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**THE SEVEN PARADOXES OF
CAPITALISM.....**

***.....Or is a theory of modern
economies still possible?***

Robert BOYER

CEPREMAP, CNRS, E.H.E.S.S.
142, Rue du Chevaleret 75013 PARIS, France
Tél. : +33 (0)1 40 77 84 28 - Fax : +33 (0)1 44 24 38 57
e-mail Boyer@cepremap.msh-paris.fr

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I - AN OLD ISSUE FOR POLITICAL ECONOMY, A RENEWED CONTEMPORARY INTEREST

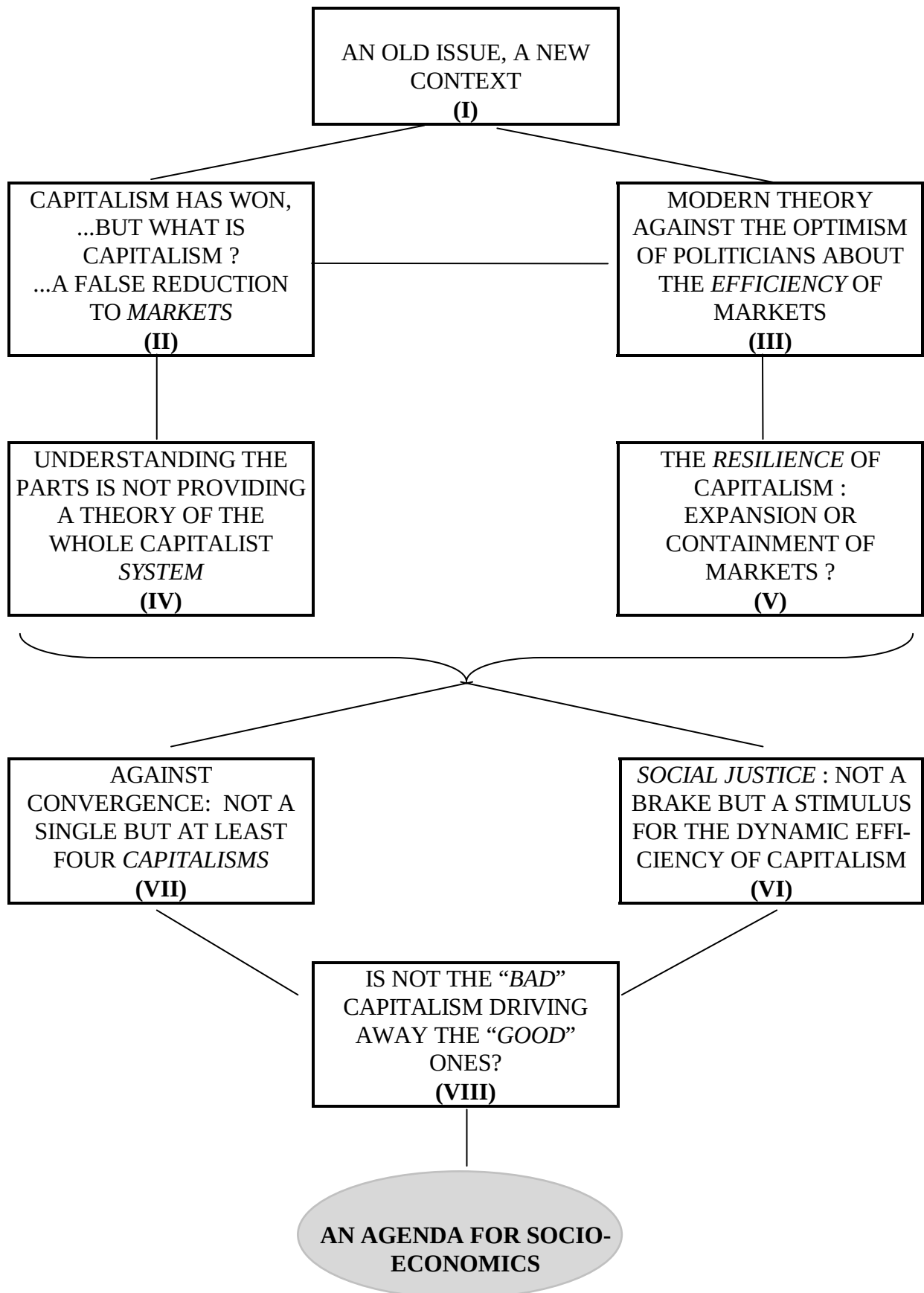
The possibility, nature and evolution of capitalism has been a major concern for philosophers and political scientists since the very early emergence of markets. In historical retrospect one observes an oscillation between two visions. For classical and more recently neoclassical economists, the market mechanism is basically self-equilibrating, the only source of crises being clumsy interventions from political authorities or legacy from inadequate and obsolete social relations. But recurrently, Marxists and afterwards Keynesians, argue quite contrarily that the pure market mechanism may lead to major crises, financial disequilibria, rising inequalities or stagnation and long run unemployment. Therefore State interventions concerning nationalization or socialization of investment decisions may help to maintain the viability of a mature capitalist system. This long swing in ideas about the role of market has been clearly pointed out by Karl Polanyi (1944; 1983).

The second vision is as the roots of post-world war II unprecedented growth regime: multifaceted interventions by the State on credit and monetary supply, labor legislation, competition, exchange rate and external trade have promoted a new form of capitalism, combining both private and public firms, market mechanisms and State regulations (A. Shonfield, 1967). During the 60's, many social scientists have concluded that a mixed economy combining private initiative and public intervention delivered better results than a typical "laissez-faire" economy and of course better than a centrally planned economy. At that time, the theory of convergence of economic systems was arguing that both Western capitalist economies and Eastern socialist societies were gradually converging toward a rather similar economic system : in the Western world, more State was correcting the drawbacks of market (unemployment and rising inequality), whereas in Eastern Europe and specially in Soviet Union economic reforms were introducing more market mechanisms and decentralization in order to cure a slow technical progress and promote a more sophisticated consumption pattern.

This very brief historical retrospect clearly shows how different are the contemporary analyses of the same issue. Many structural changes took place and the so-called Keynesian neoclassical synthesis has broken down and has been replaced by quite different visions of the functioning of markets and the suitable role of the State. The belief in markets has been diffusing to a large fraction of politicians and experts. The more market oriented capitalist economies such as the US are frequently considered as a model to be imitated specially by European countries struck by a large and long term unemployment. Many national models which were exploring an intermediate configuration between typical state-led and purely market-led capitalisms have collapsed, one of the prominent example being Sweden not to speak of France. Last but not least, the Soviet type economies have dramatically collapsed and given a new space for introducing capitalist institutions along with democratic reforms in the political system. Less than a decade after the breaking down of the Berlin wall, the surprise and disappointment associated with these transformations call for a renewed interest in the theory of capitalism.

This paper starts from an observation in form of paradox: the huge gap between the achievements of modern economic theory and the rather complex and unexpected evolution observed since two decades. Just to introduce this theme, let us quote Robert L. Heilbroner (1988) who wrote the entry "Capitalism" in the New Palgrave Dictionary of Economics:

DIAGRAM 1 - THE ARGUMENT OF THE PAPER: A BIRD'S EYE VIEW



*“(The) conception of capitalism as a **historical** formation with **distinctive political and cultural** as well as economic properties derives from the work of those relatively few economists interested in capitalism as a “stage” of social evolution. In addition to the seminal work of Marx and the literature that his work has inspired, the conception draws on the writings of Smith, Mill, Veblen, Schumpeter and a number of sociologists and historians, notable among them, Weber and Braudel. The majority of present day economists do not use so broad a canvas, concentrating on **capitalism as a market system**, with the consequence of emphasizing its **functional rather its institutional or constitutive aspects**” (p. 350b).*

In the conclusion of his enlightening analysis, Robert L. Heilbroner wrote :

*“Contemporary mainstream economists are largely uninterested in questions of historic projections, regarding capitalism as a system whose formal properties can be modeled, whether along **general equilibrium** or more dynamic lines, without any need to attribute to these models the properties that would enable them to be perceived as **historic regimes** and without pronouncements as to the likely structural or political destinations towards which they incline. At a time when the need for **institutional adaptation** seems pressing, such an **historical indifference** to the fate of capitalism, on the part of those who are professionally charged with its self-clarification, does not augur well for the future.” (p. 353b).*

The French “régulation” theory has precisely been designed in order to overcome this serious limit in modern economic research. Building critically upon the Marxian legacy, Keynes and Kalecki breakthroughs, this research program aims at a providing precise analysis of the current stage of modern capitalism, the transformations of its basic institutions, the changing pattern of structural crises. But regulation theory is only a component of a wider array of heterodox research, ranging from English and American radical thinking (A. Glyn, 1988; S. Bowles, D.M. Gordon, Th. Weisskopf, 1983) to new institutionalists (W.W. Powell, P. J. Di Maggio, 1991), not to forget economic sociologists (M. Granovetter and Richard Swedberg, 1992), historians and political scientists (R. Hollingsworth, Ph. Schmitter, W. Streeck, 1995). What are the contributions of these researches in socio-economics to the understanding of contemporary capitalist transformations? May be to deliver a more convincing and relevant picture than the bulk of neoclassical, sophisticated but balkanized, micro-modeling of a system, the logic and dynamic of which is hardly captured. Let us take some of the major events which took place during the last decade and compare the forecast of leading economic theoreticians or practitioners with what actually happened. At least seven *paradoxes* emerge out of this comparison and they organize the unfolding of this paper (Diagram 1).

The most striking structural change is probably the collapse of Soviet regime type economies, which was interpreted has a definite victory of capitalism and democracy. But has capitalism actually emerged out of the political and economic turmoil which is so evident in former Soviet Union? What do economists really know about **the implementation of capitalism**? Probably still less than about its functioning (§ II). A second and earlier event had been the demise of the Keynesian orthodoxy about counter-cyclical policies and more generally the benefits which can be derived from State interventions. In the early 80’s, it was quite common to think that if Keynes was wrong, Milton Friedman and/or Frederick Von Hayek were necessarily right. A decade later, there is a sharp contrast between **the optimistic beliefs**

of policy makers about the efficiency of markets and what **modern micro economic theory** concludes about the severe limits of this coordinating mechanism, when facing the more typical issues of contemporary economies (§ III).

Since nearly 90 % of all time economists are contemporary and observers of the current situation, one could expect that the expertise and knowledge about the dynamics of capitalism is unprecedented. Quite surprisingly, the numerous and sophisticated contributions of modern research deliver elegant mathematical models or a series of scattered and frequently contradicting empirical results...but no clear contribution to the understanding of **our society as a whole**. This could be an unintended outcome of this extreme division of labor among social scientists. Alas there seems to exist not any “invisible hand” for economic theory (§ IV). Would Marxian theories give a more satisfactory picture of the current issues about unemployment, slow growth in advanced capitalist countries, financial innovations and the transformation of the world system? Paradoxically, **the resilience of capitalism** to economic and financial crises, as well as political conflict is a surprise for most heterodox theories, from Marx, Schumpeter and Keynes and their contemporary followers. Finally, is this long run survival and adaptation of such a contradictory production mode to be attributed to an ever expanding market rationale...or is the containment of market forces a necessary ingredient for the stability of any accumulation regime (§ V)?

Another change took place concerning the links between **efficiency and social justice**. During the Golden Age of fast and quite stable growth, most politicians agreed that redistribution of income and wealth was not necessarily bad for the dynamism of capitalism. Nowadays, the common opinion is quite opposite: the only and exclusive task of the economic system should be to enhance efficiency, without any concern for rising inequalities: in the 80's and 90's, persisting and even increasing inequalities are considered again as quite functional and necessary to the objective of economic efficiency. But does historical and contemporary evidences support this view? In fact, a minimum concern for social justice is required for capitalism to be viable as it used to be during the post-W.W.II long boom (§ VI). A fifth challenge to modern economic theory concerns the impact of the internationalization of trade, production, investment and finance over the diversity of capitalist institutions. Again, we are living in a period when most of experts and opinion leaders think that the competition among firms, organizations, political and economic institutions will lead to the convergence toward a **one best way**. At the very same moment, institutional and statistical analyses convincingly show that the very sources of capitalist resilience and dynamism, i.e. the innovation process, continue to differ drastically according to **various forms of path dependency** for most economic systems (§ VII).

Last but not least, the forces of internationalization, more and more frequently labeled as globalization, are assumed to promote the efficiency of allocation, both at the national and world level. One could imagine that each social system of innovation should prosper in such a context. Unfortunately, each international environment is selecting and promoting some specific features which are not evenly distributed among nations. If financial innovations have a leading role and if major structural uncertainties are propagated by the current international forces, it is no more sure that **the best economic and political systems will overcome the bad ones** (§ VIII). Taking into account all the conclusions gathered while discussing these issues, a short conclusion is proposing an agenda for socio-economics, as a welcome and highly needed complement and challenger to contemporary neoclassical research (§ IX).

II - THE FIRST PARADOX: THE CAPITALISM HAS WON...BUT SOCIAL SCIENCES DO NOT HAVE ANY COMPLETE THEORY ABOUT ITS NECESSARY AND SUFFICIENT INSTITUTIONS

One of the major events of the last decade has been the unexpected and dramatic collapse of Soviet regime type societies. Most observers have analyzed this structural crisis as the direct consequence of two of the systemic features of this regime : the concentration of political power by the communist party and related nomenclature and the centralization of economic decisions by Gosplan. Thus, conventional economists have been active in advising the new governments and have put forward a very simple equation :

$$\textit{Capitalism} = \textit{Private property rights} + \textit{Markets}.$$

which was supposed to replace the wrong mix of political and economic institutions :

$$\textit{Socialism} = \textit{Collective property} + \textit{Gosplan}.$$

Both the Soviet and East German cases clearly exhibit the failure of such a simplistic, even if highly attractive vision, of a smooth and easy transition from one economic system to another. Unfortunately, economists have now to recognize that they have few understanding about the implementation of capitalist institutions, specially if the transformation takes place quickly out of the structural crisis of a previous regime which still exerts its influence..

II -1. From the collapse of the Soviet regime to the inability to initiate a fully-fledged market economy: Capitalism is not self implementing

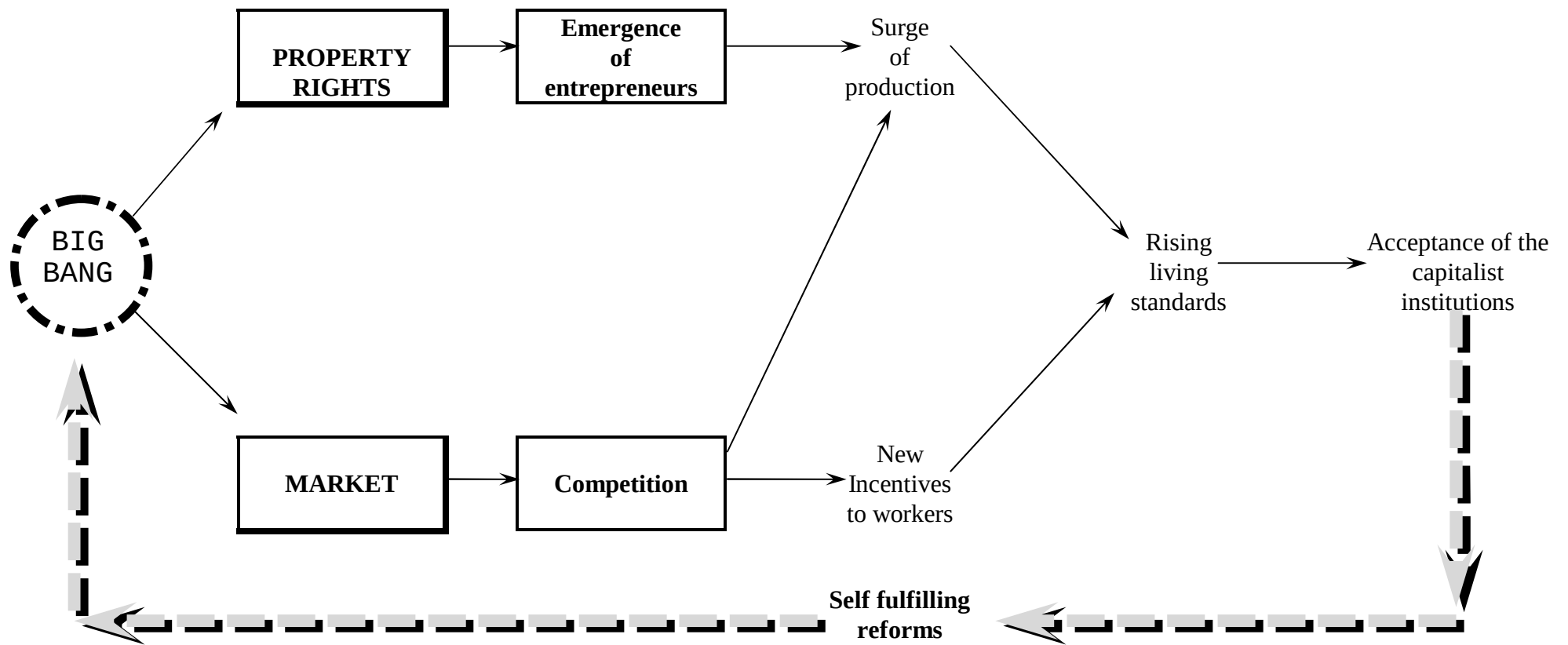
Privatization was supposed to institute clear property rights, in opposition with the old collective system. Thus the previous inefficiency would be removed by the relentless profit seeking activity of true entrepreneurs in the Schumpeterian sense. They would save scarce resources, get rich by responding to consumers' demands and would be induced to innovate, just to keep high profits. The destruction of previous planning and centralization under the aegis of Gosplan would develop "horizontal" transactions between independent economic units and progressively lead to the emergence of markets, conceived as fair and efficient, by contrast with the old system with administrative prices, chronic shortages and major sectoral unbalances and a bias against consumer goods.

