Chapter II: Post-Fordism

From the early 1970s, symptoms pointing to the beginning of a great crisis of capitalism began to appear, with indicators that were cause for concern such as the increase in unemployment in Europe, the growth in public deficits, the Third World debt and inflation. Preferred explanations included a State fiscal crisis; the contradictions of the Social State which attempted to legitimise itself through continually granting society's ever increasing demands at the same time as discouraging production investment through taxes and wage policies; and the crisis resulting from the breakdown of the prevailing production processes in the previous period of capitalist boom (De la Garza, 1988).

The majority of analysts agree that as of the 1970s, capitalism not only entered into a great crisis, but also began an important period of restructuring.

Production changes can be divided into several sublevels: hard technology (to which the so-called Neo-Schumpeterian school mainly refers); organisational (dealt with in the theory of Toyotaism and Lean production (Womack, 1991) and the theory of new production concepts); labour and industrial relations (the basis for the polemic on flexibility); workforce profile (which introduces the discussion about changes in labour market structure and qualifications in particular); and the new work culture (related to the New Wave in managerial doctrine, total quality and just-in-time management).

With regard to the State, we are dealing with the changes from the Social State to the Neoliberal State (De la Garza, 1992), with its consequences in the amount and distribution of public spending, in economic and labour deregulation and in privatisation, as well as with its implications for sources of legitimacy and possible change in the ruling bloc. All this in a context of a new globalisation of the economy, a new international division of labour, and the renewed importance of the international financial system.

In the social sphere, we are facing the decline, fracturing and reconstitution of social agents, as well as the decline of utopias, imaginary collectives and identities. Scientific theories and methodologies are in crisis due to their inability to be predictive, particularly 1970s' Keynesianism and the Structuralist Marxism, faced with the beginning of erratic and experimental tendencies since the 1980s. Neoliberalism, with its hard-core theories of rational choice, aspired to be the theoretical alternative, with spectacular results due to its links to the new economic and political powers, but has also proven to be a poor predictor. Furthermore, in Latin America, Dependency theory has been in crisis for 15 years.

The crisis of social theories is linked to the decline of positivism, dominant throughout most of this century, even though the beginning of the former predates the latter.
Epistemological dispersion and postmodernity are what is left as a substitute for the time being (De la Garza, 1993).

The Post-Fordism polemic is one of the most important debates attempting to explain today's upheavals. It is particularly important in Latin America because the majority of studies on the restructuring of the work process take this polemic as a reference point.

It is commonly accepted that the Post-Fordism polemic is centred on three major perspectives: French regulationism, NeoSchumpeterianism and Flexible specialisation. All these schools of thought are different from one another, but they have one thing in common: the idea that mass production, which characterised the previous period of capitalism, has come to an end, and that its regulatory institutions are obsolete; that we are in a transition toward a new stage with the creation of new institutions centred on flexibility, as opposed to the previous period's rigidity.

Related to the Post-Fordism polemic are the institutionalist economists like Gordon who puts forth the current change in the social structure of accumulation (Dankabar, 1992); Lash and Urry who talk about the end of organised capitalism, which is giving way to unorganised capitalism (Lash and Urry, 1987); geographers like Storper (Storper, 1992) or Kerr and Schumann, who use the category of New Concepts of Production (Kerr and Schumann, 1987).

A. Regulationism

Regulationism was born in France in the 1970s and refined theoretically in the 1980s. The aim of Regulationism has been to elucidate the articulation between production, consumption and the State in an institutionalist version of the economy. In general the idea is to explain how prolonged periods of stability are possible in capitalism, despite its contradictions and, specifically, the causes of the current great crisis and the tendencies of its transformation (Aglietta, 1979) (Coriat, 1979) (Lipietz, 1985) (Lipietz, 1988) (Boyer, 1988) (Coriat, 1991) (Aglietta, 1982).

