

Global Capital, Abstract Labour, and the Fractal-Panopticon

Massimo De Angelis

Introduction

The main underlying thesis of this paper is that the realm of capitalist work has not declined with the emergence of the neoliberal form of global capital, but has increased.¹ This statement must be qualified. First, by work I mean here what Marx called "abstract labour", which he defines as "human labour power expended without regard to the form of its expenditure" (Marx 1867: 128). In another paper (De Angelis 1995) I have argued that this aspect of work in capitalist societies is alienated, imposed and boundless in character. Also, it includes both waged and unwaged forms and it is a site of struggle. Second, because of the contested nature of abstract labour, its "imposition" must take place within a strategic framework.

In the next section I discuss the main features of this framework in terms of the "fusion" of two systems: the market order as conceived by neoliberal economist Friedrich Hayek, and the panopticon as conceptualised by Jeremy Bentham. The result of this "fusion" is the planned architecture of a "fractal-panopticon", a mechanism to extract labour from the entirety of the social field. I then proceed to illustrate how some recent trends in the global economy, namely international trade and foreign direct investment (FDI), can be conceived in terms of this mechanism, and how the latter is rooted in struggle. Finally, I conclude with some remarks regarding the constitution of subjectivities beyond abstract labour and the global fractal-panopticon.

The Market Order and Work: the Fractal-Panopticon

The movements of the 1960s and 1970s resulted in a great exodus from the confinement of authority, in the factory, in the school, in the home. Refusal of work, understood as refusal of activity imposed by an authority posed outside the subjects of the doers, forced capital to deploy strategies aiming at co-opting the subjectivities constituting this exodus. As the struggles of the thirties forced capital to recuperate workers' demands in the form of Keynesianism, the neoliberal strategies of the 1980s and 1990s attempted to recuperate the refusal of work of the 1970s by encouraging "flexible" forms of work on the entire social field.²

Neoliberal strategies promoted by states (Cornerhouse 1998), and based on a programme of new enclosures³, increasingly acted as a compulsive force that aimed at providing a competitive framework of social interaction at a global level, not only in the traditional spheres of industry, but also in several other social fields such as health, education, and in the production and access of "public goods".

What is the relation between widespread competition and capital's imposition of work? What is the consequent vision of human sociality embedded in neoliberal strategies? To address these questions is to capture the role of both waged and unwaged labour within the global circuit of social production and reproduction. But in order to recognise this role, we must try to identify the general characteristics of this global circuit, of this mechanism that promotes and lives on human competition.

I suggest an interpretative framework of the modern market mechanism in terms of the fusion of the insights of two champions of capitalist work: Friedrich Hayek and Jeremy Bentham. The market — as viewed by Hayek — and the panopticon — the confinement house designed by Bentham — seem at first to inhabit two different universes. The first one is the galaxy of freedom, the order of a *cosmos*, kept alive as an unintended result of the interaction of choices freely made by individuals. The other is the constellation of dungeons, the *taxis* designed by the freedom of the planner that hold with a grip the lives of the subjects of the plan and who has a project in mind and wants it to put it to work. Hayek, the paladin of market freedom and spontaneous order, has no kind words for Jeremy Bentham and his likes, the rationalist constructionists with their designed order (Hayek 1988: 52). I argue however that there is a common theoretical plane between the market mechanism understood in Hayek's terms as a mechanism of co-ordination of individual plans, and Bentham's principle of panopticism, understood as mechanism of discipline, secure management of a multitude and extraction of labour. This common theoretical plane can be recognised once we discard Hayek's metaphysical views on evolution, and compare Hayek's market and Bentham's Panopticism as two given mechanisms, their rationales rather than their genealogy.

Hayek and Bentham

I

Hayek sees the market as a mechanism that fulfils a crucial role, that of co-ordinating individual plans in a context in which first, individuals are private individuals (isolated from each other by social barriers defined by property rights); second, no central authority can ever know *everything* regarding individual's plans and norms of action. The recognition of this space that is not colonisable by a superior authority, — Hayek calls this *tacit knowledge* — is for Hayek the justification (and indeed the evolutionary cause) of a market order, an impersonal mechanism made of abstract rules within which individual subjectivities within society can be co-ordinated. The abstract character of these market rules are, for Hayek, what guarantees individual freedoms.

In Hayek thus, supreme power of control is invested on the market mechanism, in the impersonal machine. This is a necessity due to the inability of any individual (or institution) to co-ordinate individual "efforts" and plans. Individual freedom follows from this individual's ignorance (incompleteness) of social knowledge. Since individuals use far more knowledge than that they have at their disposal, because knowledge is embedded in goods and institutions they knowingly or tacitly use in their daily business, then "general intellect" and social power become a condition of existence of the market:

The sum of the knowledge of all the individuals exists nowhere as an integrated whole. The great problem is how we can all profit from this knowledge, which exists only dispersed as the separate, partial, and sometimes conflicting beliefs of all men (Hayek 1960: 25).

Not only knowledge exists only dispersed. But its resulting praxis is far from being the result of the sum of individual praxis. The social power of the social co-operation of labour is far greater than the aggregate powers of the individuals. The market machine's rationale is to profit from the dispersion, partiality and conflict. This is the core idea within Hayek's liberal philosophy of freedom: the market as an efficient machine co-ordinating individuals isolated by

social barriers (property rights), who are free to choose upon the opportunities offered to them and in turn whose action create the emergent order of the market.

Prices and other market indicators are abstract representations of human activities, opportunities, and expectations. By letting themselves be guided by prices and other market indicators (Hayek 1978: 60, new studies,) people have learnt to substitute abstract rules for 'the needs of known fellows' and for coercive, imposed ends (ibid. 61).

The end result of this market process cannot be judged "by criteria which are appropriate only to a single organised community serving a given hierarchy of ends." Because such a hierarchy of ends is not relevant to the complex structure composed of countless individual economic arrangements" (Hayek 1978: 183). The market order is only a *mechanism*, which cannot be judged on the values of its end results, because it is an impersonal *device* co-ordinating the multitude of ends and plans of isolated private individuals. The market is beyond ethics, and "it does *not* ensure that what general opinion regards as more important needs are always satisfied before the less important ones. This is the chief reason why people object to it" (Hayek 1978: 183).

But if the market order cannot be said to have a purpose, "it may yet be highly conducive to the achievement of many different individual purposes non known as a whole to any single person", thus "it clearly makes sense to try to produce conditions" for its existence (Hayek 1978: 183).

II

Jeremy Bentham's panopticon is another mechanism of co-ordination. The role of "freedom" here is a bit more disguised, because the panopticon is from the start an institution of confinement, and extraction of labour, and one designed explicitly for this double purpose. As it is known, the panopticon is a circular building with at the centre a watching tower with large windows. The peripheral ring is subdivided in cells, each of which has a window facing the outside and one window facing the tower. The light coming from the outside windows therefore, allows the occupants of each cells to be seen as in many little shadow theatres (Foucault 1977), while the inspectors in the central tower, protected by blinds and by an opposite source of light, is at any time invisible to the eye of the occupants of cells.