Consequently, the interplay of a new generation of managers with the strong competition induced by market mechanisms were bound to increase the volume and quality of supply, and solve one of the major limit of the Soviet regime. Simultaneously, this new market system was assumed to create strong incentives for workers to work harder for higher wages, to move from public inefficient firms to private modern firms: rising productivity and living standards would propel the Russian economy towards Western standards of living. This successful economic transition would benefit to the democratic ideal: richer consumers and workers would become citizens eager to see the economic reforms to continue and therefore should vote for the new government, which would have manufactured such an happy and favorable transition. Market and democracy would reinforce one another and create the conditions for a rather rapid, or at least steady, convergence towards American or European economic and political systems (Diagram 2.a).

FROM SOVIET UNION TO RUSSIA

DIAGRAM 2 - THE MARKET DOES NOT NECESSARILY GENERATE THE INSTITUTIONS REQUIRED FOR ITS FUNCTIONING

A. The *transition* to a market economy: The conventional analysis



Former Soviet Union is a clear counterexample of such a naïve vision. In fact no big bang really took place, since the economic and political reforms have only shifted the previous information and power system, which was not at all totally destroyed. First of all, the new businesses have been launched by individuals closely linked to the old nomenclature, which was giving political protection, information, and links with foreign trade and firms. Therefore, in many East European countries formal privatizations have not always allowed the creation of a totally new class of entrepreneurs, but have been redistributing property among elite, according to a process of recombinant property (D. Stark, 1990; 1992). But on the other side, most of the previous State interventions in terms of public spending, taxation and subsidies have been eroded or canceled, and still more have become more and more uncertain, given the difficult predictability of government action.

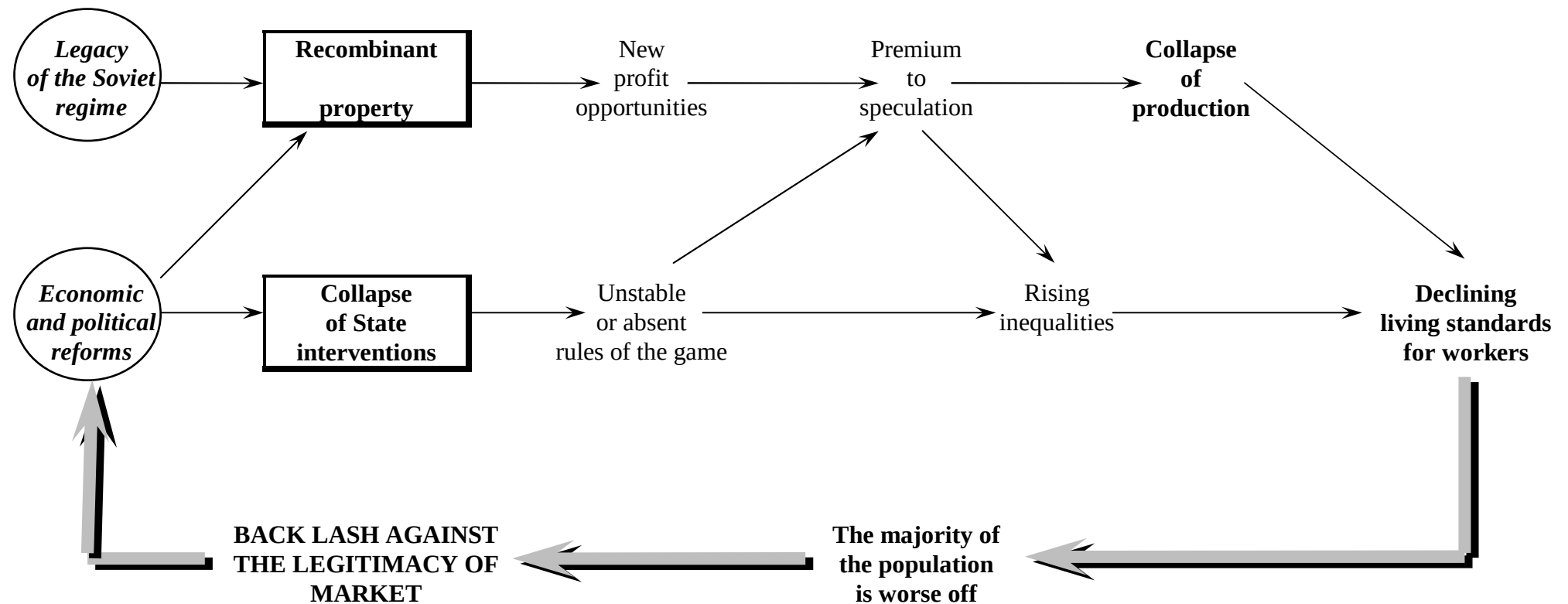
This frequent change in the rules of the game is typical of the Russian contemporary situation and is quite harmful for the emergence and prosperity of real Schumpeterian entrepreneurs : it is therefore more rational to play the role of arbitragist or speculator from one market to another, than to take the risk of long run and irreversible investment. Therefore, the simultaneous collapse of the Soviet system and the transfer of property rights within various fractions of the elite have benefited to speculators, more than they have been enhancing business innovations, initiatives, and productive capital accumulation (J. Sapir, 1996). Simultaneously, a rapid inflation and the inability of the State to pay regularly wages and to adjust retirement payments has induced a drastic unequal distribution of income and wealth. Most of aging workers have suffered from severely declining living standards, which in turn has contracted the production of most domestic firms, specially the public ones. Last but not least, since the majority of the population is worse off, it is no surprise if the legitimacy of the market is challenged and show out into political instability, which potentially blocks the deepening of economic reforms. The 1996 Russian elections have experienced the potential conflict between a fast implementation of market mechanisms and political stability within a democratic system (Diagram 2.b).

In more theoretical terms, the Russian transformation seems to contradict the neo-Austrian vision about the selection by pure market mechanisms among alternative social and economic organizations. If the macroeconomic context is highly unstable (ups and downs in the inflation rate, inability to recover taxes and therefore to pay public spending including the remuneration of civil servants, large swings in the relations with foreign markets and firms...), purely private adjustments are unable to compensate for the lack of provision of public goods such as a well established justice, accurate public and private accounting, a clear national monetary unit and an efficient payment system. The complete loss of legitimacy of the former Soviet State seems to prevent the very implementation of *another* modern and capitalist state, a quite necessary ingredient in the implementation of a market system. After all, economists come to recognize that they know very little about the necessary and sufficient institutions of capitalism, since they were considered as given or “natural” in slowly evolving Western societies. This lack of expertise is especially severe when an old system is collapsing and requires precise recipes in order to build a new one. There is **no invisible hand in the implementation and selection of basic capitalist institutions**.

FROM SOVIET UNION TO RUSSIA

DIAGRAM 2 - THE MARKET DOES NOT NECESSARILY GENERATE THE INSTITUTIONS REQUIRED FOR ITS FUNCTIONING

B. The transformation of Soviet type economy: An institutional analysis



II -2. The danger of importing a complete set of institutions: the great crisis of former Eastern Germany

In few words, the State is now so weak in Russia, that it has turned out nearly impossible to implement and enforce new rules of the game: **it is naïve to think that capitalism is self implementing**, since quite on the contrary it requires strong and coherent interventions from political authorities and a stable legal system. This strategic and structural uncertainty is actually unique among former Socialist countries. At the other extreme of the spectrum, the German reunification delivers a second major teaching concerning the “transition to capitalism”. When all the West German institutions have been transplanted into the Eastern länders, the strait jacket imposed to the firms and the workers has induced an unprecedented depression of production, only compensated by huge transfers from the West (Diagram 3). In spite of clear coherence of these institutions, the transformation has not been easy and is not yet achieved.

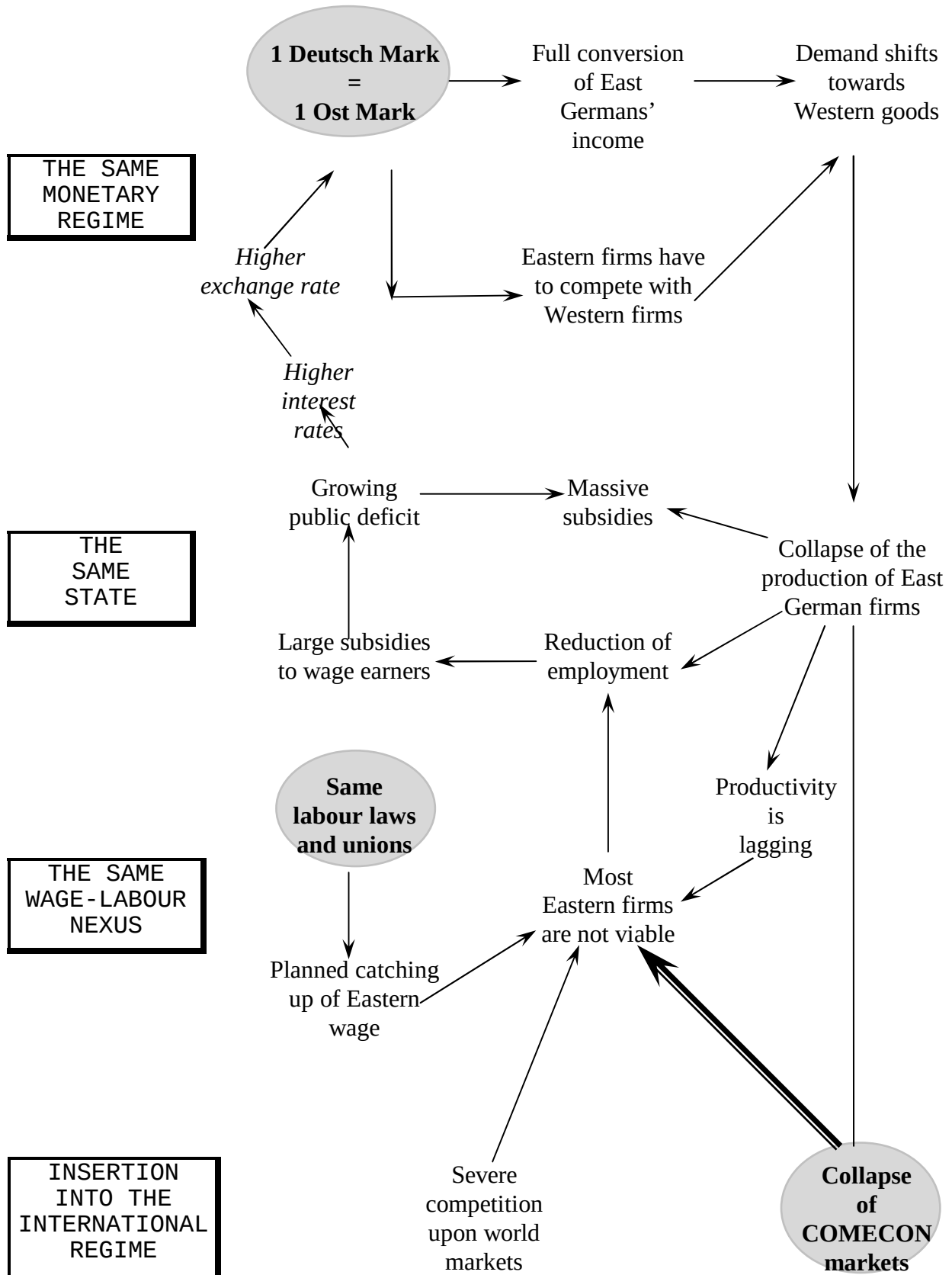
First of all, the monetary integration of former Eastern länders into the Western Germany system is implemented by the choice of a quite high conversion rate between the Ost and the Deutsch Marks. On one side, this decision warrants a good conversion of East German wealth and income and builds the homogeneity of the new reunified Germany. But on the other side, at this given exchange rate, few Eastern goods are competitive within this new domestic territory. Furthermore, East Germans prefer Western goods and consequently, the production of former GDR has been collapsing, as a direct consequence of the extension of the previous institutional architecture to Eastern länders. The good side of this reunification is that the poorer länders benefited from huge transfers from the richer, which are located in former Western Germany. This is a significant difference by comparison with the complete decay of State a public transfers observed in Russia.

But of course, if labor laws were immediately extended from West to East, the government chose to increase progressively Eastern wages to Western levels, both in order to promote the convergence of standards of living and to prevent a massive immigration from Eastern to Western länders. But since Eastern production has been reduced, in spite of privatization and restructuring, productivity has been stagnating until the mid-90's, this fast rise of wage has meant the leveling of net profit which have become negative, therefore calling for a massive and constant flow of subsidies from the West. The change in the international regime has been detrimental too : whereas most Eastern firms used to sell to COMECON countries, the collapse of the Soviet regime has destroyed the previous international division of labor between “socialist” countries and constrained the former GDR firms to compete on much more sophisticated markets such as the single European market. They were not prepared to such a context and this shift in the international trade has worsened the internal economic adjustment of Eastern länders.

Clearly, importing the same institutions that the well established and coherent Western architecture of the so-called social market economy or “German model” has not at all delivered the expected results and this disappointment calls for an explanation. Whereas in West Germany, institutions, economic specialization, firms organizations had jointly and slowly co-evolved, in East Germany, the divorce between the new institutions and the former specialization has led to a major crisis, still unsolved in spite of the very large effort deployed by German authorities and an intensive learning. In fact, Eastern firms, managers, workers,

THE GERMAN REUNIFICATION

DIAGRAM 3 - TRANSPLANTING A COMPLETE SET OF INSTITUTIONS IS NOT SUFFICIENT TO BUILD A VIABLE CAPITALIST SYSTEM



unions, banks and local authorities could not immediately capture the benefit of a coherent institutional design, because they had to learn how to behave and produce efficiently within this new context. This takes time, and the process is longer than the political and legal transfer. Clearly **institutions have to evolve slowly** and in any case several decades are needed in order to learn how to organize production, training, innovation, credit and so on. **Capitalist cannot be implemented by treaty or nor law.** Its efficiency derives from a slow process of trials and errors, which cannot be compacted into the very brief period of few years. Similarly, some behaviors which were supposed to be “normal” within old industrialized capitalist societies are not so, specially for individuals which have been socialized within a quite different political and economic order. The institution of capitalism is not a matter of “big bang” but the final outcome of a long, painful and contradictory process.

II -3. A false reduction of capitalism to markets, self-equilibrating but not self-instituting

Therefore it is more satisfactory to label as a “**great transformation**” the processes observed within former socialist countries than to consider that it is a simple **transition** from one regime to another. After all who knows what precise socio-economic system will emerge in Russia and even Germany? But this too is a challenge to conventional economics and the message has been perceived by a larger and larger fraction of social scientists. Facing these poor results, neo-classical economists are now thinking about a neglected issue: what are the basic institutions of capitalism? They recognize that they know very little about the so-called “optimal sequencing of structural reforms” (M. Dewatripont, G. Roland, 1996).

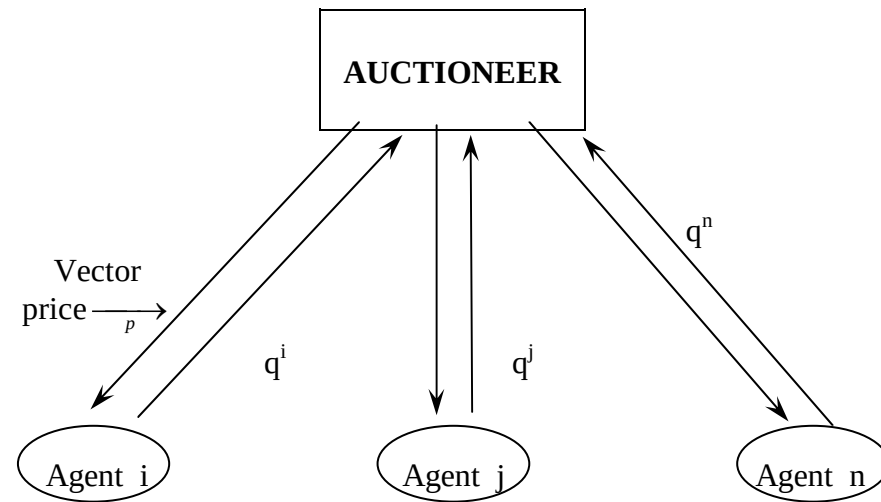
On one side, theoreticians must admit that the two welfare theorems which are used in order to prove the superiority of capitalism over the centralized system are quite misleading indeed. It has been pointed out that the framework of General Equilibrium Theory does not correspond to a monetary decentralized economy but precisely to a Soviet type one, in which the auctioneer is in fact a benevolent Gosplan, which centralizes all excess demands and supplies and set prices in order to balance them. This is quite an irony indeed (J.P. Benassy, 1984)! Therefore, from a theoretical standpoint; the so-called socialist economy could have been coherent, and the general equilibrium theorems precisely show this paradoxical statement (Diagram 4, right hand side).

But this means, on the other side, that economists do not have a complete and satisfactory formal demonstration about the superiority of really existing capitalist economies, for which of course no central planning agency is operating. As soon as transactions are really decentralized by monetary exchange, new compatibility problems emerge due to the formation of expectations, the uncertainty about the use of the money balances and financial assets, and of course the role of time in investment decisions. The equivalent of the auctioneer is then a well organized system of payment. Ultimately a central bank is needed in order to clear and balance the net credit and debt between banks, producers and wage earners (Diagram 4, left hand side). The most crucial capitalist institution is therefore the **monetary regime**...which is actually missing in contemporary Russia, a feature which prevents the building of related and more sophisticated capitalist institutions. The economists realize that the sophisticated models they build for modern economies do not deal

explicitly with one of the founding principles of capitalism: they take them for granted and have no theory about it.