The central concept in this theory is Regulation, understood in general as the way in which a social relation reproduces itself, despite its contradictory nature. (Echoing functionalism, regulationism maintains that reproduction occurs because there are internalised norms and values as well as institutional mechanisms). From the concept of regulation in general, the theorists go on to the mode of regulation, which includes the institutional forms which ensure the reproduction of social relations and in particular the adaptation of production and demand.
That is to say, regulationism clearly rejects the neoclassical idea of an automatic adjustment mechanism of the market and, in line with the great institutionalist tradition, emphasises the norms and institutions which regulate the dynamic adaptation of production and consumption. It is precisely this relationship between production and consumption that the theory dubs the regime of accumulation, which in turn allows for a coherent evolution of capital accumulation. It is clear that regulationism is not centrally a theory about the work process, but rather about the way in which production and consumption evolve stability over long periods of time, and particularly about the institutions which make this possible. Neither is it a theory about capital accumulation, which in any case is subordinate to the regime of accumulation, which in turn cannot be explained without the mode of regulation (Lipietz, 1988).

For this reason, the conceptualisation is enriched along the lines of the regulating institutions. On the one hand, the regime of accumulation includes a mercantile relation with its consumption norms; and a wage relationship, or a set of legal and institutional conditions, which regulate the use of waged labour and the reproduction of the workers. Inside the work process, the wage relation implies a discipline linked to an organisation, hierarchies and qualifications and a certain mobility. It presupposes exploitation, but exploitation ruled by norms; for example, by collective contracts. It also presupposes the reproduction of the workforce, with its norms of consumption and State gestion of that reproduction. It is important to note that although regulationism does not explicitly use the concept of equilibrium, it does in fact substitute in its place the looser notion of stable development, which rules out neither contradictions nor conflicts.

Also, the structural dynamic (the relationship between the mode of regulation and the regime of accumulation, which is reminiscent of, without being equivalent to, the Marxist structuralist ideas of base and superstructure) is explained not by collective action but rather by structural disorders, as we will see further on.

The modes of regulation are classified as "l'ancien", competitive, monopolistic and of State. The most developed conceptually are the competitive and monopolistic modes.
Mode of regulation

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Fordism is the most conceptually developed regime of accumulation; it consists of the articulation between mass production and mass consumption. In this regime of accumulation the production process is a system of machines on a continuous line, with an organisation of work which implies partialising tasks, control of times, simplification and standardisation. Clearly, regulationism has used the automobile industry as the model for Fordism.

Fordism as a regime of accumulation enters into crisis on two levels. First, in the production process itself, to the extent that the pre-existing technical regime is worn out, with costs due to oversized production facilities, increased non-productive work within the company, and the limits of Taylorist-Fordist organisation (the increase in the time for transfer of materials compared to productive time; the impossibility of indefinitely applying the principles of segmentation, simplification and standardisation to increase productivity). The other explanation is in the sphere of the mode of regulation and coincides with the early 1970s neoliberal evaluations: companies attempt to counter the consequences of higher wages, uncompensated for by equally higher productivity, with an increase in the organic composition of capital, which would lead to a corresponding fall in the rate of profit and a crisis in profitability, which the regulationists differentiate from an overproduction crisis (Conde, 1984).
It is not clear in the preceding explanation if the crisis originates in the process of production, with its technical rigidities, including the organisational ones, which would cause a stagnation in the growth of productivity, reinforced by the rigid norms and institutions regulating the wage relationship. On the other hand, the crisis could be mainly a crisis of the wage relationship, including labour relations in the work process, in other words, a crisis of the production process or a crisis of the regulation between production and consumption. Apparently, the latter would be the explanation most in keeping with the general regulationist theoretical framework: the great crisis stems from the contradictions between the outdated mode of regulation and the needs of the regime of accumulation. But, in the case of the crisis of Fordism, the initial contradiction could not be between institutions and a regime of accumulation which articulated mass consumption and mass production: the former were functional to the latter. In any case, the contradiction could be between the institutional framework and profitability, with the requisite consequences in investment due to a higher increase in wages than in productivity.