The cover of the 1787 project boasts the general principle of the panopticon (here called, following Foucault (1977), *panopticism*), which applicability, according to Bentham, is generalisable to any circumstance in which, to use Hayek's terms, individual plans are not matching. What prisoners, workers, poor, "mad" persons, patients, students have in common is the fact that they need to be put under inspection, because their individual "plans" do not match the plan that Bentham has in mind for them. To a variety of degrees, they all share the same desire of *escaping* from the particular confinement in which they are put, and *exercise less effort* in the work that they are asked to perform. Inspection fulfils this double role of security and minimisation of shirking. The innovation of Bentham is in his opinion that the principle of *panopticism* is generalisable to any situation in which "persons of any descriptions" would tend to follow or make plans that do not conform to a given norm, and therefore require to be kept under inspection.

Bentham promises the solution of all problems pertaining to different spheres (health, education, production, economy, crime management, and public finance) through the application of "a simple idea of Architecture!" (Bentham 1787: iii), that is by a spatial configuration of *relations* between bodies, through the arrangement of bodies in space.

This "new mode of obtaining power, of mind over mind, in a quantity hitherto without example" offered by the panopticon, is based on a simple principle: "the *centrality* of the inspectors situation, combined with the well known and most effectual contrivances for *seeing*

without being seen.” (Bentham 1787: 21) This immediately introduces a quality in the relation of power. Power is exercised not so much by the actual presence of the inspector over the inspected. The inspected does not need to *have full knowledge* of being inspected and the inspector *does not have full knowledge* of the plans and behaviour of the inspected. In fact, this "ideal perfection" is not possible, because it "would require that each person should actually be . . . constantly . . . under the eyes of the persons who should inspect them." Thus, "this being impossible, the next thing to be wished for is, that, at every instant, seeing reason to believe as much, and not being able to satisfy himself to the contrary, he should *conceive* himself to be so.” (Bentham 1787: 3)

This situation would enable “the *apparent omnipresence* of the inspector . . . combined with the extreme facility of his *real presence*” (Bentham 1787: 25). The *conception*, rather than the reality, of constant surveillance is what gives the inspector a god-like character (omnipresence). To paraphrase Hayek, Bentham knows that the individual in authority — in the name of the inspector — cannot have full knowledge of the inspected, his actions, and his plans. But Bentham uses an architectural design to reverse this potential ignorance and turn it into a potential knowledge to the inspector's advantage.

III

There are striking similarities and complementarities between Hayek's and Bentham's systems. While Bentham's panopticon is a closed system, clearly limited in space, Hayek's market order is an open one, which spans over the social field without inherent limit. Yet, Bentham micro-technology of power is generalisable thanks to the *modular* properties of the Panopticon, which allow a series of watchtowers to be integrated so as to control larger areas (Bentham 1787: 18). Hayek's market on the other hand, is the representation of a social organism, but one whose dynamics of interactions among individuals is particularisable to any area of the social field, as demonstrated in the last three centuries of commodification of many spheres of social life and its recent intensification. Therefore, though their starting sphere of application is different, the two systems can be imagined as 'convergent'.

Also, the striking similarity between the two orders is that both rely on individual freedom understood as free choice from a *given* menu. While this is obvious in Hayek's market order, it is not immediately so in Bentham. However, this is the case for both inmates and "inspectors". Let us take the inmates. Letter 13 titles "on the means of extracting labour." These means are based on putting the prisoners in condition to exercise a *choice* and therefore to reap a reward.⁴ Here, individual freedom of choice disconnected, as in Hayek, from the collective freedom to choose the constraints of that choice, amounts to a *means* to extract labour!⁵

Another example is the co-optation of the unwaged work of the inspector's family which according to Bentham would increase the "inspector force", or productivity of power.⁶ This unwaged work by the inspectors' family members is one which is unintended, exercised by free individuals operating within a *context* that has been designed for the purpose of surveillance *and* labour extraction.⁷

In both Bentham's and Hayek's order, power's knowledge of individual actions and plan is not perfect, and both orders' rationale is to tap into this knowledge. In both cases, this co-optation of knowledge and choices is at the basis of the system's maximisation of efficiency. Within their respective orders, power's acknowledgement of imperfect knowledge becomes an opportunity to profit.

In both Hayek and Bentham we have a clear emphasis on the management of unintended consequences of given parameters, rules. Whether these are embedded in a designed architecture (Bentham) or the (naïvely believed) product of a evolutionary order (Hayek), the point that interest both is the resulting system-like mechanism of co-ordination. The system-like co-

ordination can emerge only if the individuals are allowed a sphere of freedom within which to operate. For both Bentham and Hayek this mechanism is rooted on a system of individual free-choice, but individual free-choice always comes with a rigid *given* set of “constraints.” In the microcosm of Bentham’s Panopticon, this constraint is the result of an ingenious project. In the organic system of Hayek’s market, constraints are believed to be the result of “evolution”, while we know this evolution is the end products of power relations defining property rights. Yet, in both cases, individual freedom is the main condition for the system to operate at maximum regime and turn out “individual plans” into social efficiency.

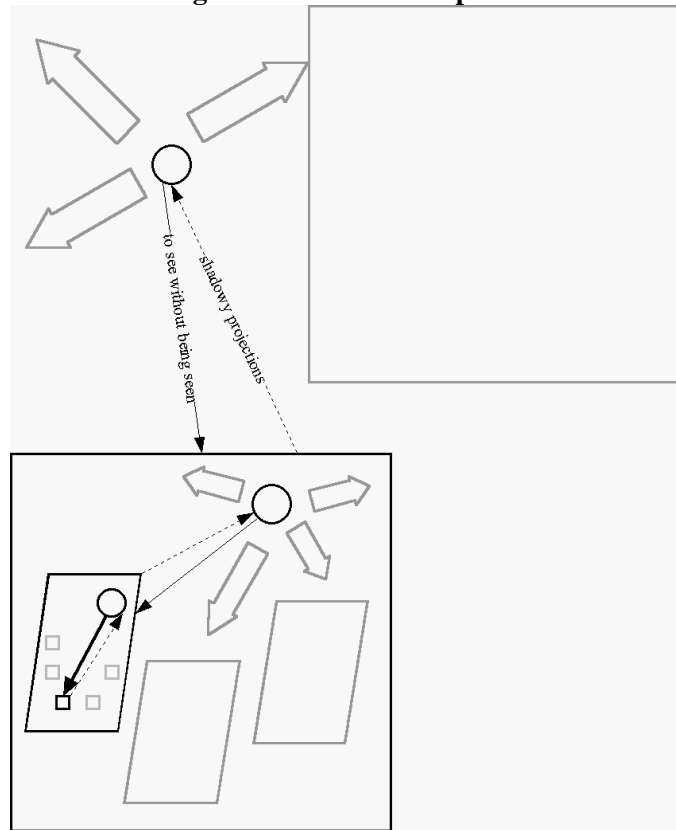
Another similarity is the notion that the co-ordinating power, the one that distributes punishments and rewards to individual singularities, is invisible. In both cases, there is an automatic mechanism that co-ordinates individual subjectivities, and in both cases the latter do not relate to each other *directly* but through the mediation of other things. In the case of the panopticon, it is the central power of the inspectors' apparatus that mediates between individuals and thus co-ordinates the division of labour of a multitude. In Hayek’s case, it is the diffused power of money and market indicators that does the mediation.