DIAGRAM 4 - FOR A DECENTRALIZED ECONOMY : THE CORE INSTITUTION IS A CREDIT AND MONETARY REGIME

WALRASIAN ECONOMY



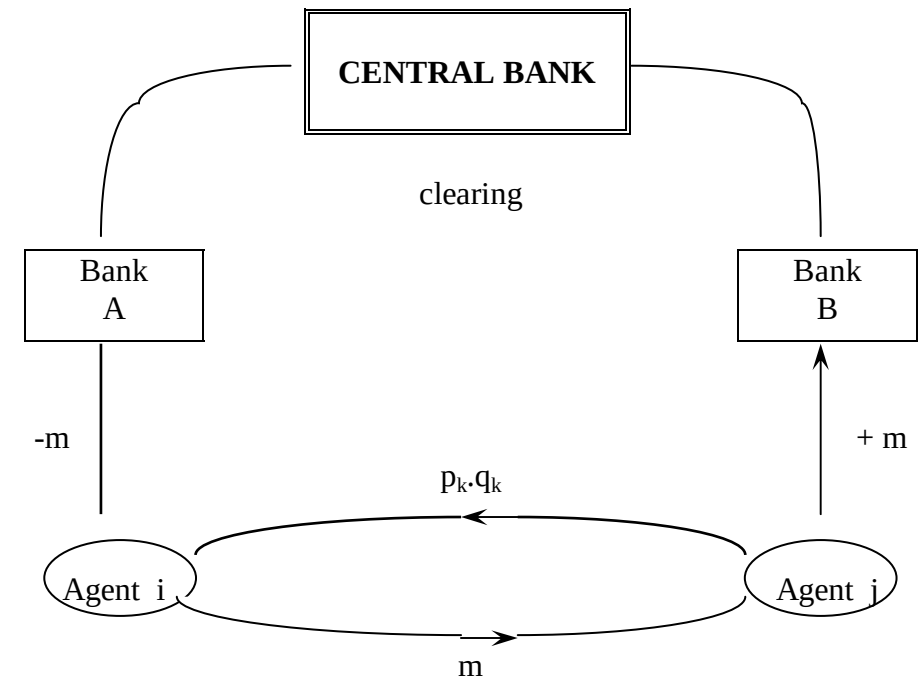
No more the auctioneer
i.e. Gosplan

→ A method for clearing credit

Neutrality of money



DECENTRALIZED MONETARY ECONOMY



i.e.

*a payment system and
a monetary regime*

individual behavior is conditioned by the
monetary regime

If such a system is established, then economic agents will normally transact by bilateral exchanges. But there is a huge gap between a series of disconnected bilateral exchanges and the constitution of a market which centralizes and makes compatible a bunch of individual demands and supplies over a huge number of individuals and goods which are substitute. Quite a few markets are organized according to the quotation of US T-bonds at Wall Street. Precisely a highly sophisticated legislation and public interventions are needed in order to get the nice properties of an integrated and efficient market. This means that **market exchange is not a natural phenomenon but quite on the contrary a social construction**, in order to assess the quality of the good, the credit of the buyers, the effective delivery of the good by the supplier, the reimbursement of the credit by the debtor, the absence of collusion, distorted and asymmetric information or prevent side transactions (Diagram 5). Furthermore, the institutional arrangements which are designed in order to cope with these problems may vary drastically from one market to another (from raw materials to financial derivatives not to forget manufactured goods) and from one society to another (an African village market is not a miniature of Wall Street). Historians, such as Fernand Braudel (1979), have stressed that the public markets, by opposition to private markets (where best informed traders gain a lot at the determinant of others) have been the outcome of struggles between traders and public local authorities. In the past, many societies have organized their exchanges without the organization of markets in the modern sense and some of them still persist in contemporary world. Even within modern capitalist societies, it is not always evident to build a new market since it is the outcome of a social bargaining among the relevant groups and not at all the automatic derivation from any economic law (M.F. Garcia, 1986).

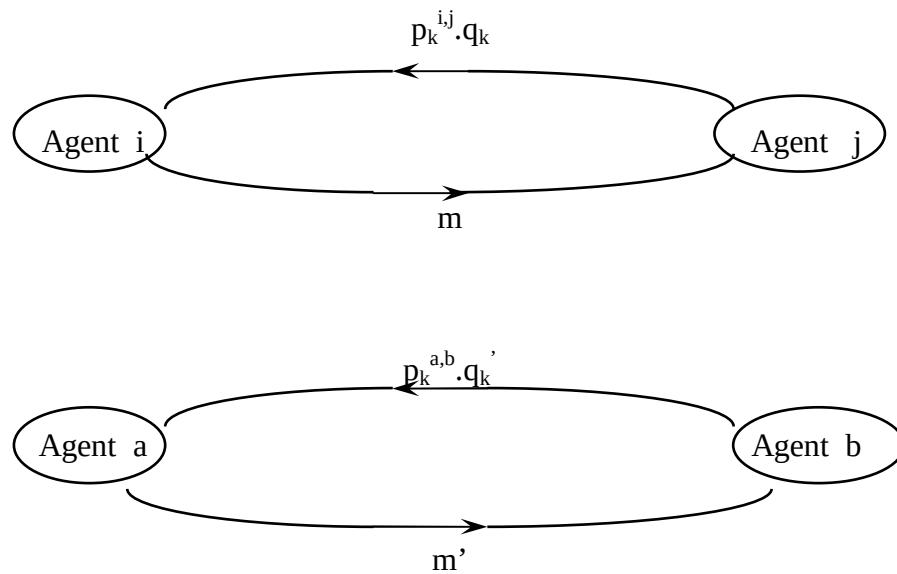
Here comes a striking paradox between the achievements of modern economic theory and the contemporary issues and transformations to be explained: the capitalism seems to have won against alternative systems but the economists, in assessing the transition of former Socialist countries, had to recognize that they knew little about the **necessary and sufficient conditions for a viable capitalist system**. Furthermore even if this system is superior, there is not any theory **about the complex process of implementation of the capitalist institutions**. This is precisely the dilemma, which was pointed out by Robert L. Heilbroner (1988) an decade ago. Will the economic profession ever change?

III - ANOTHER PARADOX: POLITICIANS FALL IN LOVE WITH MARKETS, AT THE VERY MOMENT WHEN THEORETICIANS SHOW HOW RESTRICTED ARE THE HYPOTHESES NEEDED FOR AN EFFICIENT ALLOCATION BY MARKETS

After the dramatic episode of the inter-war great depression, a vast majority of economists did agree that pure market mechanisms were not sufficient to deliver full-employment, fast growth and financial stability. The so-called Keynesian revolution brought legitimacy to a series of State interventions in the domain of competition, labor market, finance and of course budgetary and monetary policies. The neo-classical-Keynesian synthesis stressed that a pure market economy was not self equilibrating. Thus, during the golden age, State interventions were accepted by a wide range of politicians, from social democrats and centrists to typical conservative parties. Didn't the President Nixon declare in the early 70's: "Now we are all Keynesians". Who would dare to say so in the 90's? The motto would be on the

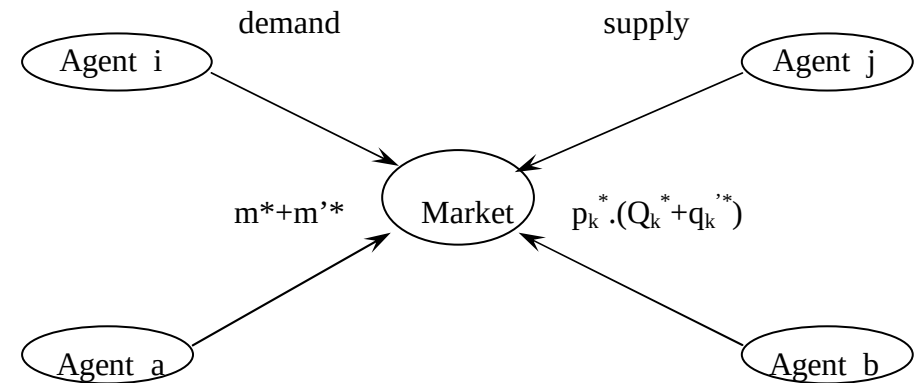
DIAGRAM 5 - MARKET IS A SOCIAL CONSTRUCTION

FROM A SERIES BILATERAL EXCHANGES



- Heterogeneous price for the same good
- It might well be a different good: asymmetric assessment of quality

TO A MARKET-PLACE



- Clear definition of the quality
- A single price whatever the buyer and the seller
- Transactions and prices now differ from the bilateral exchange case

contrary: “Markets we trust you!” since the general opinion seems to be that all State interventions are bound to fail or deliver counter-productive results. Such an U-turn deserves an explanation.

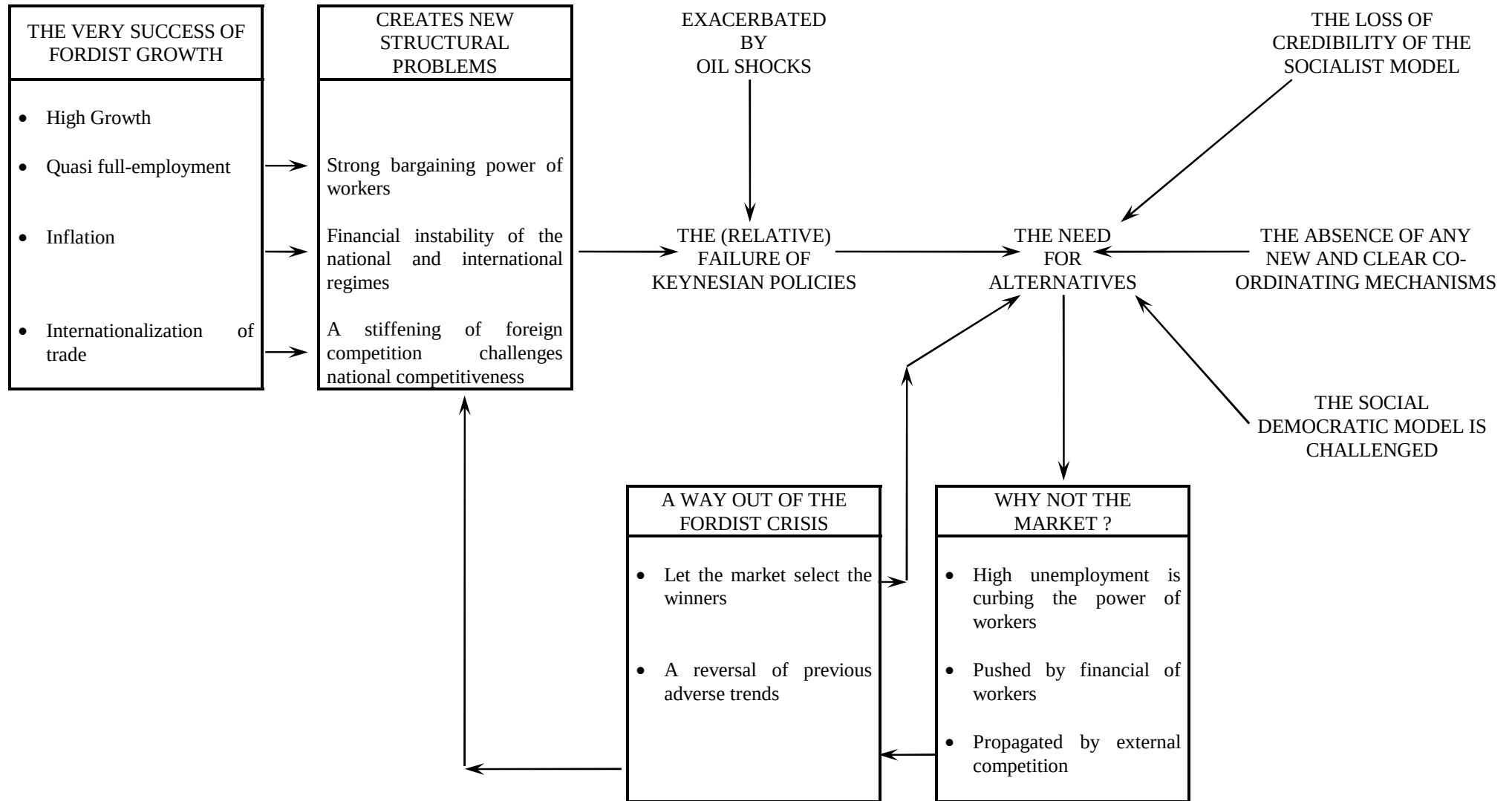
III -1. The success of the market ideology: a method for eroding/reforming Fordist institutions and overcoming political uncertainty?

“Régulation” Theory has provided another interpretation of the Golden Age : the triumph of Keynesian counter-cyclical policy was the most visible part of a structural transformation of quite all the institutional forms, away from the competitive capitalism (R. Boyer, 1990; R. Boyer, Y. Saillard Eds, 1995). Basically a new capital labor compromise has promoted an unprecedented synchronization between productivity increases and real wage hikes, or more generally between production and consumption norms (M. Aglietta, 1982). Simultaneously, competition has been mitigated by oligopolistic patterns, whereas the stability provided by a new international regime has opened more degree of freedom for national economic policies. And of course, the State has played a major role in providing the basic collective investments needed for the maturation of mass consumption and production (transport, housing, education, health). Therefore, it would be more accurate to label the **Golden Age as Fordist** (new productive methods), **Beveridgian** (collective provision of the goods and services necessary to inter-generational reproduction) and finally **Keynesian** (new links between the private interests and public interventions).

But any “régulation” mode cannot last forever, since it may enter into conflict with external or/and exogenous transformations affecting the world economy. But the most serious challenge is associated to the slow erosion of institutional forms, which may loose their ability to monitor the recurring unbalances which are associated to any capitalist accumulation regime. “Régulation” theory stresses that the same factors which explain the success of a regime are at the origin of its maturation, decay and demise (F. Lordon, 1993). This teaching specially applies to the period 1945-1996. The very success of the Golden Age institutions has triggered new emerging unbalances such as stagflation, accelerating inflation during the early 70’s, unemployment, erosion of productivity increases specially in the US, destabilization of the Bretton Woods fixed exchange rate system, growing role of exports instead of domestic demand. All these structural changes are adding-up and define macroeconomic and sectoral evolutions which are unprecedented and cannot be interpreted within the Fordist-Beveridgian-Keynesian mode of “régulation”: these novelties call for an alternative explanation, outside of the direct Keynesian orthodoxy and legacy.

Have not conventional counter-cyclical Keynesian policies been less and less efficient during the 70’s and 80’s? Is not the failure of the French 1981-1982 reflation a clear evidence of the end of an era of State interventions? Why did the highly original social democrat configuration observed in Sweden has recently be unable to continue to promote full-employment? If in the past, the choice of an exchange rate was a matter of public policy, nowadays is not finance more and more governing exchange rates and by the way national monetary and budgetary policies? Since growth has slow-down, public budgets are no more self-equilibrating and governments encounter many difficulties in reconciling the trend in spending associated with past institutionalized compromises (R. Delorme, Ch. André, 1983) with a reduced growth of the tax base. In quite any countries, politicians are facing hard times and highly difficult choices? Furthermore they are left without any clear representation about

DIAGRAM 6 - HOW TO EXPLAIN THE RETURN TO THE BELIEF OF SELF REGULATING MARKETS?



the key mechanisms governing macroeconomic variables. Therefore, one observes a strong temptation to focus economic policy on more sectoral and microeconomic measures, with the hope that they will finally solve macroeconomic unbalances. By default of any alternative representation, it has been tempting for politicians to declare that they are in favor of the market, which is in charge solve all the problems they are unable to deal with within the political arena and the public sector (Diagram 6). Hence, all the measures about decentralization, trade and financial liberalization, labor market flexibilization, privatization of public enterprises, new voluntary and private schemes for welfare...

Willingly or unwillingly, most governments have come to declare that they prefer market mechanisms to public interventions, that State should be reformed and rationalized and that they experienced few degrees of freedom in governing micro and macro-evolutions. The reference to the “**invisible hand**” was the only alternative left in order to provide a minimalist understanding of highly complex and interdependent evolutions. But is this Panglossian optimism about the overwhelming efficiency of market grounded in sound theoretical constructions? Here comes a second surprising discrepancy between economic practices and the teachings of contemporary modern economic theory.

III -2. Modern micro theory shows how restricted are the hypotheses required for the second welfare theorem: in real economic life, markets are not necessarily efficient

The second paradox is then the following : politicians and experts recommend a “market therapy” at the very moment when the more distinguished and dedicated mathematical economists prove that the market mechanism is not efficient for most of the coordination problems which arise in contemporary capitalism and are the more important to solve (for a more complete demonstration see R. Boyer, 1997). One of the major achievements of modern economics is to have exhibited a set of precise conditions under which a general equilibrium exists and corresponds to a Pareto optimum (G. Debreu, 1959). At least seven hypotheses are required. Money is only a numeraire and all transactions are centralized and prices are set by an auctioneer. Each economic unit adopts a parametric behavior and takes for given the strategy of other individuals. There is a complete and finite description of all the goods without any ambiguity concerning quality and availability. There exist no collective goods and they are not necessary for private production. All the technologies are common knowledge, set once for all and exhibit constant returns to scale. There exists a complete set of contingent future markets in which goods can be traded and prices set for each event which may happen in the future, the list of which is perfectly known at the beginning of the period. Last but not least, distribution issues are totally distinct from allocational problems or alternatively equity and social justice principles can totally be disconnected from allocative efficiency (Table 1, first column).