The perspective is very structuralist -although this is explicitly denied and conflict is said to have a role. We are dealing here with structures which become defaced, enter into contradiction and spur a change. The regulationist current is one which accepts the idea that the mode of regulation, especially of wage relations, is rigid and should be substituted by a flexible one. Some critics of regulationism therefore consider that it implicitly supports neoliberal arguments and solutions in the labour market. But the problem is not that simple. For the regulationists, in the first place, today there is not only a tendency to transform Fordism; rather they see different regulations coexisting by branch, country or region: flexible mass production in modern, high-tech industry; flexible specialisation in declining sectors which frequently change models; old Fordist methods in less industrialised countries; the use of microelectronics in services; and new systems of networks and public services, as in Boyer (Boyer, 1988). For Lipietz, we should differentiate the NeoTaylorism of the United States and England from Japanese Toyotaism, and the latter from Sweden's Kalmar'sism, and lean rather toward the latter as a regulatory alternative to Fordism (Lipietz, 1993). In any event, the regulationists do not critique the current changes and uncertainty on the basis of flexibility, which according to them is apparently here to stay. Rather, for them the advantages of flexibility at company level have yet to find their counterpart in consumption, which is also not solved with flexible specialisation (the diversification of use values does not necessarily ensure a more aggregate product). That is to say, there is still no alternative regulation to articulate production and consumption, which also provides capitalism with a new consensus.
The regulationists have also been self-critical and have recognised weaknesses in their theory: for example purely economic understanding of the State, which is reduced to institutions for regulating wages and credit; not having a deeper analysis of State like politics, particularly neocorporativism; and having neglected the material technical basis for production and its transformation (Boyer, 1989).

Many additional criticisms have accumulated over the years: as we have already mentioned, a pronounced structural functionalism, insofar as it is a relationship between the regime of accumulation and mode of regulation; the subsumption of the class struggle to the functioning of institutions; and, even though historic information is used, the idea of totality is a theoretical model to be applied in order to explain, instead of being a concrete totality which must be reconstructed each time. Other criticisms include the fact that the theory mystifies the great defeat of the working class and the capitalist offensive, visualising them as the almost natural outcome of the imbalance between the mode of regulation and the regime of accumulation. In addition, for many it has still not been established that Fordism is over. Therefore, the current changes in work are less conceptually dramatic and profitability has been reestablished through the intensification of work, deregulation, a retraction in wages and international contracting out.

B. The Neo-Schumpeterians

In the midst of an international crisis in 1920, Kondratiev developed a theory about the possibility that in addition to short cycles of overaccumulation, capitalism was also marked by long waves lasting 50 years each. Kondratiev's explanation was not completely coherent, but it did mention technological innovation as one of the causal factors. Kondratiev's work gave rise to two different lines of research. On the one hand, the analysis of long cycles of economic variables, prices, interest rates and capital accumulation; on the other hand, an analysis of the cycles of technological innovation given new impetus by Schumpeter.

At the bottom of the Schumpeterian polemic against the neoclassical economists is the idea that if technology is an exogenous variable to market mechanisms, then it would explicitly not enter into the establishment of prices; and on another level, whether technology is a variable dependent on, or is independent of, capital accumulation. The principal contribution of the Neo-Schumpeterians has been their analysis of the process which goes from invention to innovation and from the dissemination of technology to investment, within the context of the consideration that in this process not only costs, but also expectations about the impact of the
innovation have an influence, as well as the characteristics of the technological-scientific apparatus which is partially independent of investment needs. This is because the process of technological innovation requires other changes and infrastructure which cannot simply be requested from investors.