Finally, in both cases we have individual confinement as a presupposed basis of the extent of their freedom. In the case of the individuals of the panopticon, the confinement is given by physical barriers of the cells of the wall. The purpose of "safe confinement" is to prevent escape and enforce labour. Safe confinement *isolates* the inspected from each other in order to dash their *hope*, and dangerous “concert among minds” (Bentham 1787: 32). In the case of Hayek, the barriers are social, and constructed in the forms of *property rights*. In both cases however, the very existence of these barriers are *naturalised*.

The Fractal-Panopticon

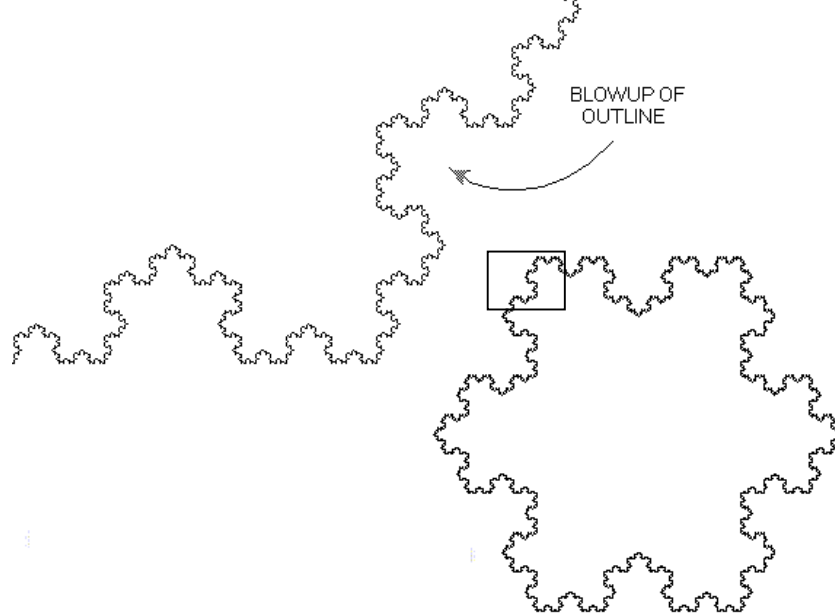
The property of modularity of Bentham’s panopticon opens up an understanding of the current global market order under construction as in fact imbued with the property of *panopticism*. Following Bentham, I understand the latter as a modality of power that rests on the principle of “to see without being seen”, made possible by a flow of information that turns real subjects and activities into *data*, shadowy projections of real subjects. Combining these principles of panopticism with its property of *modularity* and Hayek’s characteristics of the market as co-ordinating mechanism of private individual's actions, we can define the fractal-panopticon as a mechanism of interrelated virtual inspection houses. Each panopticon, that is each set of interrelationship of control and resistance, is in turn a singularity within a series of singularities which stand in relation to a "watchtower" posited outside thus forming a greater panopticon. And so on, in a potentially infinite series. In figure 1, each singularity (individual or set of individuals, such as "firms", sectors, cities, nations, regions, etc.) relates to a “watchtower” which sees, classifies, strike, punish and rewards according to the modality of the market. This "watchtower" is invisible, but its effects are tangible and operate through a process of competition.

Figure 1: Fractal-Panopticon



One of the properties of the fractal-panopticon is that each singularity is self-similar to the other. In the geometrical theory of fractals the property of self-similarity means that every feature of a fractal shape is reproduced by the same ratio in a reduced or blown up picture (see Figure 2). If we reflect upon the vision of the human condition that is derived from neoliberal and globalisation strategies and summarised in the fractal-panopticon, we find an analogous characteristic. Each “scale” of social productive aggregation, (an individual, a “firm”, a city, a district, a country, a macro-region or free trade area) faces strong pressures to turn into a node set against a “rest of the world”. An individual versus other individuals, a firm versus other firms, a city versus other cities, a country versus other countries, a free trade area versus other free trade areas. In the sense of engaging in a competitive race, each social node, each crystallised field of social relations appears as self-similar with respect to the others. At each of these scales, or levels of aggregation, each node has to cope with limited resources (budget constraint) and submit to the rules of a competitive drive vis-à-vis their own “rest of the world”. These limited resources presuppose of course a definition of property rights and states strategies of enclosure analogous in their function to Bentham's safe confinement, which aim at restricting the immediate sphere of action of each productive node so as to preclude other courses of action but the capitulation to and engagement in the competitive game. The pervasiveness of competition to all spheres of life is therefore a force through which people engage into a continuous activity of abstract labour, in both waged and unwaged form, understood as "human labour power expended without regard to the form of its expenditure."

**Figure 2:
The property of self-similarity in fractals**



Some main properties of the fractal-panopticon can be discussed in terms of the following:

1. Operational mode of power: to see without being seen.
2. Real human activity represented through "shadowy projections."
3. Contextual relation between "inside" and "outside".
4. Individual freedom and socially constructed cells.
5. Pervasiveness of the "watchtower".
6. Articulation between control and disciplinary mechanisms.

1. To see without being seen.

The relation between each singularity and a watchtower is constituted by the principle "to see without being seen." In Bentham, this enables "the *apparent omnipresence* of the inspector . . . combined with the extreme facility of his *real presence*" (Bentham 1787: 25). The apparent omnipresence of the inspector is obtained through an act of imagination in which the singularity "conceives" the inspector to be omnipresent. *Fear* of omnipresence is the guiding force of the panopticon's mechanism of control. On the other hand, fear needs to be nurtured by exemplary strike, thus power must show the extreme facility of its *real presence*. The process of competition, combined with the flexibilisation of labour markets and the reduction in entitlements, contributes to the formation of a conception of a pervasive threat and the actualisation of fear.

2. Real human activity represented through shadowy projection ("data").

Power is in the condition to strike when it is in the condition of watching. Shadowy projections represent the flow of information at the disposal of the "watchtower". In Bentham's panopticon,

from the position of the watchtower, the inspector does not have a correct and comprehensive knowledge of the reality of subjects, but one which is sufficient to exercise power upon them. Shadowy projections are edited information of life-activity, and the kind of selection that goes to form that information is what is sufficient to the mechanism of control.