Back in the 60's, the expectations of general equilibrium theorists were highly optimistic about the possibility to remove some of these quite restrictive hypotheses, while getting analytically tractable and general conclusions (B. Ingrao, G. Israel, 1990). Nowadays, it is clearly established that the removal of any of the seven hypotheses drastically affects the existence of equilibria and their Pareto optimality. First, a *decentralized monetary economy* exhibits a new variety of equilibria with some extreme cases in which no monetary equilibrium exists. The introduction of expectations, which can be fulfilled or disappointed, creates a lot of temporary equilibria, far away from the ideal of a single equilibrium set by reference to the

**TABLE 1 - IN REAL ECONOMIES, AS MANY MARKET FAILURES AS
EFFICIENT MARKETS.**

THE HYPOTHESES OF THE TWO WELFARE THEOREMS	STYLIZED FEATURES OF CONTEMPORARY ECONOMIES	CONSEQUENCES UPON MARKET FUNCTIONING
1. De facto, complete centralization of transactions, no need for money 2. Atomistic competition among very numerous agents 3. The list of goods is finite, their quality is known 4. Purely private goods, without any external effect 5. Constant returns to scale and fixed technologies 6. All contingent future markets exist 7. Equity principles have not any influence upon efficiency	1. Largely decentralized exchanges allowed by money and credit 2. Imperfect competition via product differentiation is the rule 3. Producers are better informed than consumers, products innovation is crucial 4. Existence of many public goods and external effects (security, education, R&D,...) 5. Learning by doing, by using and increasing dynamic re-returns to scale are significant 6. Only few financial markets allow intertemporal transactions 7. Workers loyalty and commitment are linked to a fair treatment	1. Multiplicity...or absence of any equilibrium. Efficiency is no more warranted 2. Market equilibria are no more efficient 3. Markets do not clear: unemployment and over capacities 4. Competitive markets imply an under-investment in collective goods 5. Imperfect competition is the rule, inefficient techniques can persist, multiplicity of path dependent equilibria 6. Existing markets cannot deliver an adequate coordination: inefficient equilibria are the rule 7. Markets do not clear; unemployment can persist

fundamental variables governing value of goods. Second, in any industrialized economy, *strategic behaviors* among a small number of large competitors are the rule and this feature destroys the very concept of a general equilibrium independent of some rules of the game concerning competition, which generally speaking is imperfect. Third, *the absence of product innovation* is quite contradictory with the very logic of a capitalist economy, but then they are introduced, market allocations are no more efficient. Still worse, when the quality of the good is uncertain for the consumer, not any equilibrium exist when the price has to fulfill two distinct functions: revealing quality on one side, allocating resources on the other side. The same problems arise when the *production and financing of public goods* is introduced in general equilibrium models: by definition, markets alone cannot decide about the optimum volume to be provided by a State in charge of promoting social welfare. A fifth obstacle to the generalization of General Equilibrium Theory concerns process innovations and more generally the spill-over effects, either positive or negative, associated with radical innovations. The allocation of investment in research by pure market mechanisms is then not optimal. A still more devastating event takes place when the theoreticians take into account that only few contingent markets exist : then a lot of complex dynamics may take place and deliver strong a discrepancy between a market equilibrium and the optimum path for a rationally planned economy. Still more fundamentally, many empirical evidences and experimental economics convincingly show that value judgments about the distribution of income do play a role in the efficiency of production, since workers proportionate their efforts and commitments to the reward they consider as fair (Table 1, Third column).

The dilemma of modern economic theory is precisely that all these configurations are not the exception but the rule for contemporary developed countries. Thus, since all these features are quite frequent in really existing economy, the superiority of the market is only by default of alternative coordinating mechanisms. Economic theory does not prove that markets are always and any circumstances, the most efficient way of allocating resources. In some cases, public interventions improve the outcome for all economic agents. For instance, contemporary growth theory (P. Romer, 1986; Lucas, 1988; well summarized in R.J. Barro and X. Sala-i-Martin, 1995) shows that a private economy equilibrium is not Pareto optimal, as soon as innovation exerts significant external effects (positive or negative). Similarly, the strong positive externalities associated to education call for public intervention, the asymmetry of information between producers and consumers can be corrected by independent rating agencies or some public norms. But conversely, public interventions even if they correct market failures may in turn introduce distortions. There is rarely a first best solution, and the problem is to choose among second or third best coordinating mechanisms (Ch. Wolf, 1990). Nevertheless, during the Golden age, the more egalitarian societies seem to have been more efficient than the more unequal ones, whereas some indicative planning has helped in synchronizing a series of individual investment decisions, just to compensate the absence of contingent markets (Table 1, Second column).

In other words, this second paradox has two sides. First **modern economic theory contradicts the Dr. Pangloss' optimism of conservative politicians**. Second, the very maturing and sophistication of capitalist economies make **less and less realistic** the belief in the self equilibrating role of markets and their efficiency. There is another evidence of this discrepancy between academic representations and governments strategies.

TABLE 2 - THE PROMISES AND THE DELIVERIES OF THE FREE MARKETERS

	PROMISE	OUTCOME
1. Capital labor relation	◦ Deregulation will allow full employment	◦ No clear impact
2. Forms of competition	◦ Deregulation will bring, more efficiency by the entry of new producers	◦ Re-regulation, less producers: from one national oligopolistic form of competition to another more internationalized
3. Monetary regime	◦ Control of monetary base is possible ◦ It provides price stability, without departing from full-employment	◦ Monetary innovation prevents this control ◦ Price stability, but mass employment
4. State	◦ Minimal State will enhance growth and productivity	◦ Lack of public investment ◦ Poor private productivity due to the lack of education and infrastructures
5. International regime	◦ Smooth currency and exchange rates adjustments ◦ External disequilibria will not more exist ◦ Complete autonomy of national economic policies	◦ Large ups and downs of exchange rates ◦ Unprecedented and stable polarization of deficit and surplus countries ◦ Stronger constraints upon the national degree of anatomy in economic policy choices.

III -3. Deregulation, privatization, liberalization have not delivered the expected results: is the efficiency of market a matter of science...or belief?

Since the end of the 70's, the majority of economic policies have been devoted to tentatively reduce the role of the State, and rely more upon market mechanisms. Financial deregulation has replaced detailed national regulations, many public firms have been sold through financial markets, some parts of the welfare systems have been privatized, labor market regulations softened and of course, external trade has benefited from a new wave of tariff reductions and exchange rates are no more set by public authorities but derive from the everyday quotations on currency markets. According to the free marketers, macroeconomic performances should be therefore far better: lower interest rates, more efficient health and educational system, more productivity and increased global welfare by the deepening of the international division of labor and finally no more inflation, a return to full-employment, budgetary equilibrium and external trade balance (Table 2).

In the light of the general argument presented before, it is not a surprise to observe that quite **none the promises of the free marketers has been fulfilled**. If productivity has increased for some deregulated sectors, it is not sure that quality has not deteriorated and the inequality widened between categories of consumers and specially businesses and households. Furthermore, most national oligopolies have been destabilized and the new boundaries established between emerging new sectors, but finally a new form of oligopolistic competition has emerged at the national or international levels. As the trajectory of the airline industries shows, free entry and pure competition are only transitory phenomena between two oligopolistic configurations. More generally, these sectoral deregulations have not yet triggered a new wave of productivity increases spreading from one sector to another, even if some measurement problems may arise.

Even the most conservative governments still suffer from significant public deficit and the external unbalances between the United States, Japan and Europe have persisted over more than one decade. The flexibilization of labor contracts and decentralization of collective bargaining has curbed down real wage increases, but has not solved the mass unemployment problem, so crucial for Europe. Reforms and rationalization of the Welfare State in the direction of privatization have not overcome the basic discrepancy between increasing social needs about retirement, payments, health care for the elderly, adaptation of the educational system. The major disappointment concerns the outcome of financial deregulation : exchange rates are more volatile than ever, uncertainty has become radical and systemic, economic policies are more and more constrained by the every day assessment of the financial markets. Clearly the only success is about the drastic reduction of inflation rates, but contrary to the promises of the neo-classical economists, the costs have been specially high in terms of employment and foregone potential growth.

Of course, neo-classical fundamentalists reply that this disappointment derives from too partial and timid reforms towards pure market mechanisms. They argue for instance that all the European unemployment problems derive from a still excessive regulation (G. Becker, 1996). But there is no clearly established theory or modeling which would show that a small dose of market mechanisms is bad for economic performance, but that a complete shift should completely reverse the outcomes. Historical record in the tradition of Fernand Braudel (1979) or Karl Polanyi (1944) suggests on the contrary that there exists an optimum degree in

the use of market mechanisms, since the two extreme configurations (no market at all or a full “ marketization ” of the society) generally deliver quite poor outcomes.

Therefore, if a jury were to assess the merits and limits of market, long run historical evidence, modern general equilibrium formal models and the contemporary record of economic and financial liberalization do not argue at all in favor of the thesis that the market is able to solve most, if not all, contemporary problems. **The reality of capitalism institutions seems to strongly contradict the ideology of free markets.** But since politicians are left without any doctrine in order to legitimize public interventions, they have preferred to issue strong public statements in favor of markets, rather than to admit that they had no alternative institutional proposal to solve the more pressing contemporary problems, such as unemployment in Europe and rising inequalities in North America. This could be an explanation of the second paradox, pointed earlier, which is directly correlated to a third one.

IV - A THIRD PARADOX: MODERN ECONOMIC THEORY MAINLY STUDIES SUB-DOMAINS AND DETAILS, RARELY THE FUNCTIONING OF THE WHOLE CAPITALISM SYSTEM

When political economy was recognized as a separate discipline, only few and dedicated scholars were working on the understanding of emerging capitalism system. The theory was in the infancy, the concepts quite crude...and logical mistakes frequent, but the intent was to capture the essence and logic of the whole social and economic system. Nowadays, the configuration is quite opposite: the vast majority of economists are contemporary, they benefit from the conceptual breakthroughs of their predecessors, they discuss carefully each notion and concept, are trained to capture their ideas into rigorous mathematical models.

On top of these efforts, they use numerous and detailed statistics and econometric techniques to test the predictions of their models and are joining academic associations devoted to the collective improvement of a given discipline or sub-discipline. The principle of division of labor, which have been so important in the history of capitalist production and manufacturing, has been extended to intellectual life. Therefore, one should expect an unprecedented quality of economic theories and a remarkable accuracy of the predictions which can be derived from them. After all, reading some of the leading academic journals, one could get the impression that economics is becoming a normal science under the model of the physics or biology.

The third paradox is precisely **that this extreme division of labor among economists does not provide any more any coherent and satisfactory representation of contemporary capitalist system.** The numerous results obtained in each sub-domain are either negative or partial (the theory explains a very minor fraction of the phenomenon observed) or contradictory one with another since adding up all the competing theories deliver no general result at all.

IV -1. The failed hopes of a “generalization” of General Equilibrium Theory

A short summary of the achievements of the distinguished scholars who have tried to generalize General Equilibrium Theory by removing each of the specific and limiting

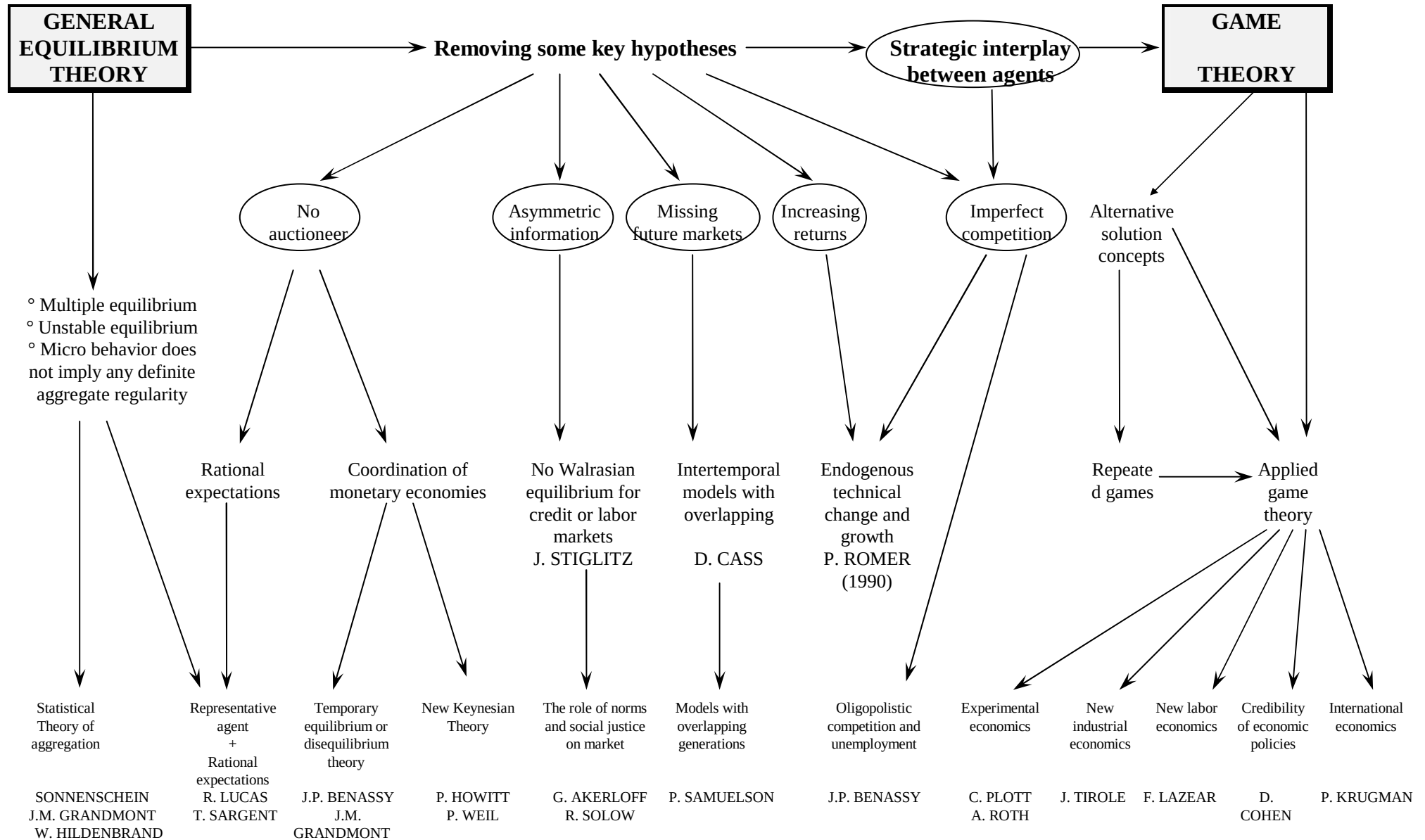
hypothesis is enlightening about the current state of economics as a discipline (Diagram 7). Back in the 60's, the hope was to progressively generalize the highly idealized and unrealistic model and converge towards a **new formalization** which should be simultaneously grounded in clear axioms and representative of really existing economies. Unfortunately, two decades later, the profession of mathematical economists had to recognize that the removal of each separate hypothesis opens a new economic world, highly specific, which finally cannot be any more compared to the other path followed by other scholars. Each realistic hypothesis opens a whole spectrum of models, which are so complex and rich in terms of results, that they cannot be pooled into a renewed general equilibrium model.

If the auctioneer hypothesis is rejected, new neoclassical theory has stressed the role of expectations in the sense that the rational calculus of each economic agent is trying to mimic what would deliver a pure Walrasian economy (R. Lucas, 1983). But this elegant construction has been challenged, since it requires an incredible informational and computational capability from each economic unit...and assumes that the actual economies are Walrasian, a quite dubious hypothesis indeed! By contrast, new Keynesians argue that many of the results of General Equilibrium Theory can be obtained within the same rational expectations theory (Ph. Weil, 1989). But previously, other theoreticians had modeled temporary equilibrium, under the hypothesis that expectations are not necessarily rational, nor perfect, and that is the essence of Keynesian unemployment (J.P. Benassy, 1982). Therefore, within the same research program, quite opposite results have been obtained: convergence towards full-employment on one side, persisting unemployment on the other side.

One imagines easily that the results are still more diverging if one is concerned mainly by the asymmetry of information (J. Stiglitz, 1987). Unemployment then derives from the inability of the managers to monitor the private information held by workers about the intensity of their effort, and unemployment is then used as a disciplinary device to elicit commitment from opportunistic workers. But a totally different economic world is opened by overlapping generations models: economic dynamics comes from the imperfect transmission of wealth from one generation to another and this is a response to the fact that contingent markets are quite rare, in spite of the multiplication of financial innovations about derivatives. Still another path is followed by the imperfect competition school which builds upon the intuition of Chamberlin about the quite restrictive conditions for pure competition. Then, unemployment is the joint consequence of oligopolistic pricing upon the good markets and some oligopolistic rents extracted by unions (J.P. Benassy, 1992).

The role of econometric methods should be to test one theory against another and thus progressively work out a general theory which would encapsulate all the basic axioms and would deliver accurate predictions for any past known experience. Unfortunately, there are serious methodological problems in testing one model against another and there are few examples where econometric techniques have delivered such a crystal crisp message. Even if applied economists refer to Popperian principles about the falsification of their hypotheses, their everyday work is basically "confirmationist": "the data do not reject the hypothesis at a given confidence level". Therefore, there is not any strong selection among theories concerning their respective explanatory power and in many cases the core hypotheses of the model explain only a limited fraction of the variance, because many ad hoc technical hypotheses have to be added and do contribute to the global explanatory power. Therefore axiomatic methods are ruling and/or ad hoc, dreamed or imaginative models proliferate

DIAGRAM 7 - FROM GENERAL EQUILIBRIUM THEORY TO GAME THEORY: ANALYSES BY DOMAINS BUT NOT ANY THEORY FOR THE COMPLETE ECONOMIC SYSTEM



without any empirical control, or so few and weak that they are not discriminating. In other words, in spite of an heavy used of mathematics and frequent statistical tests, economics is far from having reached the rigor and relevance of physics (B. Amable, R. Boyer, F. Lordon, 1995).