The Neo-Schumpeterian approach attempts to break with the dilemma of technology either receiving the impetus of the market or driving the market on its own. Instead it attempts to introduce mediations between innovation and market such as the role of the characteristics of the scientific community, the uncertainty of the market and the results of innovation on production processes (Dosi, 1988) (Freeman, 1982). To this extent, today's currents supplement Schumpeter, who emphasised the role of the innovating entrepreneur, but not the process which goes from invention to innovation and investment. In this context, the Neo-Shumpeterians have developed important concepts related to his perspective. The most important of these is the Technological Paradigm which consists of the scientific knowledge upon which the central techniques in the processes of production, circulation or consumption in a given period of development are based. To help define this concept, in terms of which technologies would be central, the concept of generic technologies is introduced. Generic technologies are the axis of a constellation of innovations, interrelated technically and economically, which are applied throughout diverse processes, like methods of control of the processes, information or forms of energy. The alternative to Dosi's technological paradigm, C. Perez's Technical Economic Paradigm or Technological Regime, implies not only "hard technology", but is also an organisational concept, and with that it touches on other Post-Fordist schools (Perez, 1985) (Perez, 1986) (Perez and Ominami, 1986).

Technological paradigms have a life cycle: they initially allow for increased productivity, but in the end make it stagnate. This stagnation is due not only to technical limitations in the paradigm, but also because of the institutions created around it. The technological paradigms can be subverted through technological revolutions, meaning changes in fundamental scientific knowledge about the central processes of production, circulation or consumption. However, insofar as innovation does not mechanically follow investor needs, an additional problem is the dissemination of the new technological paradigms. This may depend on the appearance on the scene of an input key to the structure of relative costs, key because of its unlimited supply or its potentially extensive use. Or, it may be the basis for a technological or organisational system (innovations interrelated technically and economically and which affect
several branches).

More specifically for products or processes, the concepts of product and process life cycles are used, as well as that of technological trajectory; all of these depend only in part on the market. For example, in Sahal's iterative model, the trajectories of innovations look like a tree of decisions: once a technological decision is made, you enter a course which eliminates other possible paths of development.

The most sophisticated proponents of Neo-Schumpeterianism have points of contact with Post-Fordism; the concept of technical economic paradigm and of a socio-institutional framework are similar to the regulationists' regime of accumulation and mode of regulation. However, this current has other roots and is differentiated from regulationism above all by the importance it gives technology in an economic crisis or boom. In this way, they see the mass production of the previous period as related to the utilisation of electro-mechanical and oil-based technology and petrochemicals as an energy base. Also, in the institutional framework, the Neo-Schumpeterians tend to give more importance to factors which directly allow for scientific development, innovation and the spread of technology. They particularly emphasise State scientific-technological, educational and training policies.

The current crisis, then, is explained by the exhaustion of the previous technological paradigm and the emergence of a third technological revolution (based mainly on computer and information sciences) which has not yet found an institutional framework for its fortification and dissemination. That is to say, the solution to the crisis is to be found in the application of the results of a third technological revolution through an institutional change, particularly with regard to innovation and dissemination, but without excluding labour cultures and flexible labour markets. Above all, planned State intervention is needed to eliminate obstacles for the new paradigm, through the design of new educational, training and research policies, plus support for new industries.

However, just as this current puts forward new and interesting concepts which establish little explored mediations between institutions and the economy, difficult problems do appear on its horizon. The first is the historic relevance of the long waves themselves, but above all their logical relevance. Ernest Mandel attempted in his own way to justify long waves in capitalism by extending Marx's idea of the economic cycle as a function of the cycle of rotation of fixed capital. Mandel extends it using the concept of technological revolution in an attempt to establish that, superimposed on the strict cycle of fixed capital, there is another linked to the cycle of the technological revolution. He contends that in each technological
cycle there is overaccumulation of capital, resolved by a crisis, but capital comes back with
new impetus through yet another technological revolution. However, the efforts to define the
criteria of a technological stage have led to different proposals. The problem has been
complicated by more concrete research into technological trajectories, which has shown that
they are not synchronised with the supposed central innovations which would define a cycle.
For example, the three most common criteria to define types of generic technologies are
transport, energy and productive processes, which are not historically synchronised. In fact,
authors have been forced to change criteria about types of technology in order to define
technological stages and adjust their stages to history. In Mandel's more analytical efforts, the
difference between the concepts of the cycle of technological rotation and the cycle of rotation
of fixed capital is not clear. This is complicated by the fact that the proponents of this theory
do not explicitly accept technological determinism, concurring with the majority of
researchers on the topic. The relations, then, between technological innovation and
productivity, employment, organisation, training or labour relations are seen as non-causal,
and each with its own dynamic. In this way, since they are relatively independent of
technology, and since economic development also depends on them, non-synchronisation
would make the definition of technologically defined paradigms more difficult, unless what is
really being proposed is technological determinism.