Shadowy projections can take many forms. In Bentham's panopticon, as in the Chinese theatre, they took the form of little human figures projected by an outside light source to the watchtower at the centre of the building. In contemporary capitalism, as in Hayek, they take the form of prices, and, when these are not possible, performance indicators of a variety of kinds that institutions operating in fields such as health and education are increasingly required to adopt. Prices and other performance indicators, embed that kind of edited information that allows an "agent" located outside the singular panopticon, to compare, control, and strike, thus dispensing judgement *and* at the same time, acting as a virtual omnipresent inspector. As shadows, their visibility depends entirely on the real subjects and their life-experience being hidden, but only offer an edited information of real life activity. What is left out of prices is the flash and blood lived experience of work. Prices and performance indicators *are* pervasive and operational simulacra of real life, and represent the interface between one panopticon and another. As devices of "visibility", of representation, of "openness", they project the life-activity within a singularity to the disciplinary force of the outside, a discipline the effect of which is to turn back on the activities of the doers to shape their rhythms of work, to keep the pressure of an endless rat race. Even Bentham (1787: 40), from his late XVIII century perspective, could see the virtues of "open government" of his panopticon, calling for the disclosures of accounts, the possibility of its take over if a different manager could envisage more efficient ways to extract work from the inmates.

3. Contextual relation between "inside" and "outside".

With reference to figure 1, the mechanism of competition vis-à-vis an external "watchtower" — among individuals on the labour market, schools, shop floors, etc. — coexists with a mechanism of discipline and control within each singularity. Thus, each singularity is part of a system vis-à-vis the set of interrelated "watchtowers", and is at the same time a singularity incorporating a "watchtower", an internal mechanism of discipline specific for that singularity. The extent to which external and internal "watchtowers" predominate in specific cases, is a contextual and empirical matter, as discussed in the next section in the case of the relation between externalised and internalised transaction for transnational corporations.

4. Individual freedom.

Unlike freedom in Bentham's panopticon, the individual freedom in a fractal-panopticon is in principle not restricted between work and non work (corresponding to some reward as opposed to "bread and water"), but among a multiplicity of waged and unwaged occupations which however tend all to turn into work because all are regulated within the overall mechanism of the fractal-panopticon. It is as if the individuals being inspected in Bentham's panopticon had also the choice to live their place of confinement, but as soon as they live the front door, they enter another panopticon. It is in this context that we must study the rhetoric of flexibility and the correspondent restructuring of education which aims at teaching students to cope with the demands of the market. Of course, as we have seen, the individual freedom here arises out of a context. In the fractal-panopticon barriers are social, given by property rights, entitlements and the continuous character of enclosures.

5. Pervasiveness of the "watchtower".

The most insidious aspect of the fractal-panopticon is that the material presence of the "watchtower" is combined with its apparent immateriality. It is for this reason that we have put the word in quotes. This is the trick of the market. Once we forget the genealogy and preservation of property rights as a process of enclosures, a genealogy that continuously creates the *context* of competitive interaction within and between different nodes of social fields, all "agents" participating in the framework of the fractal-panopticon are at the same time "inspected" as well as constitutive parts of what Bentham called the "inspector force." In Bentham's panopticon this is the case for the inspectors, which would be in turn inspected by visitors of the premises. However, it is only in the fractal-panopticon that also the lower ranks of the inspected become, through actively engaging in the process of competition, constitute an inspection force.

It is for this reason that a radical process of emancipation from capital's fractal-panopticon as the mechanism for the imposition of work, cannot only be seen as the transcendence of the "watchtower", as this is not constituted independently of the actions of the inspected, as in Bentham's panopticon. To paraphrase Italian Marxist Mario Tronti, the inspected must recognise themselves as part of the inspection force, if they want to counterpoise all inspectors and endless rate races to themselves.⁸

6. Articulation between control and disciplinary mechanisms.

Foucault (1977) pointed out that the polarity punishment/reward embedded in disciplinary mechanisms is a factory of ethics. More recently, several authors have argued that as the confinements of disciplinary institutions was thrown into crisis by the struggles in factories, homes, schools and rice paddies of the 1960s and 1970s, capital was forced to recapture this flight of desire by deterritorialising discipline, and turn disciplinary societies into control societies (Hardt and Negri 2000; Deleuze 1995). While in disciplinary societies individual subjectivities faced a discrete sequence of institutions of confinement, in control societies the mechanism of co-optation is deployed on a continuous basis, with a blurred distinction among institutions.

The family, the school, the army, the factory are no longer distinct analogical spaces that converge towards an owner — state or private power — but coded figures — deformable and transformable. Even the art has left the space of enclosure in order to enter into the open circuit of the bank. The conquest of the market is made by grabbing control and no longer by disciplinary training, by fixing the exchange rate much more than lowering costs, by the transformation of the product more than by specialisation of production . . . Marketing has become the centre or the `soul' of the corporation . . . The operation of the market is now the instrument of social control and forms the impudent breed of our masters . . . Man is no longer man enclosed, but man in debt (Deleuze 1995: 181).

But debt of course is at the same time a form of enclosure, not in terms of physical confinement, but in the original sense of separation from social wealth, a separation that acts as a material force to turn activity into abstract labour and therefore accumulation. All the same, the instruments of monetary economic policies not only attempt to control monetary flows, but reconfigure costs of production over the social field and thus operating as a disciplinary force. Also, as we will see in the next section, in the global fractal-panopticon, the continuous

reconfiguration of global production chains is not simply the attempt to direct flows of subjectivities, but also to discipline them along classic parameters of accumulation and work vis-à-vis their struggles.

In other words, the distinction between discipline and control is not so neat. On the contrary, they are complementary, and always have been in the history of the capitalist mode of production. What changes within this history, is the *form* of their articulation. In cybernetic, every control mechanism is based on *given* parameters, that is norms or, in social sense, "ethics", "values", normalised modes of operations. There is of course a distinction between how these parameters are set, whether from the outside or, as in "learning systems" from within control mechanisms (Skyttner 1996). The ideal within the fractal-panopticon is that only the contextual parameters are set as discrete policies, i.e. liberalisation policies and new enclosures. Then the competitive market mechanism set in place by these parameters, with the help of the enforcement of "law and order", is supposed to normalise, in disciplinary fashion, the cracks arising out of struggles.

Abstract Labour and the Global Fractal Panopticon

In what has now become an often-quoted formulation, geographer David Harvey (1989:284-5) defines the current transformation of global capitalism as the result of "time-space compression". For Anthony Giddens (1990: 64) "globalisation can . . . be defined as the intensification of world-wide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa". These formulations are certainly suggestive but their interpretative framework ignores the centrality of the capitalist relation of work, and the boundless drive of profit making associated to it. If we put this contradictory relation at the centre of our analysis, both Harvey's "time-space compression" and Giddens' "intensification of world-wide social relations" imply the increased pervasiveness of capitalist relations as well as their contested nature. "Local happenings", such as declining wages in manufacturing in countries in the North, are shaped by events happening in distant and remote places, e.g., even lower wages in countries in the South producing the same goods, or producing commodities entering the wage basket of the workers in the North. This aspect of the "intensification of world-wide social relations" is certainly central to the process of capitalist integration in so far as they are "intensification" of capitalist relations of production, which are exploitative and riddled with conflict. In this section I want to illustrate with the case of international trade and foreign direct investments (FDI) how the fractal-panopticon discussed in the previous section becomes operational⁹.