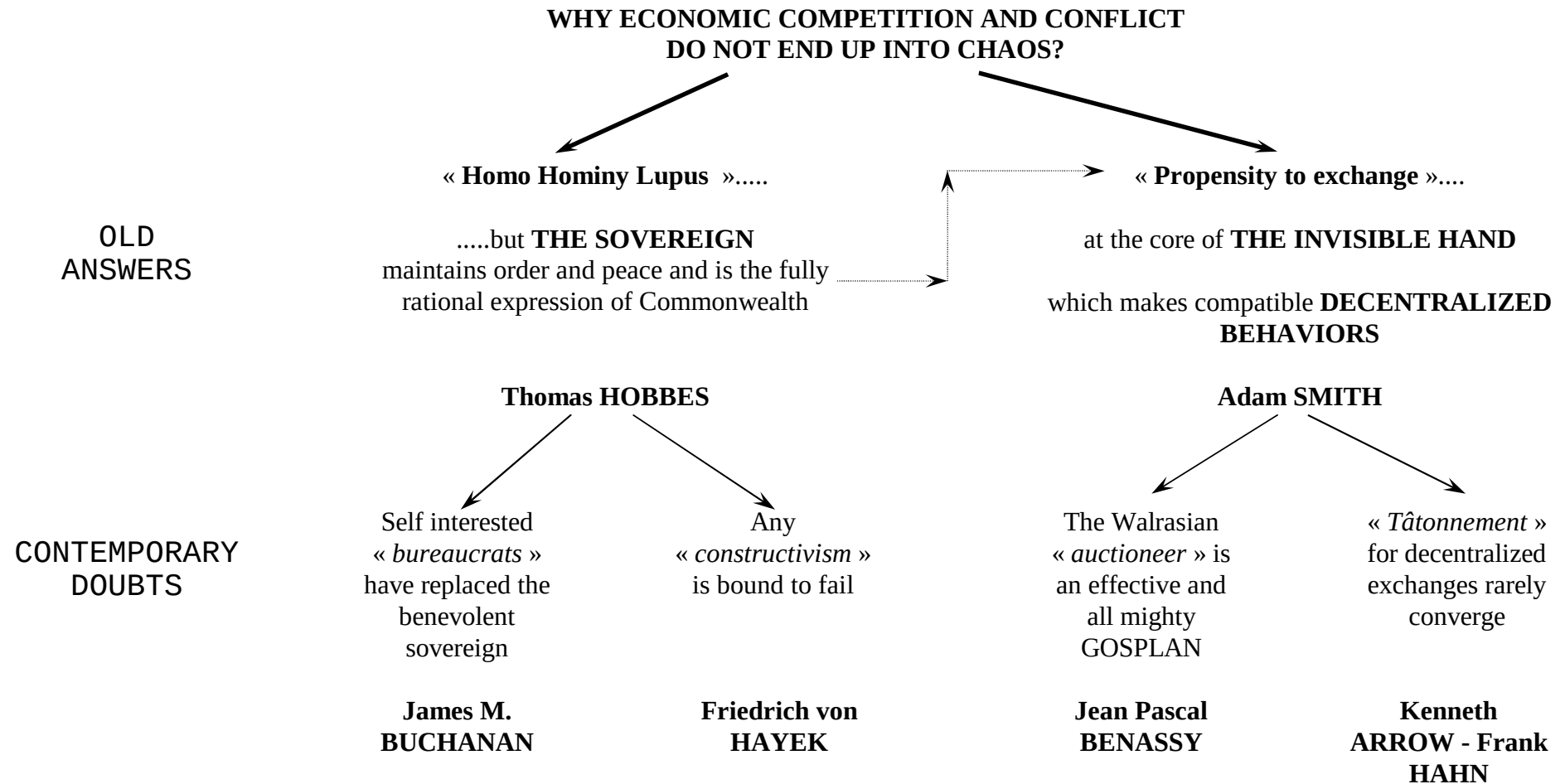
Therefore, more than an harmonious division of labor among diverse economic specializations (theoreticians, statisticians, econometricians, economic policy analysts,...), contemporary research displays **a form of balkanization** among quite opposite approaches, tools, and still more results. There is no better example than the current fashion for game theory : these quite attractive tools can deliver nearly every required result, provided that the structure the game and the flow of information and the sequencing are properly defined. The relevance of the conclusions is directly associated to the adequacy of the core hypotheses...which are never tested but simply introduced by few and subtle references to some of the features of the real economies. But why to select one feature against another? Contemporary research is far away from the ambition of general equilibrium theory to provide a unified model, valid anytime and everywhere. There is a huge number of models differing by the core hypotheses, the tools used, the sub-domains investigated (industrial economics, labor markets, economics of technical change, growth theory, business cycles models, regional economics, international relations and so on) and the position of the economist (manager, consultant, international expert, civil servant, central banker, adviser of unions).

Therefore, contemporary economies are more complex than ever, economic profession has specialized accordingly,..., but unfortunately the intellectual relevance is far back and lagging with respect to the requirement of a minimal understanding of economic systems as a whole. At a period when financial markets interact with monetary policy, forms of competition, labor market adjustments, and of course international trade, production and finance, it is highly detrimental to compartmentalize the research in economics. Contemporary research understands a lot of detailed mechanisms, but does not grasp how these components make a more or less coherent picture. It reminds amateur paleontologists which would have gathered a lot of scattered bones, studied them carefully and even built wonderful models about each piece...without even daring to imagine that they belong to the same dinosaur, the concept of which would help to structure the whole research program and of course, the relevant theory !

IV -2. The main economic institutions necessary for the viability of a capitalist economy

Is this state of economic theory a fatality which cannot be reversed? By chance, various researchers belonging to different disciplines (history, sociology, law, economics,...) have begun to investigate carefully what are the necessary institutions for a capitalist system to function and adapt. Frequently, this new institutional economics is accused to be built upon ad hoc hypotheses, by inductive methods and not so much by a deductive or still better an axiomatic approach which are assumed to be the distinctive feature of "true science". A first step in this direction can be made by starting from the old problem of political economy, which is still useful for understanding contemporary capitalism: why a system built upon competition and conflict does not end up into chaos (Diagram 8)?

DIAGRAM 8 - AT THE ROOTS OF POLITICAL ECONOMY



Basically, scholars are divided among two visions and approaches. Starting from **Thomas Hobbes**, many philosophers and political scientists do focus on the role of the Sovereign or in modern language the State, in imposing his authority and therefore rules governing the interaction among individuals. But on the other side, **Adam Smith** starts from a totally different vision of mankind: man is not necessary the enemy of anybody else, but exhibits a propensity to exchange which is the basis for mutually advantageous bilateral exchanges. The invisible and anonymous hand of the market is replacing the hierarchical authority of a political order. Basically, many difficulties in understanding capitalism derive from its dual aspect, both political and economical, and the specialization of scholars make the two visions more and more diverging.

For simplicity sake, let us follow the trajectory of political economy and try to show that the last resort body which warrants the existence of a market economy is the State. It has already be shown that the general vision of a peaceful adjustment via a series of market transactions is not substantiated by modern economic theory: as soon as the Walrasian auctioneer is non existing -and after all Gosplan has been disbanded in contemporary Russia !- a market equilibrium does not necessarily exist if transactions are totally decentralized and take place before the equilibrium price is reached (K.J. Arrow, F. Hahn, 1971). Nevertheless, capitalist systems are not that chaotic and usually function, rather well which means that some key institutions are playing the role of diffusing information and allocating goods and resources according to some rather effective rules.

Actually, these institutions can be built conceptually, starting from the very requirements of decentralized exchanges (Table 3). Clearly a payment system has to replace the central planning agency, but this system is managing credit and debt, and not directly the circulation of goods. As previously demonstrated (Diagram 4, supra), this calls for a series of banks which themselves require a central bank in order to compensate recurring disequilibrium among commercial banks. Therefore, the first constitutive institution is the **credit and monetary regime**. Incidentally this explains why the absence of a robust and coherent payment system prevents the very constitution of product and factor markets, as evidenced by contemporary Russia, where barter exchanges are spreading by lack of any reliable system of payment. Then if there is such a stable credit regime, markets can be organized provided that the more powerful actors have interest in implementing them. Here comes a second basic institution, **the form of competition**, which describes the conditions of entry, the number of existing firms, their strategic interactions, public regulations governing fair competition, and so on....

One of the more misleading hypotheses of Walrasian economics has then to be removed: there is no such a market in which the service of labor is exchanged. Labor is not a conventional commodity even if wages seem to be set on the so-called labor market. Basically, labor is the support of a social relationship: wage-earners accept the authority of the firm in exchange of a remuneration, which means that strategic interactions between workers and managers necessarily take place during the bargaining process about wage, but also afterwards in the organization and intensity of work in everyday production. The third institution to replace the service of labor is the **wage labor nexus**, defined as the precise set of conditions and rules which affect the productive use of labor and income formation of wage earners.

TABLE 3 - WHEN THE WALRASIAN AUCTIONEER DOES NOT EXIST ANY MORE, FIVE INSTITUTIONAL FORMS ARE REQUIRED

What does the auctioneer do?	Is it coherent and relevant?	The role of Institutional forms
1. Money is only a numeraire... The auctioneer centralizes all the transactions	Money is a medium of exchange and reserve of value This not a market economy but GOSPLAN	The need for rules of money creation and destruction A credit/monetary regime decentralizes transactions
2. All agents are price takers	Strategic behavior is frequent	Form of competition differs from pure and perfect ideal
3. The service of labor is exchanged on a typical market	The dual nature of labor : present wage against future effort	The labor contract is embedded into a wage labor nexus, which implies a social relation
4. No State	A required authority for sustaining property, contracts, monetary exchange, public goods	The configuration State/Economy
5. No Nation-State	Any given State is ruling upon a well defined territory	The insertion into the international regime

Could all these three institutions be self implementing? Yes, usually reply most economists, but immediately other social scientists argue that the political and legal order is necessarily involved in the emergence and implementation of these forms. Until now, the only viable monetary regimes have been controlled and endorsed by a public authority. Similarly, forms of competition necessarily imply the imposition by the political process of some constraints or rules to be enforced, just to prevent collusion which would be detrimental to the rest of the society. Finally, even a competitive wage labor nexus calls for some laws which for example forbid any coalition between the workers or the firms. In this context, one cannot conceive a capitalist economy without an explicit **role of the State**. And of course, this is a new paradox. On one side, capitalism emerges when economic activity is separated from the direct control of the sovereign. But on the other side, the very founding institutions of this new economic system call for original forms of State interventions. Therefore, the nature of the relationship between the political order and the economic institutions defines a fourth major institution.

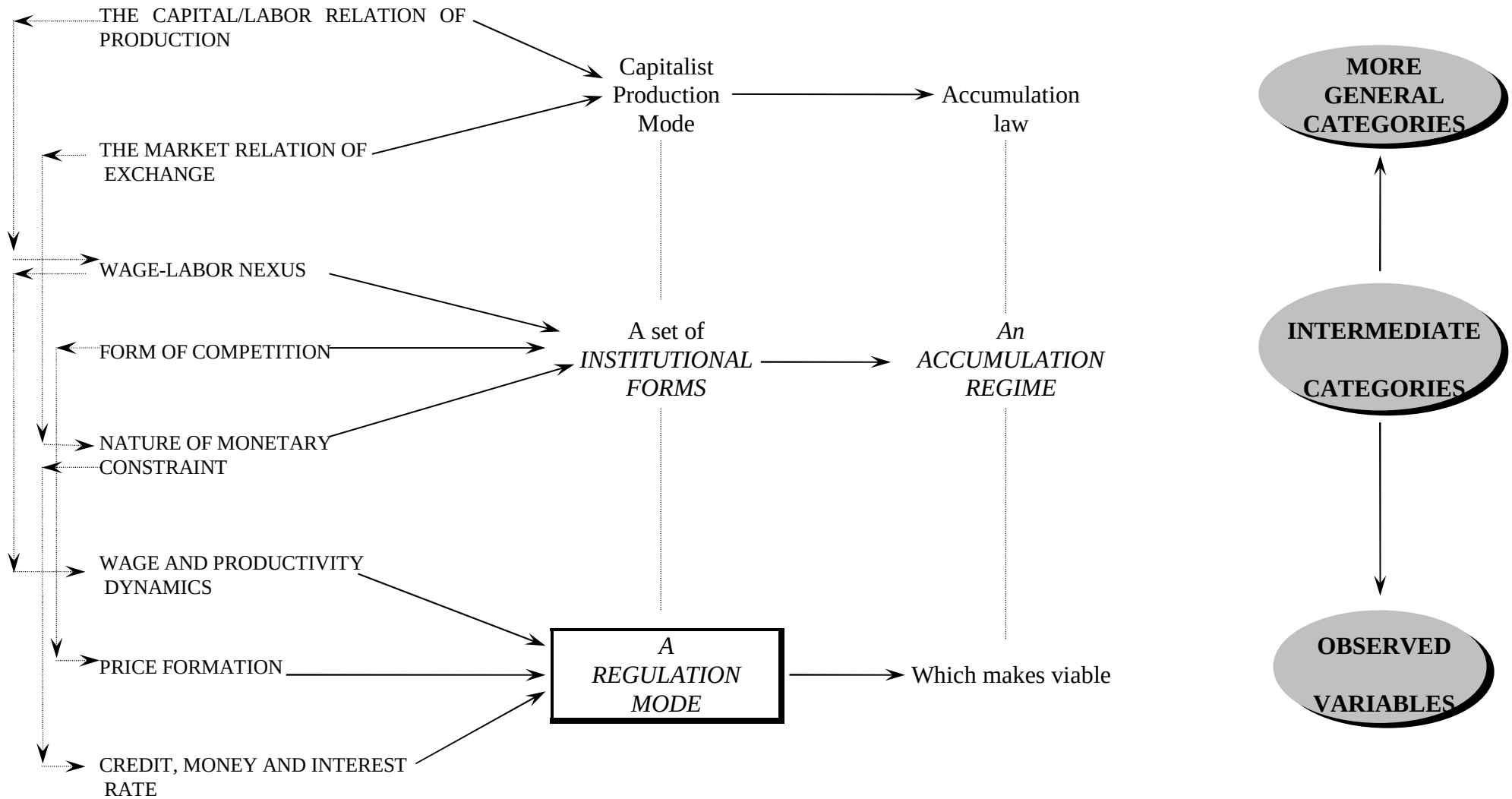
But the legitimacy and coercive power of a State is limited to a given territory and therefore a fifth and complementary institution is to be introduced. The contemporary Nation-State is simultaneously defined by the *internal political process* of constitution of a domestic constitutional order and by the *external recognition or imposition* of a style in the relationship with other Nation-States. Therefore, the modalities according which a Nation-State organizes its relationship with an **international regime or configuration** defines the last general institution which is necessary to analyze a capitalist economy. We are then far away from the a-temporal and a-territorial Walrasian model and the five institutions are now organizing the interactions among economic units, both in terms of information flows and allocation of resources and products. The task of the economist is now to assess the viability or the incompatibility of an institutional architecture which has been brought by past political processes and economic specialization.

IV -3. Accumulation regimes and “régulation” modes: a method for analyzing capitalism as a system

One could recognize the core concepts of “régulation” theory. But, it is important to stress they have been first derived, not from the limits of general equilibrium theory, but from a critical appraisal of Marxian theory. The majority of economists have been convinced to abandon the analysis of capitalist dynamics, from the observation of some methodological mistakes within the original works by Karl Marx. But they were falsely attributing to the global and systemic character of Marxian theory, errors which were largely related to methodological approximations and inadequate empirical hypotheses. “Régulation” theory was developed in response to these criticisms, but while preserving a macroeconomic approach to capitalist accumulation, growth and crisis (Diagram 9). This theory is built upon three guiding principles:

- ° Contrary to Marx’s hypothesis, the conjunction of a market relation and a capital labor relation, defined at the most general level, are not sufficient to define a single and unique accumulation regime, which would for instance induce a tendency of profit to fall. Even if accumulation is the coercive law of capitalism, there may exist **several accumulation regimes**, both from a theoretical point of view and a historical one.

**DIAGRAM 9 - STARTING FROM MARXIAN THEORY TO UNDERSTAND THE INSTITUTIONS OF CAPITALISM :
« REGULATION THEORY » IN A NUTSHELL**



- ° Similarly, the very form of institutionalization of the capital labor relation i.e. the wage labor nexus, of the market relation, i.e. the monetary regime and the form of competition, is possibly creating new processes of socialization and economic dynamics. **The precise nature of institutionalization matters for capitalism**, which therefore can vary through time (it is the old question of the stages of capitalism mentioned in introduction) and through space (this theme was more neglected even if somehow touched by the theory of imperialism).
- ° In opposition with methodological individualism, or more specifically the new classical school, economic actors have not to perfectly know and internalize the regularities governing the macro-level of capitalist reproduction. By definition **institutional forms summarize the rule of the game**, reduce the relevant information to be gathered and analyzed, restrict strategic interactions to a very limited set and monitor the solutions given to possible and recurring conflicts and disequilibria. It is why **the “régulation” mode**, which is actually a guide line for individuals and groups is to be distinguished from the accumulation regime, which is an abstraction created by an external analyst in order to capture the inner structure of a given capitalist system.

It is not the purpose of this paper to present a survey of the main conclusions obtained by this research program, since it was done recently (R. Boyer, Y. Saillard Eds, 1995) and is periodically updated (*Lettre de la Régulation*). Somehow, pieces of this research have been mobilized earlier (§ II and III) and will be pushed a step forward by the next developments (§ VI and VII). For the time being, it is more interesting to note a surprising convergence with some recent approaches in institutional economics which have had some impact.