Compared to regulationism, neo-Schumpeterianism has the virtue of emphasising little
analysed questions (technology and its mediations), but its weakness is its emphasis on the
supply side alone and its silence about demand. Finally, the importance of political
phenomena, conflicts, alliances, etc., are relatively excluded from this view.

C. Flexible Specialisation

The third important current among the Post-Fordist theories is Piore's and Sabel's flexible
specialisation (Piore, 1990). Theoretically it is less developed than regulation theory and its
understanding of technology is not as sophisticated as that of the Neo-Schumpeterians.
However, this theory makes a contribution on a level unemphasised by the others: the struggle
for markets between large companies and small and medium-sized ones. This makes the
theory attractive: the idea that small and medium-sized companies can be competitive vis-à-
vis large companies, and establishing this not as an automatic market mechanism but as the
constitution of an economic-political alternative to the large corporations (Sabel and Zeilin,
1985). Along with the regulationists, Piore and Sabel consider that the mass production
industrial model (the use of special machines with semi-skilled workers and the mass production of standardised goods) has reached its limit. We are facing, then, first of all, a crisis of regulation. But, in contrast with the regulationists, they consider that this crisis is articulated with an industrial break, a technological change (the first industrial break was at the end of the nineteenth century with the appearance of mass production techniques). They consider that this crisis of regulation and the industrial break are being resolved through two alternative paths: a new international division of labour (some internationally competitive manufacturers would move part of the production process to the Third World, with its low standards of working conditions and a resulting increase in exploitation) and through flexible specialisation or the rebirth of craft forms which use reprogramable technologies, work flexibility, retraining, consensus in the workplace and production by lots by small and medium-sized companies. This industrial model would be functional in the new situation of changing markets which demand variety more than massive numbers of standardised products. The possibilities for success of a small, innovative company would go together with its setting up of industrial districts, that is, networks of companies which support each other more than just through mercantile dealings, with the important influence of the local political milieu, in which public institutions would also be set up to support innovation and production (Piore, 1990).

The explanation of the current crisis is market saturation spurred by mass production. Faced with this, the Keynesian State is no longer functional. Although Piore and Sabel have attempted to illustrate the functioning of successful industrial districts in many countries, for them flexible specialisation is more than a widespread reality; it is a viable development project which would have to be consciously taken on board by the actors themselves (mainly small business owners and their workers) in order for it to be victorious vis-à-vis the large corporate projects. The utopia of a new industrial model is simultaneously a utopia of a new society if we take into consideration the fact that industrial districts can be the basis for solidarity without domination, of federations of family-run companies, with an ethos of interdependence.

There have been many critiques of flexible specialisation. In the first place, it has not been proven that large corporations are inferior to small and medium-sized companies; corporations are the ones who have made most of the world's changes in technology, organisation and labour relations. Neither has it been shown that mass production is in decline; it continues to exist in the world and, as Boyer suggests, production in small lots continues to be restricted to
a minority of high-income, middle sectors. That is, the regulationist concern about how an upturn in production could be synchronised with an upturn in demand is not clearly resolved by the theory of flexible specialisation. It could be implicitly stated that small successful companies with worker-management relations based on cooperation would imply higher wages and therefore a growing market. However, if production does not create its own demand, the theory of flexible specialisation is insufficient in the terrain of demand. In other words, the possible advantages of flexibility at company level do not ensure the growth of aggregate output without specific actions on the demand side. Or, the diversification of use values in small lots does not guarantee the growth of the total mass of value. Finally, after 15 or 20 years of production restructuring, large corporations have changed but they are not in decline. Production in small lots uses massive inputs. Large corporations and small companies are not mutually exclusive; very often they are linked through contracting out, with the small companies frequently subordinated to the large corporations.

