conscious activity “for the sake of social interests, for the sake of humanity...” (Vazjulin, 1988, 198). Given that consciousness does not exist independently from the body, from the physical individuality of humans, we can claim that the subject of knowledge is man as personality, as socialized individuality. Every human being perceives the world through his/her personality. All the aspects of personality, physical and social ones (idiosyncrasy, feelings, intelligence, the moral stance, the aesthetic ideals, the personal view of the meaning of life) partake of the cognitive process<sup>3</sup>.

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<sup>2</sup> “Consciousness per se, in contrast to science and in general to the knowledge, to the cognitive process, is destined to regulate the relations among humans as subjects and this fact presupposes also necessarily the relations among humans as consciousness bearing agents” (Vazjulin, 1988, 157).

<sup>3</sup> “Whatever I know I know with my entire self: with my critical mind but also with my feelings, with my intuitions, with my emotions” (Freire, 1998, 29-30).

Precisely because man knows the world through his personality, his education is, to a large extent, determined by the degree to which he is conscious of his social bonds with other people, of the social essence of his individuality. The significance of education for every individuality is defined by his/her social position in life, by the social content which gives meaning to his/her life. If education is about the cognitive assimilation of humanity's achievements and of the social modes of activity, then the individual's interest for knowledge, the range and duration of his/her educational endeavors correspond, in general, to the authenticity and depth of his/her interest in humanity, in the needs, problems, achievements and prospects of society. At this point emerges the importance of the conscious elements of learning (moral attitudes, perceptions of the meaning and purpose of life, ideals) which shape the framework for the quest and evaluation of the social importance of knowledge. In this respect, education means of course the shaping of universal capabilities of the mind but also the development of the forms of social consciousness (its ethical, aesthetic and philosophical forms), the formation of humans as personalities.

The cultivation of social consciousness and the formation of personality as key elements of education render the pedagogical relationship indispensable, given that intellectual faculties and forms of social consciousness can only develop through the interaction of personalities. Only within the pedagogical relationship, as experience of emotional communication, moral bond, dialectical - collective thinking does the fundamental development of the mind and consciousness become possible. Education, as pedagogical relationship, is intricately associated with the educators' necessary role, as people who do not merely transmit information, but contribute with all the aspects of their personality to the shaping of their students' consciousness and personality. Taking into account that educators' work involves using the general intellect, which means the activation not only of their knowledge but of the whole content of their consciousness, of all the cultural wealth of their personality (feelings, mental capabilities, moral principles, aesthetic ideals, philosophical worldviews), for the success of their pedagogical work, it becomes necessary for them to develop as bearers of the "general intellect", as personalities. The fundamental development of educators' general intellect (consciousness) is of paramount importance to the successful accomplishment of their mission.

### **The specificity of the ability to intellectual labour**

But how can reproduction and development of the general intellect (consciousness), as the fundamental labour capability of educators, and all other knowledge workers be achieved? In cases of manual labour there is a clear distinction between labour time, during which the labour power is spent, and leisure time, during which this power is restored. Labour time is a key factor for the capitalist exploitation of labour power, in the sense, that on the one hand, the length of the working day must be extended to a maximum level (production of absolute surplus-value), and that on the other hand, the time necessary for the production of means required for workers' individual consumption must be continuously reduced, and the value of the labour power be also reduced thereof, so more surplus-value will be produced per unit of labour time (production of relative surplus-value).

Under the conditions of industrial capitalism, the dominant rule for the overwhelming majority of manual workers is the mere reproduction of their labour power in order to

serve a mechanized production system, providing extremely meager possibilities for its qualitative, cultural development. The workers' leisure time is dedicated to this very end. The exploitation of manual labour in the industrial capitalism economy is not associated with the need for real cultural development of the workers, neither in labour nor in leisure time. The reproduction of the spent labour power is of a consumerist character. In most cases it is connected with the absence of activity, with passive consumption and not with engaging in creative activities<sup>4</sup>.