IV -4. A taxonomy for an institutional economy: a preliminary step towards the understanding of capitalism as a system

Any alternative to conventional neo-classical economics has to develop a set of common founding concepts, rigorous methods, which are shared by a large community of researchers, whose advances can be used by other members involved into the same research program. It is specially so if the objective is to understand the dynamics of a capitalist system, which by definition is supposed to form an entity, which deserves an integrated approach. It would be pitiful if the new wave of institutional analyses were to produce a series of disconnected results from competing, or worse fragmented, communities. Therefore, this section proposes a provisional common basis for promoting such an understanding of capitalist systems, and overcome the paradox that neo-classical theory is currently facing. The taxonomy builds upon recent proposals from economic historians (D. North, 1990) and political scientists (Ch. Sabel, 1997) and is rather compatible with a logical extension of “régulation” theory.

Too often, any coordinating mechanism alternative to markets is equally labeled as constitution, institution, organization, convention, collective or individual routines as if these terms were synonymous whereas these terms have to be properly defined and then they are not at all equivalent (Table 4). The definitions proposed are pointing out a clear hierarchy according the generality of the related coordinating mechanism. Under this respect, one should agree that the **constitutional order** is the higher principle organizing the solution to possible conflicts between lower level rules. The principle of action derives from the legitimacy of a

TABLE 4 - A TENTATIVE TAXONOMY FOR SOME KEY COMPONENTS OF AN INSTITUTIONAL ECONOMY

NATURE COMPONENT	DEFINITION	PRINCIPLE OF ACTION	FACTORS OF CHANGE
CONSTITUTIONAL ORDER	A set of <i>general rules</i> to set lower level conflicts among institutions, organizations, individuals	<i>Legitimacy</i> via deliberation	◦ Large inertia in democratic states ◦ Role of <i>political</i> process in the redesign.
INSTITUTION	An immaterial method for <i>structuring interactions</i> among organizations and eventually individuals	Reduces or removes the <i>uncertainty</i> associated to strategic behavior	◦ Structural <i>crises</i> ◦ Low efficiency is not a <i>sufficient</i> reason for change
ORGANIZATION	A <i>structure of power and a series of routines</i> to overcome coordination failures among agents or their opportunistic behaviors	<i>Carrot</i> and <i>stick</i> (i.e. the pay system and control) are related to external institutions or conventions	◦ Poor outcomes in the <i>competition</i> with other organizations ◦ Major crises trigger redesign
CONVENTION	A <i>Self enforcing set of shared expectations and behaviors</i> , emerging from decentralized interactions.	<i>Lost memory</i> of the origins of the convention which seems « natural »	◦ <i>General crisis, invasion, translation,</i> ◦ Efficiency is rarely a selection criteria
HABITUS	A set of <i>embodied patterns of behavior</i> , forged during the socialization process of an individual.	<i>Adaptation</i> to a given field, possible disequilibria out of this field	◦ Shift to a new field of an habitus forged into another ◦ New <i>learning</i>, even if quite difficult

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past founding political event and the solutions given proceed from deliberation, i.e. voice, which is a principle quite distinct from the economic principle of exit. We are far away from the Walrasian auctioneer, since the issue is about the compatibility of a complete set of legal rules which may enter into conflict, and clearly cannot be made compatible by organizing....a market. It is an open and other question to investigate if the constitutional judges do maximize or not an economic criteria such as social welfare (R. Posner, 1982).

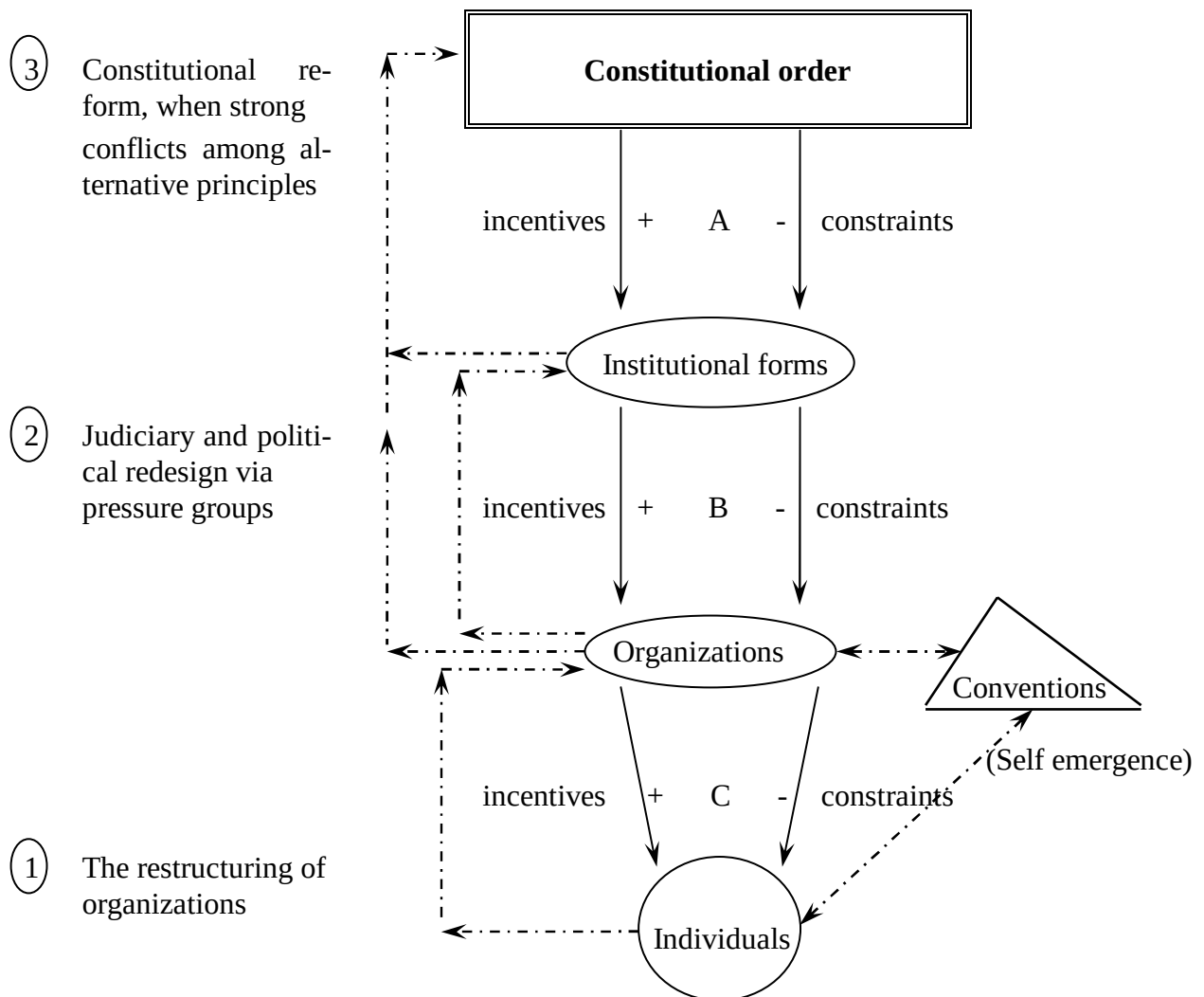
The different definitions will not be detailed, but they are organized from the more over arching coordinating mechanisms to the more individualized and context specific ones. **An institution** takes into account the constraints and opportunities brought by a constitutional order and structures the interaction among organizations, by purely immaterial methods. **An organization** is built upon a structure of power and a series of routines in order to overcome coordination failures among more or less opportunistic agents and behaviors. **A convention** is totally different, since it is a self enforcing set of shared cross expectations and behaviors, emerging without any third party enforcement. Finally, **an habitus** is a set of embodied patterns of behaviors, forged during the socialization process of an individual, whereas **a routine** can be shared by a group and externalized, without implying any hierarchical authority to monitor it.

According to this vision, the principles of action are quite different indeed and a priori the change in these coordinating mechanisms is the more difficult, the higher in the hierarchy provided by Table 4. Of course this hypothesis can be challenged, specially from the point of view of methodological and ontological individualism: is not the habitus the more long lasting element, featuring the larger path and past dependency? In fact, one could argue first that the pattern of behavior is highly sensitive to the institutional and general context -the modernization of European and Japanese economies during the Golden Age is a good example of such a malleability of so-called cultural values-. Secondly and conversely, it has been observed that quite contrasted national trajectories for capitalism are closely related to the permanence of constitutional order (see § VII), and that it is difficult to shift from one constitutional style to another (Diagram 10).

This does not mean that in the very long run, an institutional architecture cannot change, quite on the contrary. During normal times -when a well established “régulation” mode is operating- the logic of interaction between a constitution, institutions, organizations, conventions and habitus is **top-down**. But by the very definition of a capitalist and democratic system, some actors have always interest in innovating and simultaneously the very generalization of a given economic order generates new and unprecedented unbalances, which challenge the higher level coordinating mechanisms, according to a process which is now **bottom-up**. Not only institutions play a role but they are changing through time but remain quite distinct across Nations. There are major phenomena to be explained by any satisfactory theory of capitalism.

Therefore, the balkanization of conventional economic theory is producing the third paradox: a lot of detailed analyzes and knowledge but no general understanding of the more pressing contemporary issues which are systemic and related to a precise configuration of capitalist economies. But this is not necessarily a fatality, since a **new generation of institutionalist thinking** rejuvenates the concern for a more encompassing theory.

DIAGRAM 10 - A SUGGESTED MAP FOR THE RELATIONSHIP BETWEEN CONSTITUTION, INSTITUTIONS, ORGANIZATIONS AND CONVENTIONS



Top-down : From the constitution to individuals : a clear hierarchy
 $A \rightarrow B \rightarrow C$

Bottom-up : Emerging disequilibria and conflicts call for a revision of upper level rules of the game:
 $1 \dashrightarrow 2 \dashrightarrow 3$

Degree of persistence : Constitutional order > Institutional forms > Organizations > Individual behaviors

V - THE PARADOXICAL RESILIENCE OF CAPITALISM: THE CONSEQUENCE OF THE EXPANSION OF MARKET MECHANISMS... OR THEIR CONTAINMENT?

Of course, capitalism is the less unsatisfactory economic system and it has triumphed over its socialist or communist competitor. More generally, whereas earlier analysts cast severe doubts about the long run survival of capitalism, two centuries after and until now it has overcome all its structural crises. But what are the exact reasons for such a resilience? In fact, economists and social scientists strongly disagree about the sources of such a surprising property. The former, specially if they belong to the neo-classical school, think that the more the market logic is extended, the more resilient and dynamic capitalism is. The later, quite on the contrary, are convinced that a pure capitalist system would be self destroying and it has survived by using resources, values and norms which are manufactured outside this system. This is the fourth paradox: **capitalism is to be praised for its long run adaptability, but there is no agreement about the factors of such a crucial property.**

V -1. Is capitalism self-equilibrating or is it structurally unstable? An old debate since the birth of political economy

This uncertainty is not new and seems to recurrently surface within the tradition of political economy. David Ricardo is one of the first economists to build a complete theory around the concept of equilibrium and to derive from this methodology that crises were the exceptions and a smooth and flexible evolution the rule, as soon as prices, wages, real interest rates and income distribution are set upon well functioning markets. But Malthus challenged this vision and argued that market and industrialization could not solve the discrepancy between population trends and economic production. For him, the emerging industrial capitalism was condemned to bring major social and economic problems. At the end of the XIXth century, Alfred Marshall and Léon Walras were constructing two economic theories based upon a new elaboration of the concept of equilibrium, partial or general, which were proving that conflicting economic interests could peacefully be solved by the generalization of the market mechanisms. They were replying to Karl Marx which thought to have definitively proved that the market leads to the crisis, as necessarily as the storm brings the rain. For him, the cyclical crises would become more and more severe in line with the diffusion of the capitalist logic and would end into a major structural crisis which would mean the collapse of this mode of production and its replacement by a superior one.

An equivalent debate took place during the inter-war period. On one side, for Charles Pigou, unemployment was involuntary and eventually the consequence of frictions leading to minor deviations from a full-employment equilibrium. On the other side, John Maynard Keynes has been pushing a new and efficient version of the purchasing power doctrine, which implies that it was the size of the demand of products which limited the demand of labor, without any clear mechanism promoting full-employment. A symmetrical debate opposes the economists such as Oscar Lange and Taylor who try to show that a socialist economy can function and be more efficient than a capitalist economy, to the Austrian school, led by Fredrich von Hayek, for which any public intervention or tentative construction of any state imposed institution is bound to fail. The same tension may be perceived within the work of a very same author Joseph Schumpeter. His *Theory of*

development (1911) is highly optimistic about capitalist development as soon as innovative entrepreneurs find new ways for developing markets, goods and techniques, but his last work *Capitalism, Socialism and Democracy* (1945) was on the contrary rather pessimistic, because new middle classes and large firms would tend to block the innovation process which was at the core of the dynamism and the resilience of capitalism.

It is important to note that the triumph on one side (more market is good for capitalism) on the other side (market has to be controlled to deliver a viable economic system) is somehow linked to the epochal conjuncture and atmosphere. In good times, the equilibrium and pro-market theories deliver the optimistic message which is in the mood of the current state for economic activity. By contrast, when major social and economic problems are at stake, the disequilibrium approach and the interventionists tend to set the pace within professional economists. Given this long run regularity, it is the more surprising to observe **the contemporary triumph of one of the most extreme variant of Panglossian economics**: everything is for the best, except small and transitory problems which would be easily solved if everybody, including the government, accepted more vigorous market mechanisms. And this is another paradox of the last two decades. Contrary to what can be observed by everybody every day, professional economists argue that markets will solve any economic or social problem: unemployment, financial instability, public deficit, welfare financial problems, and even social inequality which would derive mainly from irrational public interventions.

One could have expected the affirmation of a new Keynes, i.e. an economist who would stress the structural character of contemporary slow growth, productivity deceleration, mass unemployment. Quite on the contrary, Chicago economists from Milton Friedman, Garry Becker to Robert Lucas have got fame by deconstructing the Keynesian legacy and promoting the idea that any public intervention is bound to fail and that pure market mechanisms lead to better configurations than any other coordinating mechanisms. But an excessive imprecision in the definition of a market may be at the origin of this controversy about the contribution of markets to the resilience of capitalism.

V -2. Removing some confusions about the nature and scope of market mechanisms.

Frequently, capitalism is defined as a **market system** and generally the authors imply this is sufficient to analyze the forms, trends and performances of this economic system. This may be so, by opposition with previous production modes, frequently labeled as pre-capitalist. But historical record shows that markets were present in many pre-capitalist societies and conversely, some market mechanisms used to take place even in the heyday of the Soviet regime economies, concerning for example labor or natural resources (J. Sapir, 1989). Therefore is important to develop a precise definition for markets, their prerequisites, their nature and their extensions. When such an analysis is done, it is clear that market mechanisms are not deriving from some natural law or human propensity to exchange, but quite on the contrary that they are social constructions which necessarily imply extra economic factors, specially in the domain of law and political legitimacy (J. Commons, 1974; 1990).

There are many definitions for a market, they vary from one language to another and have a lot of geographical and historical variability (R. Boyer, 1997). For the time being, let us call market, the locus, real or virtual, where a **series of initially disconnected supplies and demands are aggregated** and deliver both a set of transactions and prices, all the

exchanges being voluntary. It is immediately clear that the mutual interest of traders is not necessarily to organize a market, since the better informed may lose a part of the benefits they extract from less formal exchanges. Therefore there is always a part of **power relations** in the constitution of any market...and this is an important statement which challenges the naïve vision of a self extending market.

The viability of a given market, once created, is an open question too. At **least four conditions** are required (Table 5, left hand side). It has been pointed earlier, the existence of a payment system and a monetary regime is the first pre-condition. Then the notion of contract has to be legitimized, as soon as some credit is required or if there is a lag between the order of the goods, the delivery and the final payment. Since the interest of the traders may be contradictory, some conflicts may emerge out of the interpretation of a given contract. Therefore, clear and enforced commercial laws are to be operating for the market to function recurrently, i.e. on the long term basis. Finally for some highly sophisticated markets, such as the financial ones, self regulation by an association of traders or direct public controls are required in order to prevent the collapse of market by the diffusion of opportunistic behavior or embezzlement.

Similarly, there are many ways of organizing the interactions between the traders on markets and therefore they may display **a whole spectrum of configurations and properties**. In every day discussions, specially about the deregulation process undertaken during the 80's and 90's, the new markets created are supposed to display pure and perfect competition. But this is only an ideal, a rather exceptional configuration for markets, which usually are affected by various imperfections linked to the nature of the product, the organization of the industry, or the localization of transactions. Therefore, a market is only defined when a precise map of the actors and their mutual relationships has been elaborated and then allow to put a precise prefix to the market. At one extreme, monopoly or monopsony are observed when there is only one supplier or demander, whereas at the other extreme a very large number of actors interacting anonymously may define a pure and perfect competition market. In between, there may exist a continuum from oligopolies to contestable markets, which would nearly behave as pure and perfect ones, even if the number of traders is limited (Table 5, right hand side).

But the major challenge to the conventional definition of a capitalist economy as a market system is related to the **extension of markets**. They may concern exclusively commodities, raw materials and be very limited in scope. Commercial capitalism began by trading rare commodities obtained by long distance international trade, but clearly, the related economic systems were not displaying the same properties as the contemporary industrial capitalism. In modern world, markets have been extended to consumer goods specially produced by capitalists to earn profits and in a second stage to equipment goods themselves. Another stage takes place when markets are ruling nearly all the commodities. But capitalism really takes place when labor force is itself bought upon, but not produced for, a highly specific market, that of labor. And this would be the standard definition of capitalism, in the Marxian or institutionalist tradition.