The basic critiques of the Post-Fordist theories are:

1) Its structuralism, functionalism and evolutionism. The structuralist perspective sees changes in structures as dependent on the tensions, contradictions and disfunction of the structures themselves, more than as a result of a voluntary action of social agents. This perspective is present above all in regulationism and Neo-Schumpeterianism despite the fact that the tendencies of the current change are relatively open and therefore present several alternatives. It is also to be found in Piore and Sabel (the supposition, for example, of an economy of buyers who demand variety and quality and who determine the viable options like flexible specialisation), but tempered by a call to action.

However, in general, the defence against structuralism is weak. When today's alternative empirical lines of development are accepted, not all of them are viable for the Post-Fordists, and some of them would fail when faced with what -because of timidity- is not accepted as what will prevail: flexibility with consensus (Hyman, 1991). In this way, functionalism continues despite the apparent opening of alternatives, because some are more functional than others. Evolutionism makes its presence felt, and faced with structural factors the actors must make choices. However, as August Comte said, if they did not act according to "social laws", their actions would come up against a brick wall and fail (Rustin, 1990) (Clarke, 1990) (Clarke, 1988).

2) The idea of stages in capitalist development has also been criticised (Meegan, 1988) (Hyman, 1991) (Bonefeld, 1991), and continuity and change counterpoised, but without such
clear breaks by modes of regulation, production paradigms or industrial models. However, the idea of stages has shown itself to be an important analytical tool in historical studies in general without necessarily adhering to some type of evolutionism. Stages can be identified a posteriori without social agents being deemed unable to define the direction of changes. On another level, critiques have tried to show that Post-Fordism does not exist in empirical reality, nor is it a project of the companies themselves.

3) The third important critique is opposed to selecting a single central factor as the impetus for change (accumulation, market, technology), counterpoising opening up the idea of history to a diversity of factors, re-articulated and efficient to differing degrees, more to be discovered than theoretically espoused. In particular one critique emphasises Post-Fordist theories' disdain for the class struggle; this critique presents the class struggle as the central factor for change and not any of the structural factors emphasised by the Post-Fordists.

4) Finally, the Post-Fordists are criticised for their implicit support for the restructuring of capitalism through a new, more durable, consensual and cooperative institutionality. Post-Fordism can be seen as a form of institutionalism, critical of neoliberal solutions which reduce society to the market, thereby making long-term consensuses difficult to reach. However, at the same time, it is fascinated by flexibility, which it gives a central, organising place in the new technological cycle and in labour relations or the labour market. For this reason, the Post-Fordists have been accused of implicitly supporting capitalist restructuring characterised by deregulation, job cuts, making collective bargaining agreements and labour law flexible, increasingly the number of precarious jobs and the attack on unions as the defenders of labour rigidity (Amin, 1994).

The Post-Fordist polemic is clearly connected with the broadest kind of flexibility. Not only the schools of thought close to Post-Fordism, such as the new production concepts, the risk society, new times, etc., concur, but also managerial currents of thinking like total quality and just-in-time production, not to mention the neoclassical perspective on flexibility as the freeing up of the market's ability to adjust.

Labor flexibility is understood as the managerial ability to adjust the number, wage and use of the workforce to the daily production needs. In addition, the polemic within Post-Fordism, with development alternatives like Neo-Taylorism or Neo-Fordism, is linked to other, older polemics about the polarisation of skills or the generalised enrichment of work, the stratification of the labour market and the internal and external markets. In any case, the doubt
persists about the generalised benefits of work flexibility. Accompanying flexibility are heterogeneity in technology, organisation and labour relations. And, as the regulationists say, it does not resolve, in and of itself, the contradiction between production and consumption. Growth continues to be slow, technological potential under-utilised and the new regulatory framework clamoured for by the regulationists uncertain.