Things however change drastically upon emergence of the general intellect as a fundamental element of modern workers' labour power. General intellect or peoples' consciousness, while to a certain degree depends on the terms of individual consumption, on the satisfaction of biological needs, it is mainly formatted and developed within the very processes of its activation – application. Individual consumption constitutes the physical condition of general intellect. On its own however, it cannot create or develop general intellect. The formation and development of general intellect is associated with the various versions of intellectual labour and cultural activities of people and is decisively determined, not in terms of rest (i.e. absence of activity) but, on the contrary, in terms of labour – activity. The intellectual capabilities required for the creation, transmission and application of knowledge are formatted and developed in the course of the intellectual – cognitive activity itself. Furthermore, the formation and use of these capabilities can not be restricted within specific labour time limits. General intellect is present, in different ways, in the whole scope of every day human activities and social relations, the quality of which impacts its efficiency decisively. New research hypotheses and ideas, original theoretical conclusions may appear at any time, often quite unexpectedly. Here, the traditional juxtaposition between necessary labour time and free time, between labour and leisure practically becomes devoid of meaning<sup>5</sup>.

Thus, intellectual-cognitive activities cannot be measured by labour time. Intellectual work cannot be restricted within specific time limits as it cannot be evaluated by quantitative indicators and be remunerated by their money equivalent. In such a case, productivity is not determined by labour time, by the volume of abstract labour spent within a given period of time. Production intensification and control over workers' personality necessary for its accomplishment not only they don't develop the general intellect but they cause its ultimate degradation and consequently destroy its efficiency. General intellect effectiveness - "productivity" is determined not by the conventional length of the working day, but by all the conditions under which consciousness functions, by all the conditions under which formation and development of the individual personality take place. It is determined, in other words, by the totality of the moments of social life.

It must therefore be emphatically pointed out that cognitive labour (scientific, educational etc), in order to be effective, it must take place in conditions that are

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<sup>4</sup> As David Riesman put it, "leisure itself cannot rescue work, but fails with it, and can only be meaningful for most men if work is meaningful, so that the very qualities we looked for in leisure are more likely to come into being there if social and political action fight the two-front battle of work-and-leisure." (Riesman, 1989, lvii).

<sup>5</sup> As Maurizio Lazzarato notes, in this case "it becomes increasingly difficult to distinguish leisure time from worktime. In a sense, life becomes inseparable from work" (Lazzarato, 1996, 138).

beneficial for the manifestation and development of general intellect, in the optimal working and living conditions for the growth of the worker's personality. This means that labour as a general intellect activity, is by definition opposed to the worker's alienation from the conditions, means and processes of his/her labour activity. In other words, knowledge workers' labour and living conditions must be so structured as to favor full activation and cultivation of their sensibility, intuition, imagination, their analytic, systematic and synthetic capabilities, all forms of their consciousness and sociability and give full satisfaction to their inner need for creative activities.

The rise of general intellect is connected with the necessity to shift the interest from the results of labour to the labour process and to the self-realization of human beings within it. But this means focusing on the development of workers as the highest purpose of labour and social life. This stance entails a radical change in the relationship between living and dead labour. In capitalism dead labour, as accumulated labour – as capital, prevails over the living labour. The latter becomes the medium for the accumulation of dead labour. On the contrary, labour emancipation means that the living labour activity, as a free – creative activity, becomes an end in itself for the workers. It is here necessary to note that the expansion universally of labour as a creative activity in a society of comradeship relations would effectively mean the transcendence of labour in the traditional sense of the term, i.e. as we have known it so far in the history of society.

Labour for workers has so far been a painful, oppressive obligation. In the history of class societies the meaning of labour for the workers themselves and for their exploiters especially has been judged solely on the basis of its results and the degree of their appropriation. However, labour as an aim in itself becomes culture, is identified with all the activities which lie beyond the boundaries of material necessity and have the purpose to reveal and develop human creativity. As culture we can define labour which has been rid of utilitarianism, the requirements of physical needs and has become a moral satisfaction, an aesthetic and intellectual enjoyment; it has acquired in other words a formative – educational dimension for the humans. Here we are referring to the par excellence Marxist perception of the genuine human activity, the one that is suited to free individuals and is conducive to the actualization of their powers, satisfaction of the inner impulse to create in freedom from immediate need (Eagleton, 1990, 204). Victor A. Vazjulin, in his theory of communism, defines as culture the mature social labour which has become an end in itself for all humans:

labour as an end in itself, labour for the satisfaction of inner physical and spiritual needs under the laws of truth, goodness and beauty, is no more labour but culture in its multifaceted action, the life of culture in its fundamental manifestations, a multidimensional cultural activity (Vazjulin, 1988, 307).