On the other side, it is true that the market mechanism has had a tendency to be extended to new commodities which are no more goods and services, but concern property (stocks, bonds,...) and more and more sophisticated financial instruments, which represents rights upon expected profits or returns. But the sophistication does not stop here, as the recent creation of derivatives and futures show: what is traded is no less than expectations about future indexes. The markets for pollution rights is another example of such a

sophistication, since they concern a fictitious commodity par excellence to use the terminology coined by Karl

TABLE 5 : WHAT IS A MARKET ECONOMY ? A QUASI CONTINUUM OF CONFIGURATIONS

THE PREREQUISITES TO ANY MARKET

- PRIVATE CONTRACTS
- COMMERCIAL LAWS
- MONETARY REGIME
- SELF-ENFORCING MECHANISMS /EXTERNAL REFEREE

DEFINITION : A configuration for a market economy is any viable matrix such as

	Commodities	Fictitious	Extended
Monopoly		X	
Oligopoly		X	
Imperfect comp.	X X		
Contestable mar.			
Perfect comp.	X		
Pure and perfect comp.			

EXTENT OF THE MARKET DEGREE OF PERFECTION	COMMODITIES				FICTITIOUS COMMODITIES			EXTENDED COMMODITIES		
	RAW MATERIALS	INTER-MEDIATE	EQUIP-MENT	CONSUMER GOOD	LABOUR	MONEY	LAND/NATURE	FINANCE	FUTURES	POLLUTION
• MONOPOLY (MONOPSONY) • OLIGOPOLY • IMPERFECT COMPETITION	EMERGING MERCHANT CAPITALISM				INTERWAR PERIOD			THE		
• CONTESTABLE MARKET • PERFECTLY CONTESTABLE MARKET • PURE AND PERFECT COMPETITION	EARLY INDUSTRIAL MARKET ECONOMY THE FORDIST REGIME MATURE INDUSTRIAL MARKET ECONOMY									
	THE TRENDS				FOR					
	ADVANCED CONTEMPORARY				ECONOMIES					
	THE AS THE IDEAL OF				BIG MARKET NEO-CLASSICAL THEORY OF			A CAPITALIST ECONOMY		

Polanyi. But again these markets are not created by any natural process but they are the outcome of explicit strategies to open such profit opportunities. There is no such thing as the self expansion of market and this is a first answer to this fourth paradox about contemporary capitalism.

Simultaneously, this vision of markets opens to the understanding of the possible **variability of capitalist systems through time and space**: since markets are constructed and instituted and may coordinate a more or less important fraction of economic activity. There is a clear space for path dependency and idiosyncrasy with the local context. Let us now come back to the central issue: where do the innovations, which make the capitalism so resilient, come from?

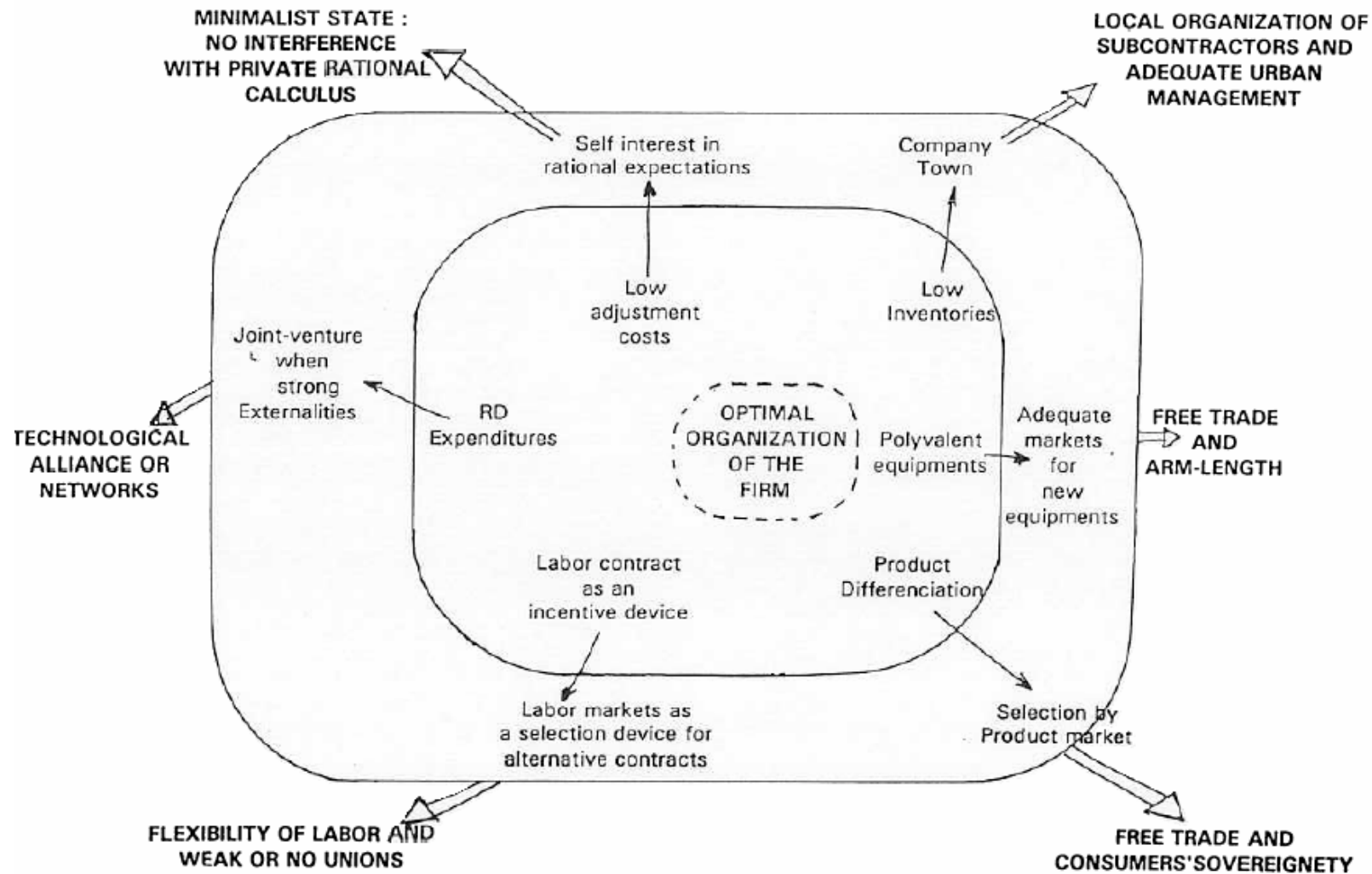
V -3. Self interest, community values and the political process: three origins in the building and transformation of capitalist institutions

The question of the origins and dynamics of capitalism systems is difficult indeed, since the actual process is quite complex, is given quite contrasted answers across the various disciplines of social sciences and last but not least is a matter of hot political and ideological debate. The previous analyzes point towards an eclectic approach. Economic institutions are not only a matter of rational calculus, they rely on underlying social relations, they call for an adequate legal and political system. The issue is made still more challenging by the fact that the same factors do not play an equal role in the emergence, functioning or transformation of capitalist institutional forms. For instance, the **economic viability** of an institution is important when it has been instituted, but such a functionalism is misleading for explaining the **emergence of institutions**. Many of them which would benefit to the whole society are not implemented by lack of political expertise in the bargaining about the sharing of future gains. The explanation of the economists in terms of irrationality cannot be accepted since it does not take into account the embeddedness of economic activity into a complete web of social and political relations, which are constitutive of any modern society. But conversely, the political scientists do not have the monopoly of the analysis of capitalism institutions, since some political compromises may turn so difficult to implement, that they are finally rejected or eroded by lack of economic relevance or efficiency. One feels that these disciplines (economics, sociology and political science) have to **interact** to provide a satisfactory picture. More basically, the resilience of capitalism is probably linked to this ability to play among these three different spheres, and not at all the exclusive ruling of economic rationality. Nevertheless, it is important to contrast three visions which correspond to rather serious academic discipline boundaries.

V -3..1 - Institutions are the outcome of the interaction of rational economic strategies.

For a large fraction of the contemporary neoclassical institutional economics, institutions are supposed to derive from the interaction of highly rational individual agents, which compute the intertemporal benefits they can derive from the possible implementation of these institutions. The principle of rationality is then extended from the normal selection among alternative strategies concerning goods and factors to the **choice of coordinating mechanisms** themselves. Of course since long, economists know that some collective goods may never be produced by lack of individual interest in revealing their value for the individuals, and their unwillingness to finance it. This is the famous free rider problem typical of collective

DIAGRAM 11 - A FIRST VISION : OPTIMIZING INDIVIDUAL AGENTS WILL GENERATE THE RELEVANT INSTITUTIONS



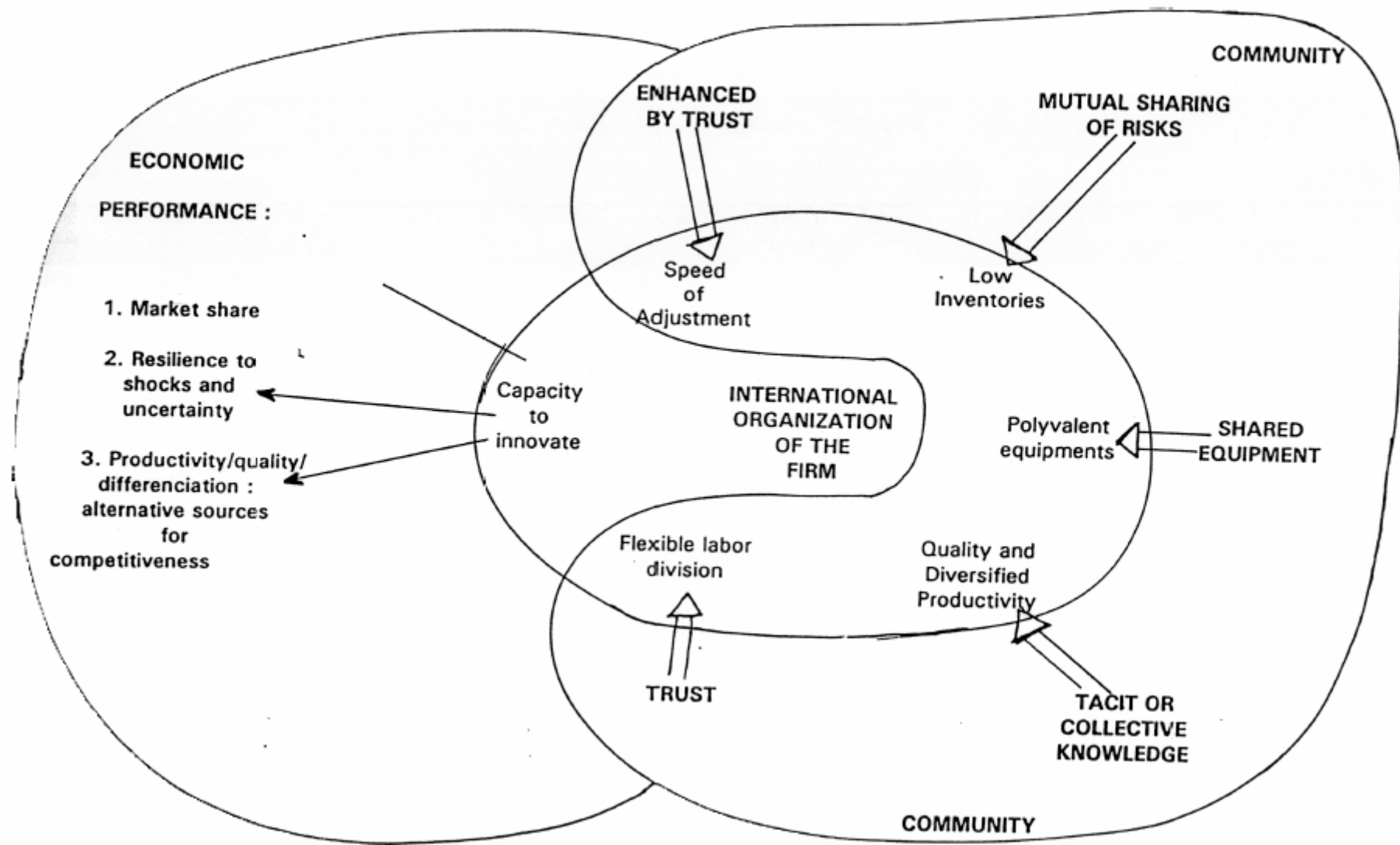
goods (M. Olson, 1965) and commons (E. Ostrom, 1990). But the strategy of contemporary theorists, should they belong to the implicit contract approach, or should they use repeated game theory or any other tool, is to show that individuals or organizations may agree on rules of the game which are mutually beneficial and which are proof to re-negotiation. For instance, employment stability, long run commitment between a large firm and its sub-contractors, and long term links between the main bank and the industrial firm, typical of the new productive paradigm inspired by the Japanese practices, can be interpreted as the long run equilibrium of a repeated game between managers, wage earners, sub-contractors and bankers (M. Aoki, 1988; 1995). According to this first vision, the firm and rational agents are building economic institutions as the result of a strategic game, and they serve then their joint interests (Diagram 11).

This approach has already delivered interesting results, specially in demonstrating the economic logic of social institutions which used to be presented as the product of culture and tradition. Nevertheless it suffers from some severe limitations. First of all, the cognitive and computational content of these models largely outruns the ability of most really existing economic agents, which casts some doubts about the relevance of their conclusions. Second, a significant dose of functionalism permeates most of these analyzes: any institution which is a perfect equilibrium in a repeated game should be observed...and this drastically contradicts the many historical examples, recording the inability to manufacture institutions, even if all the agents agree that they would benefit of them once created. Nevertheless, they are unable to implement it. A third limit relates to the fact that most, if not all, economic institutions have also a role in the structuring of social interactions and are the expression of political power...and all these extra economic variables are specially decisive concerning the emergence of institutions.

V-3..2 - Some key ingredients of economic institutions, such as trust, are manufactured by communities: capitalism is an open system

The second vision is elaborated by sociologists (M. Granovetter and R. Swedberg, 1992) and economic historians (D. North, 1990), and their findings provide an interpretation about some paradoxes concerning the role of extra economic factors on economic performance. Under this respect, the example of trust is illuminating. More and more scholars argue that the more efficient capitalist systems are the ones which benefit from low costs of transaction, few opportunistic behaviors (O. Williamson, 1995), long run commitment between economic actors and units (M. Aoki, 1988). All of these features seem to derive from social institutions, the purpose of which is totally different from the enforcement of economic rationality but which play a catalytic role in the smoothness and reliability of capitalist transactions (Diagram 12). Community values are supposed to manufacture this trust among partners (F. Fukuyama, 1996), which is then inserted into purely economic activity. The principles of labor division are more fuzzy than in purely market-led capitalist society and allow a lot of flexibility in the organization of production. Given the geographical or familial proximity, a flow of tacit knowledge and expertise is circulating from one member to another, and this is the principle of competitiveness which shows up into market shares and even profit rates, Italian industrial districts being a good example. The solidaristic values which are percolating the community allow more risk taking, since these societies implicitly afford risk sharing and insurance, which in turn is good for entrepreneurs. For this sociological and network approach, the viability of any capitalist order would be up to its ability to build

DIAGRAM 12 A SECOND VISION : CAPITALIST INSTITUTIONS ARE BUILT BY IMPORTING COMMUNITY VALUES.



economic institutions on top of community values. Therefore, this school would argue that the containment of pure capitalist logic is necessary for this economic system to survive, according to a legacy which can be traced back to Karl Polanyi (1944). This is a statement which is strictly opposite to the vision of new neo-classical institutional economics. Here comes the fourth paradox: is the resilience of capitalism linked to its inner dynamics, i.e. the *extension of the rationality principle* to all the social and economic institutions, or on the contrary, does it derive from *resources which cannot be easily reproduced within capitalist systems*?