Trends of Trade in Manufacturing

First, we must notice the increase in *international trade in components and semi-processed manufacturers*, the growth of which started in the 1960s and soon overtook world trade. While world trade expanded almost 33% since the 1960s, manufactured goods as a percentage of total world exports increased from 55 per cent in 1980 to 75 per cent in 1990. This aggregate change has also been accompanied by changes in the suppliers of manufacturing goods (UNCTAD 1999b; Propokemko 1997: 11).

The increase in manufacturing productivity, the intensification of patterns of competition and consequent systemic glut in the market has started to have an effect on the terms of trade commanded by manufacturing goods. Between 1980 and 1996, the terms of trade of countries of the South exporting manufacturing (UNCTAD 1999a: tab 2.5) has fallen by 18%. As a result, "many manufactures exported by developing countries are now beginning to behave more like

primary commodities as a growing number of countries simultaneously attempt to raise their exports in the relatively stagnant and protected markets of industrial countries." (UNCTAD 1999b: VI)

The first implication of this trend is a cheapening of goods entering the wage basket of metropolitan workers. From the perspective of wage earners, this has allowed absorbing, at least partially, the effect of the decline in real wages that has occurred through the 1980s and 1990s in several Western countries. In Marxian terms, a greater share of import-consumption is a case of a classical relative surplus value strategy¹⁰ aimed at minimising and bypassing workers' resistance against a reduction in the value of the labour power (Caffentzis 1998). On the supply side, the opening of markets implies the diffusion of the real or perceived competitive threat, and thus, together with other institutional factors, contributes to promote workers' competition among themselves, that in turn again increases relative surplus value. At the same time of course, power relations shaping wages and productivity also greatly depends on the real and perceived *threat* of capital mobility resulting from competitive pressure.¹¹ This threatened mobility can in fact be used as a disciplinary device in wage settlements.

Another related aspect is that in the context of the global market, the increasing importance of export-oriented production allows companies located within national borders room to escape the constraints of workers' domestic purchasing power.

Transnational Corporations and International Trade

Linked to the increase in *international trade in components and semi-processed manufacturers* is the internationalisation of production flows directly managed or at least overseen by big corporate capital. Indeed, another relevant stylised fact regarding trade is that the great bulk of international trade is organised by large transnational corporations (TNCs). According to UNCTAD (1996a), TNCs account for 2/3 of world exports in good and services. Not only, but what acquires importance is the growth in intra-firm trade, which is trading *within* a particular transnational corporation located throughout the world. According to UNCTAD data, in the 1970s, intra-firm trade accounted about 20% world trade, it was 1/3 by early 1990s, excluding intra-TNC trade in services (UNCTAD 1993). This however could be a rough underestimate (Dicken 1998: 43).

The spatial configuration of intra-firm trade is of course directly linked to TNCs design of production networks, both within and outside its domain (i.e. web of subcontractors). This trade pattern occurs in the context of what some authors have called "deep integration", which is a historically very different nature of global integration.¹² Shallow integration characterised international economic integration before 1913, and consisted in "arm's length trade in goods and services between independent firms and through international movements of portfolio capital" (UNCTAD 1993: 113). Today's deep integration, is organised and promoted by TNCs and refers to the movement away from north-south complementarity and specialisation and the development of a pattern of trade from inter-product to intra-product trade. This means that "there is no longer a neat division of labour between countries" (Hoogvelt 1997: 22).

Although clearly both deep and shallow integration coexist today it is important to understand the specific nature of current globalisation processes. The features of deep integration are generally analysed in terms of *global production chains*, that is maps of how a sequence of productive functions are linked together within an overall process of production of commodities.¹³ Production chain analysis helps us to map how TNCs, aided by states (Dicken 1998: 6-7) are slicing up production at the global level, thus making full use of the fractal-panopticon architecture.

Generally speaking, from the perspective of a TNC, individual functions within a global commodity chain may be integrated with other functions in two main ways: by means of externalised or internalised *transactions*. In the first case, individual and formally independent firms linked to other firms by means of the market perform a productive function. In terms of figure 1, the firms competing to supply the TNC are singularities exposed to an external "watchtower" constituted by their own process of competition. In the second case, each function within a productive chain may be located within a vertically integrated firm, and the external "watchtower" operates here as a result of TNCs competition among each other. Furthermore, both within the singularities represented by TNC and their smaller subcontractors, we have an internal "watchtower", that is the traditional more direct mechanism of command over labour.

In either case, both externalised and internalised transactions when organised cross-border point at the central importance of trade in constituting today's capitalist production process. Thus, firms' planning departments and market mechanisms are two forms of the same thing, namely a mechanism of co-ordination and regulation of production chains and command over labour. The reasons why a TNC chooses its mix of in-house and out-source functions, depend on a range of things, all of which have to do with risk and cost assessment and ultimately with the firm's strategic evaluation of its profitability condition and opportunities. Also, it is clear that the greater the flexibility and pervasiveness of markets at the global level, the greater is the number of interconnections within a global fractal-panopticon, the greater is the range of opportunities for TNCs to reduce costs and minimise and externalise risks. There is therefore a symbiotic relation between the neo-liberal drive towards trade and market liberalisation, TNCs' vantagepoint, and the constitution of production processes worldwide and capitalist imposition of work. It is in this sense that "transnational enterprise is evolving from company organisation to a loosely confederated network structure (global web)" (Hoogvelt 1997: 127). Trade thus, both internalised and externalised, is what keeps together geographically displaced production processes at the global level and enforces the discipline of abstract labour.

This because each productive singularity within a production chain represents at the same time a configuration of value production, i.e. of power relations, not just a technical configuration for the production of use-values. Not only power relations between say, subcontractor and subcontracted firms (in the case in which the market plays the co-ordinating role) or between various departments within a vertically integrated TNC. Also, and more poignantly, power relations at the point of production, that is, around the quality and quantity of expenditure of labour, both between TNCs and the subcontracted firms and *within* them.

If the framework of analysis is the whole global fractal-panopticon, every externalisation is somebody else internalisation. Thus, TNC's externalisation of risks involved with outsourcing implies of course the internalisation of risks by subcontracted companies. For subcontracted firms to be able to internalise this risk, they must be able to rely on a workforce that is flexible enough to absorb required changes in production. In other words, subcontracted firms must be able to *externalise to them* possible costs of adjustment. A configuration of power relations that rotates around job search in a flexible labour market and "life-long education" as unwaged work of market adaptation, as well as a management of public expenditures that preclude non-market ways to gain access to social wealth, are therefore at the cornerstone of profitably viable TNC's outsourcing strategy. This implies ultimately that that does themselves are competing with each other as singularities within their own specific fractal (the "labour market", entitlements within workfare schemes, bursaries and grants within education), and as in any other layers of the fractal-panopticon the process of competition gives rise to the emergence of a correspondent "watchtower".