But where does human's innermost need for labour in the form of creative activity originate in? I consider that this need relates to what Abraham Maslow calls "the self-actualization need", that is the intrinsic tendency in humans to become actualized in what they are potentially, to manifest and develop their special characteristics. Self-actualization means to become everything that one is capable of becoming. The inner need for self-actualization relates directly to general intellect activities, various forms of intellectual, research, scientific labour and manifests itself as a desire of original



thinking, of a novel intellectual quest and exploration of new phenomena (Maslow, 1987, 130,161). In the core of this tendency for self-actualization lies the cultural potential of humans, that is, knowledge, intellectual and practical capabilities, acquired via education primarily, but also via social life experiences at large. The educated – cultivated individual perceives the totality of his/her acquired capabilities as an inner need for their activation, manifestation and further development. This is a man who is “as rich as possible in needs” because he is “rich in qualities and relations” (Marx, 1973, 409). As K.Marx points out, “The rich human being is simultaneously the human being in need of a totality of human manifestations of life – the man in whom his own realization exists as an inner necessity, as need” (Marx, 1977, 89).

Thus, the more authentically and universally an individual is educated, the more developed his/her cultural needs and primarily his/her internal need for creative activity are. At this point however, it should be noted that the internal need for self-actualization, for creative labour (and of course for creative intellectual activity) must not be perceived as an egoistic endeavor for self-gratification. Self-actualization ceases to be authentic when it becomes a purpose in itself, when it is manifested as an individualistic interest (even if it is of a cultural-educational content) which takes precedence over the collective-social interest and may lead even to conflict with the latter. Abraham Maslow states that “Self-actualizing people have a deep feeling of identification, sympathy, and affection for human beings in general. They feel kinship and connection, as if all people were members of a single family” (Maslow, 1987, 138). From this point of view it is worth mentioning Victor E. Frankl’s idea that the real meaning of life does not lie in “self-actualization”, in the self-centered meaning of this concept, but in the “self-transcendence of human existence”, in the dedication of individual existence to something outside the self. In V.E.Frankl’s words,

being human always points, and is directed, to something, or someone, other than oneself – be it a meaning to fulfil or another human being to encounter. The more one forgets himself – by giving himself to a cause to serve or another person to love – the more human he is and the more he actualizes himself (Frankl, 1992, 115).

Based on the above we can conclude that the strongest motivation for the general intellect activity, except for the desire to exercise the individual cultural potential, clearly is the desire to serve collective needs and purposes, the pursuit of collective, social progress. Here, the individual’s sociality and morality, his/her conscious dedication to other individuals and to humanity, shaped through the experiences of social life, are manifested as his/her strongest innermost impulse for creative activity. Obviously, such an attitude is possible only when the formation of the individual’s personality and his/her activities take place within social relations of comradeship and solidarity.

### **The rise of general intellect and the contradictions of cognitive capitalism**

The emergence of general intellect as a force of production upgrades significantly the importance of education and of educators for the cultivation of students’ consciousness and personality. At this point it should be stressed that the work of educators constitutes an activity par excellence of general intellect - of consciousness. Educators work precisely as bearers of knowledge, feelings, mental capabilities, moral

principles, aesthetic criteria, philosophical worldviews, social ideals etc. Therefore, educators are intellectuals by definition.

The definition of educators as intellectuals is connected with the necessity for them to reflect upon the social, political, institutional - organizational conditions and the cultural, cognitive content of their work, to be able to combine theory and practice achieving a real control over the purposes and conditions of their activity, on principles and processes of the curriculum, at the service of the students' growth as personalities (Giroux, 1988, 9, 126). Educators are intellectuals, by definition, (but unfortunately not always in esse), not simply because they are bearers of a certain knowledge, but because in order to teach it they need to deeply understand and critically evaluate its content. In order for someone to teach, he/she must be in a position to reflect upon the dominant forms of knowledge in relation to the whole reflection upon social reality (on the needs, problems, contradictions of the epoch) and to the comprehension of the personalities he/she teaches.

Being a relationship between subjects, the educational process forms not only the students but the educators as well. Its success which consists in the growth of the students as personalities is feasible only if it is accompanied by the growth of the educators' personality. Educators' work, like every work relying heavily on the general intellect, is decisively determined by the extent to which labour conditions are favorable to the development of their intellect – consciousness and the degree to which they are conducive to their self-actualization. As optimal conditions for the fruition of the educational work are reckoned those that assure its realization on the basis of the principle of creativity: of the strongest possible manifestation and cultivation of the educators' intellectual capabilities and wider cultural wealth of their personality<sup>6</sup>. Therefore, if education is a determining field for the formation of multifaceted developed personalities, of both students and their teachers, then its most fundamental element appears to be that of solidarity and cooperation between the two sides, the development of a deeply moral relationship between teachers and students. As Paulo Freire put it, "Education must begin with the solution of the teacher –student contradiction, by reconciling the poles of the contradiction so that both are simultaneously teachers and students" (Freire, 1972, 46). So apart from its purely cognitive aspects the authentic education as a highly communicative activity, as a par excellence moral relationship, consists in the cultivation of sociality of students and teachers, in the development of their social essence and of the forms of consciousness which are the psychic –ideal expression of this essence.

Taking into account the above assumptions, *we* can claim that the educational activity, like any other activity relying on the general intellect, is by its "nature" opposed to the relations and practices of alienated labour. This is however, where we encounter the inevitable contradictions of capitalism, which make up its essential relations and indicate their limits. The contradictory character of modern bourgeois society lies in the fact that, on the one hand, the conversion of scientific knowledge into a direct productive force greatly upgrades the significance of education in social life, rendering continuous learning necessary. On the other hand, from the moment that the

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<sup>6</sup> bell hooks claims that "teachers must be actively committed to a process of self-actualization that promotes their own well-being if they are to teach in a manner that empowers students", (hooks, 1994, 15) and therefore, they have the "responsibility to be self-actualized individuals" (hooks, 1994, 16).

workers become alienated from their own labour capabilities, their work does not belong to or serve them, become also alienated from their education, in the sense that the acquisition and use of knowledge and qualifications is determined, in principle, by the capital's needs and not theirs. The limit of humans' education, as wage workers in the capitalist society is their formation as bearers of the commodity "labour power". Any education, cultivation or growth they may have is subjected, more or less, to the necessity of forming a tradable labour power, i.e. a series of capabilities and skills which must be useful to the capital.

While scientific – technological progress marks a trend towards a significant increase of workers' leisure time, under the conditions of capitalist production relations, this trend takes on the bleak dimension of a fast growing mass unemployment (in its many obvious and hidden forms), which, on the one hand poses a threat to the very sustenance of people, and on the other, in the case of protracted deprivation of a labour activity and labour relations, it entails painful frustrations, loss of meaning of life, decay of the consciousness and personality. Life-long learning under these circumstances is tantamount to a life-long agonizing effort to ensure the tradability of ones' labour capabilities which become fast obsolete as a consequence of permanent scientific – technological reversals. However, under the dominance of the modern global capitalist market no one is in a position to know which special skills will maintain their exchange value and which ones will lose it, while a large number of those who have academic degrees are faced with the imminent threat of losing their jobs.

In the so-called post-Fordist reality of continuous technological – productive innovation, fierce global competition between multinational corporations, neo-liberal generalized deregulation of the economy, the utmost shrinking of public goods, the precarious employment and the decadence of relationships and collectivities humans' sociality itself shrinks and becomes distorted<sup>7</sup>. The outcome of this is that social consciousness, the psychic forms in which social bonds are reflected are seriously undermined and destroyed<sup>8</sup>. The global domination of marketization, economic and social antagonism, the absence of clear life prospects, the loose and fleeting social ties, all contribute to the formation of a very fragmented consciousness. People trapped in the routine of modern capitalism, are more and more at a loss how to form a concrete and integral image of the world and equally at a loss how to place themselves in it, to acquire self-knowledge. Richard Sennet refers to the "corrosion of character"<sup>9</sup>. When life crumbles in short term activities in conditions where

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<sup>7</sup> It is interesting that while several capitalist firms recognize the importance of collective labour and communication skill development of the workers, at the same time they foster competition among them undermining the creation of genuine collectivities. The workers are expected to have a collective behavior, but they experience stress and anxiety in conditions where "the line between competitor and colleague becomes unclear" (Sennett, 2006, 52-53).