Thus, as an infinite interconnected self-similar layers of invisible "watchtowers" emerges out the pervasive process of competition, also command over labour is made invisible, as it is displaced through an archipelago of productive units in competition with each other. The

command over labour appears in a more discrete and sanitised form as *market transactions* and *trade flows*. In many spheres, market transactions seem to gradually replace the convey-belt and the foreman's stopwatch as device of command over labour.

There is thus a second implicit result that we can derive from production chains analysis understood within the architecture of a global-fractal panopticon: each functional node of a production chain is a site of implicit or explicit conflict over the quantity and quality of labour expenditure, as well as over the wages. It must be pointed out that within the overall sequence of a production chain, and it can be a long sequence with many ramifications, the degree of impact and disrupting leverage of conflict within a particular node is, *ceteris paribus*, inversely proportional to the degree of spatial substitutability of that node. This continuous re-definition of commodity chains which is obtained through trade and foreign direct investment cannot be read in isolation from capital's needs to enforce capitalist work, manage conflict and regulate micro and macro patterns of insubordination at the point of production. In other words, growth of FDI and trade not only are instrumental in the continuous reshaping of global commodity chains, but creates greater opportunities for capital to substitute functional nodes within global commodity chains. By therefore increasing the real or perceived degree of spatial substitutability of these nodes across space, FDI and international trade are systemic forces shaping a global fractal-panopticon.

Struggles and the Fractal-Panopticon

The fractal-panopticon is not the reality, is only one of the constitutive elements of it. Thus, our playing by the rules of the market which turns ourselves into constituting elements of a pervasive "watchtower", whatever is our field of action, does not exhaust the determination of the real. The real is also made of struggles against disciplinary "watchtowers", including those rooted within us. Indeed, the constitution of the fractal-panopticon on a global level results as an attempt by capital to escape the limitations posed on to accumulation by these struggles. This not only in a genealogical sense — globalisation as capital's strategies to escape and co-opt the struggles of the 1960s and 1970s (Hardt and Negri 2000) — but also in a physiological sense. By acknowledging the social conflict inherent in capitalist relations of production we can identify the dynamism of today's capital and, within it, the strategic role acquired by the mechanism of the fractal-panopticon to manage social antagonism.

Some important insights of this process can be gained by reading politically one of the most interesting models recently used to describe this continuous process of transnational re-definition of commodity chains: the "flying geese development paradigm". This paradigm, originally formulated in the 1930s by Japanese economist K. Akamatsu to describe change in industrial structure over time, has been recently used to describe patterns of regional integration in South Asia (UNCTAD 1996b: 75-105). It defines trade as the most important vehicle for transferring goods and technology across countries following a dynamic process of "shifting comparative advantage", and therefore as the instrument for promoting a continuous social and geographical re-organisation of production and of the division of labour within and across countries. Although this model does not reflect the rapid catching up of certain follower countries such as China (Peng 2000), its illustrative strength is still of great interest, as an example of a narrative embedding an alternative hidden narrative of social conflict.

The model divides countries within a region in two groups, followers and leaders. Imports from a leader country to follower countries allow new goods and technology in the latter. This allows production of the imported goods in the follower countries, which, eventually, will be able to export them in other countries. When at the end a country "looses competitiveness" in one particular product, its domestic production is phased out, workers made redundant, and

production replaced by import from the country which has succeeded in building up a competitive industry in that sector by employing cheaper workers. One of the interesting insights of this model, is that the flying geese pattern of FDI "is governed by shifts in competitiveness" which TNCs themselves help to generate. (UNCTAD 1996b: 76-77).

We can reformulate this flying geese pattern of trade and FDI in a way to bring at the forefront the embedded conflict of capitalist social relations of production and the hidden flash and blood narrative of struggle. When workers in the leader countries succeed in setting up rigidities to the ability of their employers to offer low wages and appalling working conditions (through the often-long process of organisation), FDI shifts production or part of it into some follower countries. This has a twofold rationale. In leader countries the class composition is changed thus threatening the forms of organisation that workers were able to build on the basis of that composition. While cheaper imports from follower countries — together with restructuring of the class composition — allow keeping in check the value of labour power in leader countries, the development of new branches of production with a new configuration of labour processes allow starting anew the process of accumulation with a relatively lower social unrest.

In follower countries, where the imported class composition mixes with local cultural and socio-economic contents, class composition is relatively new and workers have still to go through the lengthy work of organisation. A pre-condition for this shaping of production in follower countries is of course a previous wave of enclosures, be this enforced poverty on the countryside, reduction of various forms of entitlements such as food subsidies, or any policy making poorly paid wage labour a desirable alternative, especially in a context of widespread reserve army.

This process of course does not have an inherent end. Both leader and follower countries will soon be hit by new waves of micro or macro forms of social unrest and struggles, in which the novelty is not only in terms of their re-occurrence in time, but also in terms of the form of organisation and characteristics of aspirations based on the new configuration of the class composition. Also, this model not only implicitly recognises a vertical hierarchy among regions within an international division of labour, but makes of this hierarchy the framework for capitalist accumulation and cannot envisage an end of this structural hierarchy, only its structural displacement. The socio-economic geography of the capitalist world is and always will be made of "developed" and "underdeveloped" and the dynamic principle of this development and underdevelopment is the attempt by capital to escape conflict.

In each group of country the slow work of organisation of a previously fragmented workforce, and the slow work of alliance building across groups in society, will reach a point in which it threatens the viability of capital's accumulation. Finding a new tier of follower countries that offer large pool of labour power and widespread poverty condition would then displace the struggles in the follower countries. Transferring relatively skilled labour production to lower tiers in the hierarchy and/or regulating/promoting inflows of migrants enjoying less rights than domestic citizens, as well as upgrading production to new line and processes of production, will displace the struggles in the leader countries by changing their class composition.

This model reformulates at an international level the properties of regulation of class conflict that economic cycles always had at the national level (Bell & Cleaver 1982). From the perspective of capital, the optimum management would be that in a trade region organised hierarchically, booms and busts, class composition and decomposition were synchronised in such a way as to allow a continuous *aggregate* flow of investment and thus accumulation, thus making local declines instrumental to a consistent overall accumulation and imposition of work.

The experience of South Asia seems to confirm this pattern at a regional level. The emergence of a first-tier NICs (newly industrialised economies) — Hong Kong, Republic of Korea, Singapore and Taiwan — were soon accompanied by that of a second tier — Indonesia,

Malaysia and Thailand, under the impact of strong wage increases and gaining of union rights in the first tier (especially South Korea). FDI from the first tier then moved to countries in the second tier in which wages were lower to promote labour-intensive production — especially Indonesia. Finally, the last 10 years rise of China as a major player in the region with a huge reservoir of cheap labour power and a strong police/military intervention of state planning in the promotion of infrastructures and management of social conflict, is again shifting "comparative advantages" and contributing to displace social antagonism in the region and beyond.