<sup>8</sup> Ulrich Beck makes an interesting observation saying that "As people are removed from social ties and privatized through recurrent surges of individualization, a double effect occurs. On the one hand, forms of perception become private, and at the same time – conceiving of this along the time axis – they become *ahistorical* ... the temporal horizons of perception narrow more and more, until finally in the limiting case *history* shrinks to the (*eternal*) present, and everything revolves around the axis of one's personal ego and personal life" (Beck, 1992, 135).

<sup>9</sup> "A pliant self, a collage of fragments unceasing in its becoming, ever open to new experience – these are just the psychological conditions suited to short-term work experience, flexible institutions, and constant risk-taking" (Sennett, 1998, 133).

everything seems uncertain, alien and threatening, the general picture of the reality formed by the everyday consciousness can only be chaotic and irrational. While the bourgeois society proclaims its loyalty to science, at the same time it fosters the widespread of an irrational consciousness.

Of course, the capitalist society rationalises various spheres of the system of production and of social life. It uses scientific knowledge and technological applications in a wide range of human activities, and aims at fostering through education a rational, calculating mind, so that people are able to handle technical means in order to live in a cultural environment that requires precise actions based on specific, logical links and rules. At the same time, the capitalist society through the global, unregulated, antagonistic and destructive movement of its economic forces reproduces in an ever larger scale a universally irrational reality within which it becomes increasingly difficult to understand the fundamental interactions between aspects of the system, the laws regulating social relations<sup>10</sup>. So the various rationalizations of the capitalist economy and society coexist with universal irrationality reflected in a spontaneous and widespread irrational everyday consciousness. That is why, quite often modern individuals are in a position to make decisions concerning particular issues of their life on the base of a technical rationality, using parts of scientific knowledge and at the same time they adopt irrational beliefs about society and the world as a whole, about the universal forces and laws that govern their lives. From this point of view the triumph of scientific rationality and of scientific education in modern capitalism, which seems to be the catalytic triumph of the spirit of Enlightenment are accompanied by their total defeat. It must be emphatically stated that the decline of social ties, the destruction of sociality entail inevitably the destruction of consciousness, of the general intellect, which is something that undermines the formative potential of education.

The decadence of education in modern capitalism, which claims its “cognitive” nature, is further aggravated by the decadence of the educational institutions, to the extent that they are alienated more and more from the needs of society, being subjected to the needs of capital. A crucial aspect of this process is the conversion of education into a series of tradable services and the restructuring of public educational institutions into independent market agents competing with each other in order to increase their client base. This is exactly the quintessence of the neo-liberal educational strategy (Hill & Kumar, 2009).

The result of the neo-liberal deformation of education is an ever growing alienation of educators from their work due to the bureaucratic control exercised over it. The implementation of educational work is increasingly distanced from its planning which is made over to administrative bodies – taken away from the educators. Standardized teaching models with detailed outlines of duties and tasks are imposed on the teachers, greatly restricting their capacity for initiative taking (Apple, 2000, 113-136). Apart from that, in the name of educational services’ quality assurance, educational institutions and teaching staffs are submitted to a continuous supervision –assessment of their work, thus coerced into a competitive performance race, the results of which

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<sup>10</sup>Georg Lukács refers to the characteristic of capitalist society coexistence of particular rationalizations with the irrationality of its totality: “The capitalist process of rationalization based on private economic calculation requires that every manifestation of life shall exhibit this very interaction between details which are subject to laws and a totality ruled by chance” (Lukács, 1971, 102).

determine, more or less, their funding and employment prospects. Of course, employment conditions of educators in all grades are characterized by their growing destabilization, occupational insecurity and important pay cutbacks (Hill, 2007, 86-89). It should be pointed out that the more antagonistic and estranged the teachers become among themselves, the more the aggravation of their professional insecurity and anxiety, the more the margins for real collegiality and cooperation shrink as well as those of mutual enrichment via an exchange of their ideas and knowledge. As Andy Hargreaves notes, “competition prevents schools and teachers from learning from one another. People keep their best ideas to themselves” (Hargreaves, 2003, 168).

The dominant forms of assessment of educational workers and institutions in many aspects manifest the capitalist ideology which sees in the abstract quantitative evaluation of their performance the decisive driver of educational progress. The evaluation as quantitative assessment of the intellectual, educational labour indicates the treatment of this kind of labour as part of the universal form of abstract labour, indicates the abstraction from any elements of specificity and uniqueness of the intellectual-educational labour, reflecting the diverse socio-cultural conditions in which it occurs and the particular personalities involved in it. Owing to the fact that the creations of general intellect (scientific theories, philosophic worldviews, aesthetic forms, educational programs) reflect the uniqueness of consciousness, the specificity of the personality of their creators, they are inherently unique and despite their many common points, they are inherently non-comparable. Their "value" lies precisely in their originality rather than in their uniformity. Subsequently, their creators can not be treated as comparable and exchangeable, as mere agents of abstract labour.

Based on the above we can claim that the rise of the general intellect in the contemporary capitalist system signals and accentuates an insurmountable contradiction. On the one hand, the more this system is obliged to use knowledge and intellectual labour for material production, the more it must ensure the best possible conditions for the development of the personality of knowledge workers, scientists, artists and of course educators. It must also ensure the proper conditions for the development of the overall cognitive powers of society, given that scientific and technological progress in our times is not the affair of some individuals alone, but depends on the overall educational – cultural level of a society and on the overall state of social consciousness. The conversion of general intellect to a direct productive force makes necessary a life-long multifaceted education and development of every human. Of course, a task of this magnitude would require the corresponding radical restructuring of labour relations and social relations at large in a collaborative-comradeship way. To the extent however that the capitalist society will remain capitalist, founded in the law of capital accumulation, i.e. exploitation of wage workers, treated as the means to produce surplus-value, it will inevitably continue to undermine the development of their personality, reducing the possibilities for them to reveal and exercise their creative capabilities. The dominant relations of alienation and competition bring about a decline in people’s sociality, their general intellect-consciousness, and hence a decline of their creativity.

The rise of general intellect is indicative of the trend towards the maturing of the social character of labour. In its technical dimension the mature social character of labour is defined by the automation of production, by the elimination (or at least by

the great reduction) of the direct physical involvement of humans in the production process as servants -operators of hand tools and machines. In its human dimension the mature social character of labour is defined by replacing the worker who is the bearer of primarily physical forces and skills by the worker who is the bearer of general intellect, social conscience and is involved in production as a collective director of automated means of production, and of production processes.

The rise of general intellect in modern capitalism points at and brings to a culminating point the fundamental contradiction between the maturing social character of labour and the yet dominant capitalist exploitation of it. As opposed to manual labour, which through various forms of control over the worker's body could be carried out in conditions of class exploitation and yet be relatively productive, intellectual labour in its authentic and permanently improving version, as a par excellence social, collaborative, creative activity exceeds the limits of class exploitation and alienation of labour. When this kind of labour is performed under conditions of exploitation, then it inevitably loses its qualities. Intellectual labour (including educational labour) in a knowledge society means labour of emancipated workers, linked together by bonds of comradeship and solidarity. In human history until now the development of the system of production has been connected with the sacrifice and destruction of a large part of workers' forces and abilities, the distortion of their personality. Now, in conditions of the dynamic development of the intellectual - social character of labour the only way to social progress goes through the radical change of social relations, the creation of an emancipated classless society in which "the free development of each is the condition for the free development of all" (Marx, 1986, 53).

The last global economic crisis having catastrophic consequences for the working class, including a significant proportion of knowledge workers, condemning them to unemployment and poverty, further promoting flexible employment relations, privatization of all public goods (including education), further undermining the social relations, causing enormous damage on peoples' consciousness, proves the impossibility for capitalism to become an authentic cognitive society. Therefore we should underline that the fundamental interests of knowledge workers, as bearers of the most developed form of the social character of labour, stand in an inescapable opposition to the dominant capitalist relations of production. Awareness of this opposition on behalf of knowledge workers (including educators) would mean their crucial, for the prospects of class struggle, conversion from class in itself to a class for itself and for all humanity. This requires the awareness by them of their social interests as identical with the general class interests of the people of wage labour, with the objective of universal social emancipation from all forms of class exploitation and alienation. The prospects for the rise of a genuine cognitive society are now definitely connected with the great cause of transgressing capitalism towards the socialist reconstruction of all human relations.

### **Author Details**

**Periklis Pavlidis** is an Assistant Professor in Philosophy of Education at the School of Primary Education, Aristotle University of Thessaloniki, Greece.

**E-mail:** ppavli@eled.auth.gr

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