In conclusion, "shifting comparative advantage" is the economists' term for the recognition of the centrality of class struggle, its dynamic nature, and the strategies aimed at its continuous displacement within an ever-changing international division of labour. As in the case of the role played by the economic cycle in a national economy in attempting to regulate class conflict, the flying geese model captures the management of social conflict through the process of economic development, through continuous shifting of technical and social compositions from leader to followers, in such a way as to minimise workers' organisational impact. It must be observed that the disciplinary logic built within the shifting comparative advantage narrative, can only work to the extent the different points of conflict in the leading and follower countries are temporally displaced and accept their role within the global fractal-panopticon. If David Harvey (1989: 284-5) "time-space compression" were to work for the organisation of struggling workers and other movements, it would not be difficult to show in practice the Achilles' heel of this capital's strategy.

Beyond the Global Fractal-Panopticon?

At the basis of the constitution of the global fractal-panopticon, there are strategies of new enclosures which aim at the commodification of new spheres of life and at dismantling barriers erected as a result of past struggles to protect society from the market. In short, new enclosures define the parameters, the context of the global fractal-panopticon. In the contemporary world new enclosures range from attacks on conditions of life by a World Bank funded dam in India threatening hundreds of thousands of farming communities, to cuts in social expenditures in the UK threatening hundred of thousands of metropolitan families. Viewed in light of the overall *raison d'être* of the money circuit of capital, these diverse strategies share a common role: that of the *separation of people from whatever access to social wealth they have that is not mediated or co-optable by the market*. To some extent, such an access shields people from the market and from market pressures, giving them a *space* in which they are to a certain degree empowered vis-à-vis market discipline, competitive pressures and the grip of the global fractal-panopticon.

This set of neoliberal strategies of global integration did not occur in a vacuum, but *against* a set of social forces opposing it. "IMF riots" against structural adjustment policies in the South (Walton and Seddon 1994); growing "network guerrillas" against the (failed) multilateral agreement on investment (MAI); mass action in Seattle against the WTO millennium round are just some of the examples of these struggles against the parameters of capital's global fractal-panopticon.

The character of social movements and struggles against neoliberalism and the effects of capital's globalisation has evolved since the beginning of the 1980s. What is now occurring seems to be a process of *recomposition* of radical claims and social subjects, a process which is forcing every movement not just to seek alliances with others, but also to make the struggles of other movements their own, without first the need to submit the demands of other movements to an ideological test. Unlike the times in which communist and socialist organisations provided the hegemonic ideological frame of reference in many struggles, today the ideological frame of

reference seems to be the ongoing *result* of the process of recomposition among different social subjects. The premise of this process of recomposition is the multidimensional reality of exploitative and oppressive relations as it is manifested in the lives and experiences of the many social subjects in the global fractal-panopticon. Subjectivities are emerging across fractals, and attempt to build forms of social co-operation which are alternative to those constrained within a competitive jacket. The interaction among these social subjects in various occasions of struggle creates alternative modes of thinking and praxis, which are increasingly set against the hegemonic and monolithic *pensée unique*, which legitimises neoliberal strategies.

It is now impossible to define the basic elements of alternative social praxis, without testing it against the issues raised by the struggles of a great variety of social movements. The relief of poverty does not justify blind environmental destruction (thanks to the environmental movement); environmental protection does not justify the unemployment of thousands of workers (thanks to the labour movement); jobs protection does not justify production of arms, instrument of torture and yet more prisons (thanks to the human rights movement); the defence of “prosperity” does not justify the slaughter of indigenous people and their culture (thanks to the movement of indigenous people); and so on with the movements of women, blacks, students, among others. The visibility of a great variety of contentious issues and aspirations, leads of course to inevitable contradictions, the transcendence of which is the object of daily political practice, intra-movements communication, the continuous formation of new alliances which is helping shaping new political visions. The central issue for us is whether these movements are posing the question of autonomy vis-à-vis capital, whether this process of recomposition of radical claims and new subjectivities emerging from the multiplicity of global struggles is constituting a front against “abstract labour”, that “work for work sake” which is the basic life-substance of the global fractal-panopticon. I can here only offer a hypothesis and suggest that practices that are developing in the constitution of recent struggles seem to run counter the very foundations of abstract labour.

Against strategies of enclosure at the basis of the fractal-panopticon, the market and capitalist work, we have witnessed an abundant array of struggles around the world. Struggles against genetically modified food, intellectual property rights, World Trade Organisation, privatisation of public utilities and others not only oppose commodification of a variety of aspects of life and throw a spanner in the wheels of capital, but at the same time open up spaces for developing new meanings, new ethics and social praxis beyond the logic of the fractal-panopticon. Also, in contrast to the estrangement and alienation of the doers from the product, from the activity of labour, from sociality and from ourselves as part of nature implicit in “work for work sake,” new practices seems to have emerged which refuse to consider the “other” as object. A variety of struggles opened up public debates on what we eat, how we relate to “nature”, and how our cloths are made. This is of course just a start in opening up ways to break the estrangement towards the products and activity of labour inherent in capitalist production. Although the partiality of each of these issues and others is obvious, at the same time the engagement with these fragments is necessary for a social process to transcend abstract labour. Through communication, alliances, and cross-movement “bridge building”, each oppositional fragment has the chance to acknowledge the “other”, redefine priorities, methods, and their place within an oppositional universe constituting new social relations. Therefore, the constitution of a new sociality beyond capitalist definition of human activity (abstract labour) is not to be found in the prior definitions of political theory, but rather in ongoing processes of self-organisation.

The methods of organisation and alliance building are also important. In the last two decades there has been a growing emphasis on “horizontal” organisations, rather than vertical, on “direct action” rather than delegated action, on “consensus seeking” rather than majority vote. These practices are sinking in deep into the consciousness of “how to do things” of the people involved in various social movements. In this sense, as the Zapatistas remark, the question of

power is completely redefined. Instead of aiming at “seizing power”, those in struggle are all focused on the *exercise* of power through a process of mutual recognition of the different “fragments”. Finally, it is becoming increasingly evident that the notion of “politics”, of the fighting for different worlds, is becoming less and less separated from “play”, i.e., lived experience beyond anxiety and imposed scarcity. Together with the struggles against enclosures and alienation, the increasing relevance of play in the practice of politics, teaches the importance of setting a limit to the boundlessness of capitalist work that wants to turn all human activities into work. In a word, by posing the question of direct democracy, consensus seeking, horizontal organisation, play and access to resources, recent struggles are preparing a fertile terrain upon which it is possible to pose anew the question of human freedom, not in the sense of individual freedom limited by the cells of a fractal-panopticon, but that of free individuals defining together the parameters of their social interaction. Will these movements be able to avoid co-optation and displacement by yet new forms of commodification and competition?

Notes

¹ This thesis runs counter some of the arguments put forwards by Rifkin (1995) and Hardt & Negri. (1994) among others. For a criticism see Caffentzis (1999), and the contribution of Harry Cleaver in this book.

² For a discussion of “flexibility” in terms of “flexpolitation”, see Costello and Levidow (2001).

³ See for example Federici (1992) and the other contributions in the 1992 issue of *Midnight Notes on the New Enclosures*. See also Caffentzis (1995).

⁴ “If a man won’t work, nothing has he to do, from morning to night, but to eat his bad bread and drink his water, without a foul to speak to. If he will work, his time is occupied, and he has his meat and his beer, or whatever else his earnings may afford him, and not a stroke does he strike but he gets something, which he would not have got otherwise.” (Bentham 1787: 67)

⁵ The British Library copy of the 1787 edition has a stamp of the “Patent Office” right above the title of this letter “on the means to extract labour”. It would be interesting to uncover the history of this “intellectual property right”.

⁶ “The more numerous also the family, the better; since, by this means, there will in fact be as many inspectors as the family consists of persons, though only one be paid for it.” (Bentham 1787: 23).

⁷ “Neither the orders of the inspector himself, nor any interest which they may feel, or not feel, in the regular performance of his duty, would be requisite to find them motives adequate to the purpose. Secluded oftentimes, by their situation, from every other object, they will naturally, and in a manner unavoidably give their eyes a direction conformable to that purpose, in every momentary interval of their ordinary occupations. It will supply in their instance the place of that great and constant fund of entertainment to the sedentary and vacant in towns, the looking out of the window. The scene, though a confined, would be a very various, and therefore perhaps not altogether an unamusing one.” (Bentham 1787: 20)

⁸ “The working class must materially discover itself as *part* of capital, if it wants then to counterpoise all capital to itself . . . The collective worker counterpoise itself not only to the machine, as constant capital, but also to labour-power itself, as variable capital.” (Tronti 1971: 55).

⁹ A general picture of the current character of international trade should include other important areas, such as trade in services, issues related to intellectual property rights, and analysis of new enclosures that make trade possible. I cannot deal with them here.

¹⁰ We must note that in countries such as the United States, the purchasing power of large sectors of working people has been so far maintained also by large diffusion of private debt.

¹¹ In the US, 4% of national production was exposed to global competition in early 1960s, while it is 70% today.

¹² For a review see Hoogvelt (1997).

¹³ For an overview, see Gereffi and Korzeniewicz (1994).

References

Bell, Peter F. and Harry Cleaver. 1982. *Marx's Crisis Theory as a Theory of Class Struggle*. In, *Research in Political Economy*. Greenwich, CT: Jai Press.

Bentham, Jeremy. 1787. *Panopticon: or the Inspection-House*. Dublin: Thomas Byrne.

- Caffentzis, George. 1995. "The Fundamental Implications of the Debt Crisis for Social Reproduction in Africa," in Mariarosa Dalla Costa and Giovanna F. Dalla Costa (eds.) *Paying The Price. Women and the Politics of International Economic Strategy*. London, Zed Books.
- Caffentzis, George. 1998. *From Capitalist Crisis to Proletarian Slavery. An Introduction to Class Struggle in the U.S. 1973-1998*. Jamaica Plain: Midnight Notes.
- Caffentzis, George. 1999. The End of Work or the Renaissance of Slavery? A Critique of Rifkin and Negri. In *Common sense*, December, N. 24.
- Costello, Anne and Les Levidow. 2001. Flexploitation Strategies: UK Lessons for Europe. In *Restructuring and Resistance: Diverse Voices of Struggle in Western Europe*, Forthcoming.
- Cornerhouse 1998. *The Myth of the Minimalist State*, March, Briefing N. 5
- De Angelis Massimo. 1995. Beyond the Technological and the Social Paradigms: A Political reading of Abstract Labour as the Substance of Value. In *Capital and Class* 57, Autumn.
- Deleuze, Gilles. 1995. Postscript on the Societies of Control. In G. Deleuze, *Negotiations*, Translated by Martin Joughin, New York: Columbia University Press.
- de Jonquières, Guy. 1998. Network Guerrillas. In *Financial Times*, 30 April 1998.
- Dicken, Peter. 1998. *Global Shift. Transforming the Global Economy*. London: Paul Chapman Publishing Ltd.
- Federici, Silvia. 1992. The Debt Crisis, Africa and the New Enclosures. In *Midnight Notes*.
- Foucault, Michael. 1977. *Discipline and Punish: The Birth of the Prison*. Translated by A.Sheridan. London: Penguin Books.
- Giddens, Anthony. 1990. *The consequences of Modernity*. Polity Press.
- Hayek, Friedrich. 1960. *The Constitution of Liberty*. London: Routledge
- Hayek, Friedrich. 1978. *New Studies in Philosophy, Politics, Economics and the History of Ideas*. Chicago: Chicago University Press.
- Hayek, Friedrich. 1988. The Fatal Conceit: the Errors of Socialism. In *The collected Works of F.A.Hayek*. Edited by W.W.Bartley III. Volume I. Chicago: University of Chicago Press.
- Hardt, Michael and Negri, Antonio 1994. *The Labor of Dionysius: A Critique of the State Form*. Minneapolis: University of Minnesota Press.
- Hardt, Michael and Antonio Negri. 2000. *Empire*. Cambridge, Mass: Harvard University Press.
- Harvey, David. 1989. *The Condition of Postmodernity*. Oxford, MA: Basil Blackwell.
- Hoogvelt, Ankie. 1997. *Globalization and the Postcolonial World. The New Political Economy of Development*. London: Macmillan.
- Marx, Karl. 1867. *Capital*. Volume 1. Translated by Ben Fowkes. New York: Penguin Books. 1976.
- Peng, D. 2000. The changing nature of East Asia as an economic region. In *Pacific Affairs* Summer, Vo 73. No. 2, pp. 171-192.
- Propokemko, Joseph. 1997. Globalization, Alliances and Networking: A Strategy for Competitiveness and Productivity. *ILO, Enterprise and Cooperative Development Department*, Working Paper EMD/21/E.
- Rifkin, Jeremy. 1995. *The End of Work*. New York: G.P. Putman's Sons.

Skyttner, Lars. 1996. *General System Theory. An Introduction*. London: Macmillan.

Tronti, Mario. 1971. *Operai e Capitale*. Torino: Einaudi.

UNCTAD 1993. *World Investment Report 1993: Transnational Corporations and and Integrated International Production*. New York: United Nations.

UNCTAD 1996a. *World Investment Report 1996: Investment, Trade and International Policy Arrangements*. New York: United Nations.

UNCTAD 1996b. *Trade and Development Report 1996*. New York: United Nations.

UNCTAD 1999a. *Handbook of International Trade and Development Statistics. 1996-97*. New York: United Nations

UNCTAD 1999b. *Trade and Development Report 1999*. New York: United Nations.

Walton John & David Seddon (1994). *Free Markets and Food Riots. The Politics of Global Adjustment*. Oxford: Blackwell.