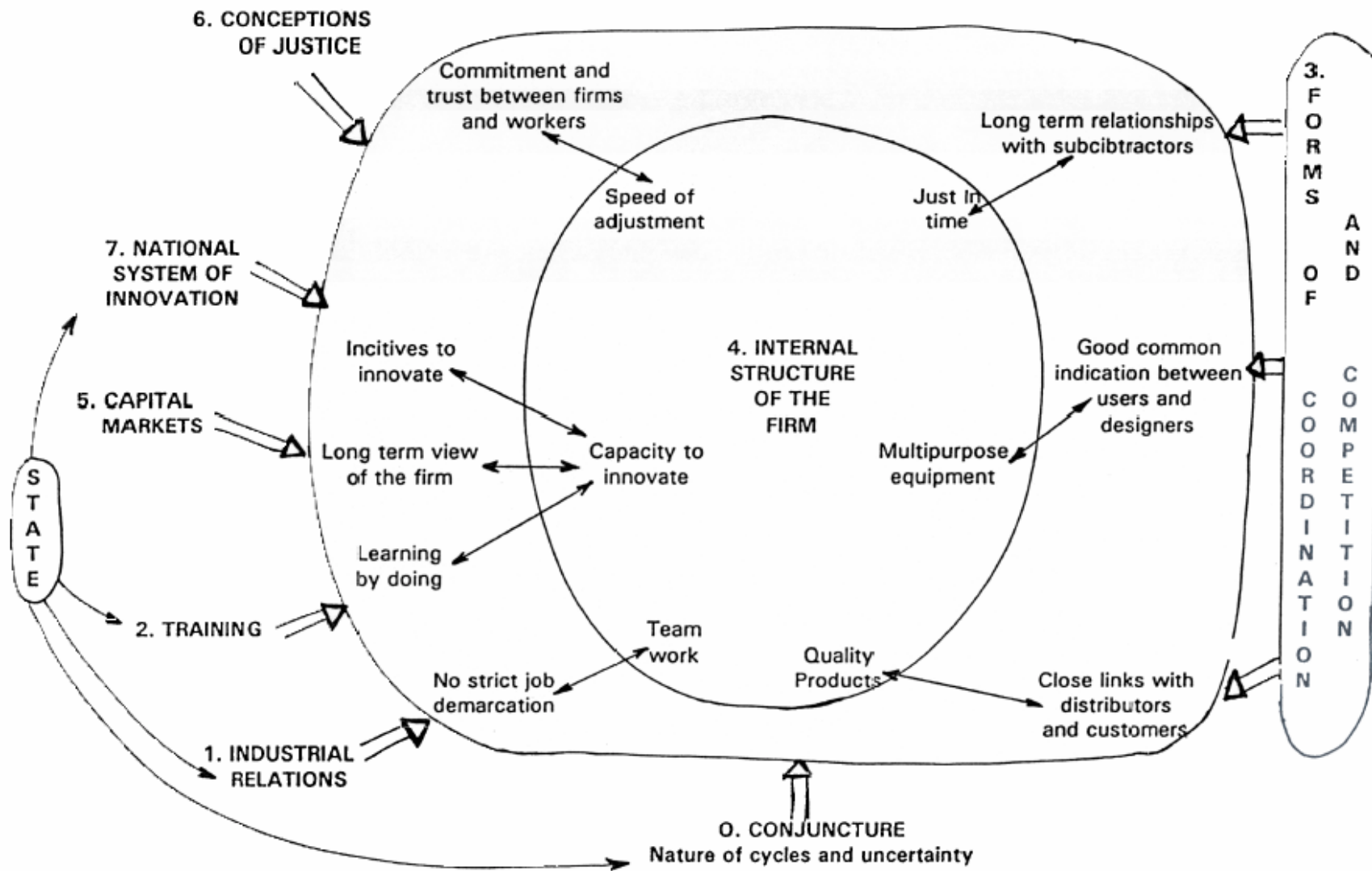
The sociological vision is not devoid of merits. Has not the long distance international trade be facilitated by kinship ties, which warranted to the merchant that his agent would come back without stealing the receipts of the sales (D. North, 1990)? Is not the performance of the Chinese business community closely linked to a clever use of family ties in order to build innovative and risky businesses (M. Granovetter, R. Swedberg, 1992)? More generally, long run historical record suggests that every times a pure market logic has been unleashed, the epoch has ended into social, political and even economic crises (K. Polanyi, 1944). Conversely, some economic theorists recognize that an economic systems run by pure economic rationality could be unstable and chaotic (R. Guesnerie, 1996). Within repeated games, a minimum dose of irrationality is required to get a satisfactory solution. Similarly, very simple coordination games have only a solution if the players mobilize some knowledge which has been manufactured outside the economic sphere in order to converge towards a focal point (Th. Schelling, 1977; 1978). All these approaches have the merit to insert economic rationality into a richer social context and they are far more realistic that the closure around a strictly economic analysis of human behavior.

Nevertheless, the explanation is not totally satisfactory, nor complete. First of all, family, community, religion, political party, industrial district, all these organizations have changed through time and cannot be considered as independent from economic life. Second, if trust were only a legacy of the past, only few examples of cooperation would survive today...and the capitalism would finally fail after having exhausted the “reserves of trust”, since it propagates the logic of self interest which finally is bound to affect the very manufacturing of trust. Thirdly, any social science has to explain where does trust come from, since according a stimulating statement by a Japanese scholar: “the legacy of the today culture is not else than the forgotten innovation of the day before yesterday”. No doubt that the trust which is mobilized by the Japanese large corporation is permanently manufactured and has probably significantly changed with respect to the social relationships which used to prevail one or two centuries ago among villagers. Therefore capitalism is extracting some ingredients or catalysts from other systems, but it has to be compatible with their long term reproduction. In a sense, the true challenge is to explain the co-evolution of economic and social institutions and not at all to reduce the causality to only one of these spheres.

V-3..3 - The long run viability of capitalism: the consequence of constraints imposed by the political process to economic rationale

The origin of institutions is not only debated by economists and sociologists, since at least a third academic discipline has to be put into the picture: **political science**. One remembers one of the founding paradox of capitalism : it originates from a separation of power and political relations for economic activity, by a progressive differentiation of these two spheres (R. Heilbroner, 1988). But if they become separated they are nevertheless not

DIAGRAM 13 - A THIRD VISION : THE MARKET MECHANISM IS STABILIZED BY SOCIAL-CONSTRAINTS IMPOSED BY POLITY



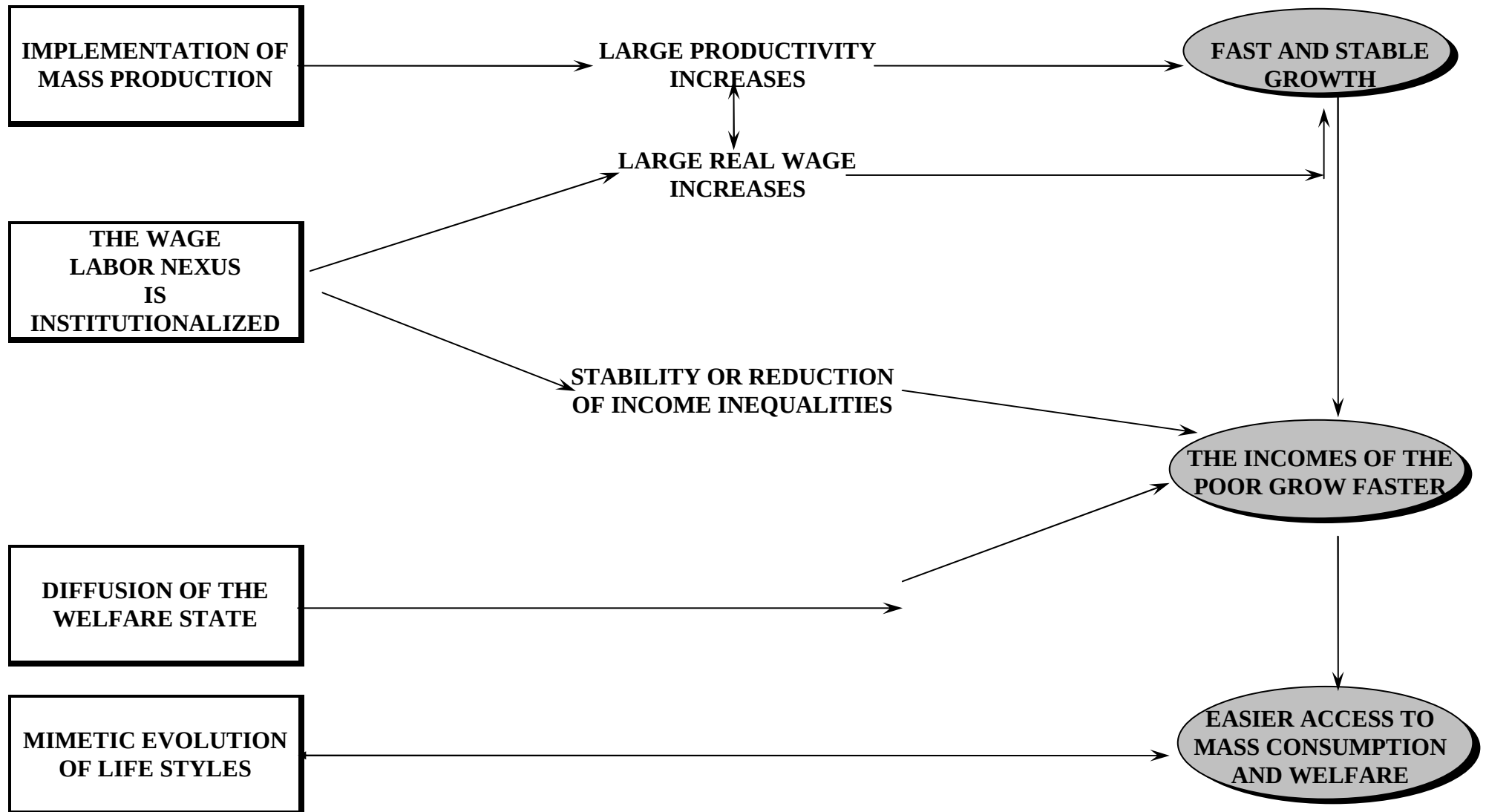
independent one for another. On the one hand, polity imposes rules which are in fact necessary to the smooth functioning of the economy, such as a constitutional order, the enforcement of property rights and a predictable and stable monetary and tax system. But these interventions cannot be totally independent from an assessment of their likely impact upon economic activity. On the other hand, without a sufficient economic performance, there is a political risk that citizens reject the social relationships which are at the core of the capitalist order. Therefore there exists a **two sided causality between polity and economy**, and thus a pure economic approach to capitalism would be self defeating.

Some political scientists and even sociologists (W. Streeck, 1991; 1995) argue that only the imposition of some constraints about the respect of social life, the preservation of decent standards of living, the limitation of work duration and intensity or the preservation of local and global environment have induced capitalist firms to innovate according to directions which have finally benefited to the whole society. If on the contrary, the capitalist system is left free to follow its own inner dynamics, it will explore the more easy sources of profit, exhaust them and then collapse for having destroyed too much human talents and natural resources. It is another presentation of the core message of Polanyi, but the emphasis is put upon the necessary and generally beneficial role of **political constraints** imposed to the economic system. But this has definite consequences upon the ability of a capitalist firm to manufacture economic institutions (Diagram 13). Basically, quite any institutional form is explained as a compromise between on one side some pressures coming from the political process, acting and representing the whole society and its founding principles, on the other side the profit motive which is at the core the capitalist firm. Just to give an example, the involvement and commitment of workers by sophisticated devices rarely come from a spontaneous offer from the firms, but are frequently imposed by a vision of social justice, quite often open labor conflicts. Similarly the concern for quality is related to a voice mechanism obtained by consumers, the intensity of innovation derives partially from the institutional organization of research, the competence of workers from the quality of the educational and training systems, which have some political objectives and origins.

In the controversy about the resilience of capitalism, this third vision attributes it to the resistance opposed to harsh economic rationality by the political sphere which reflects the pressure for maintaining the basic social relationships which are at the core of any society. In passing the reference to the political process solves the mystery of the origin of community values: they have been built in the past and they are constantly reformed, adapted and transformed. The realism is a second merit of this vision: polity and law have a clear and well established role in the emergence and implementation of most institutional forms. This interpretation explains too why capitalism can take so many forms across nations and periods, since political and social history are quite idiosyncratic and permeate quite all relevant economic institutions. Members of a society may prefer the persistence of their core values and social relations to any gain in terms of economic efficiency, even if it is very large. The pet idea of economists about the existence of a trade-off between political values and economic efficiency is largely misleading: is not the social link a prior, prerequisite to any economic activity? It is why various forms of capitalism do not have to converge towards a one best way, since they are shaped by quite different political environments, which persist in the long run.

The fourth paradox seems close to a solution: only neoclassical economists may dare to think that capitalism is resilient by its inner constitutive elements. Most of other economists, and still more social scientists, would agree that this adaptability is the outcome of the interplay between the dynamism of accumulation and the social transformations it

triggers on one side, the constraints and opportunities shaped by the political and social spheres, on the other side.

DIAGRAM 14 - THE REDUCTION OF INEQUALITIES AT THE CORE OF THE FORDIST GROWTH REGIME

VI - A FIFTH PARADOX: SOCIAL JUSTICE, USUALLY PERCEIVED AS A NEGATIVE CONSTRAINT, HAS BEEN A STIMULUS FOR CAPITALIST DYNAMIC EFFICIENCY.

We are living again a period, when the most diffused opinion strongly opposes economic performance to the requirements of social justice. The economic motives tend to be isolated from the rest of the society and a deepening of inequalities is accepted with the hope that they will foster productivity, growth and in the long run general standards of living. But the paradox here derives from a contrast between the **beliefs and public statements and the teachings of economic history and modern theory.**

VI -1. The relationship between inequality and growth: a brief historical retrospect.

The surge of industrial capitalism has arisen a wide concern about the impact of this new social and economic system upon the previous order and specially inequalities of income and wealth. Whereas the classical school was quite optimistic, the Marxists have insisted upon the built in inequality bias associated to capitalism: the rise of profit and productivity could only be obtained at the cost of the misery of the direct producers, who used to be independent but are now constrained to sell their labor power to capitalists who are mastering technology and capital advances. Léon Walras and Wilfried Pareto contributed to clearly distinguish between efficient states -Pareto optima- and the political choice among these equilibria, and Therefore efficiency and ethical and political problems could be totally disconnected. Of course, modern economic theory pointed out that any transfer by taxes and subsidies would change ex ante and ex post allocations and therefore efficiency and equity were somehow connected. During the inter-war period, John-Maynard Keynes was very concerned by the inequalities typical of the capitalism of his time and he considered that they were exacerbating the lack of effective demand, which was at the roots of involuntary unemployment. Again, capitalism and inequality were associated... but for the worse, since this feature was directly leading to a challenge of the current economic system. One has to remember that John-Maynard Keynes advocated a “third way” between laissez-faire capitalism and socialism. Indeed, a complex political and social process has led, after W.W.II, to a complete renewal of capitalist institutions, precisely to prevent the repetition of the inter-war dramatic episode and to respond to the challenge set by the Soviet regime. During the Golden Age, few politicians dare to ask for more inequality and the Fordist system experienced unprecedented performances along with a reduction and then a near stability of inequalities. Since the end of the 70’s, the intellectual and political mood has shifted towards much more conservative positions: the widening of inequalities would be the cost to pay for recover efficiency and dynamism.

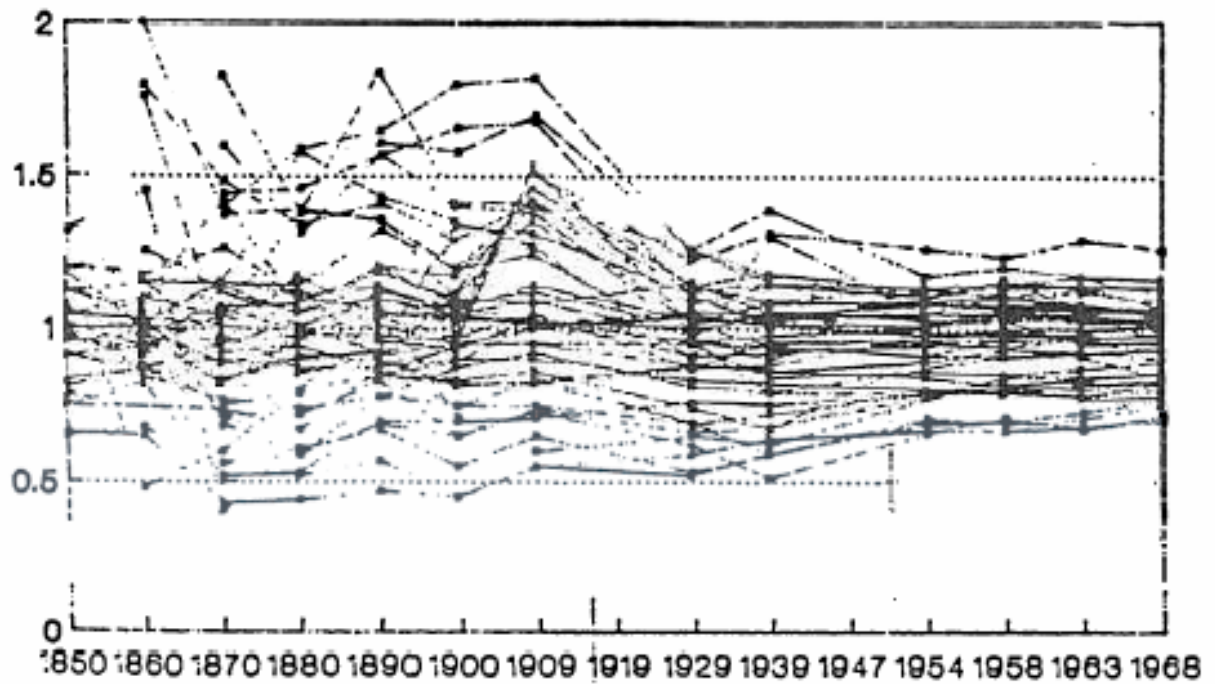
The history of intellectual thought is not the only one to experience long waves, Kondratief style ! Most of long run historical research tends to show that there is no stable “objective” link between growth and inequalities. The so-called Kutznet’s law tentatively introduces some order among the scattered observations for developed and developing countries. In the early stage of development, growth goes along with rising inequalities, then inequalities are reduced during the next stage, but ultimately, for mature economies, when growth slows-down, they are increasing again (H. Phelps-Brown, 1988). The generality of this law has been challenged and the mechanisms operating for so diverse economies remain rather

**GRAPH 1 - THE AMERICAN FORDISM HAS BEEN ASSOCIATED TO A
REDUCTION IN INEQUALITY.**

AVERAGE STATE WAGE RATES RELATIVE TO US AVERAGE

1850 TO 1967

(Limited to Rates < Two Times U.S. Ave.)



mysterious. Nevertheless, empirical evidence confirms the teachings derived from the history of economic doctrines and theories: there is **no general law** governing the links between social justice and economic efficiency. Thus let us restrict the analysis to the post-W.W.II period and investigate what these relations have been then.

VI -2. The “Golden Age” unprecedented growth: the institutionalization of the wage labor nexus and reduction of inequalities

According to the orthodoxy of the 80's and 90's, the unprecedented reduction of income inequalities experienced after 1945 should have destroyed the incentive to work, the profitability of innovation, the selection of managerial elite. In the other words, growth should have slowed-down and productivity increases declined, along with standards of living. But it is precisely the opposite evolution which is observed (R. Boyer, 1991) and this surprising outcome calls for an explanation. A brief summary of the regulationist approach may be useful (Diagram 14). It builds upon the synergy between a technological and managerial revolution and a political compromise between wage earners and capitalists, which had the consequence to reduce previous inequalities.

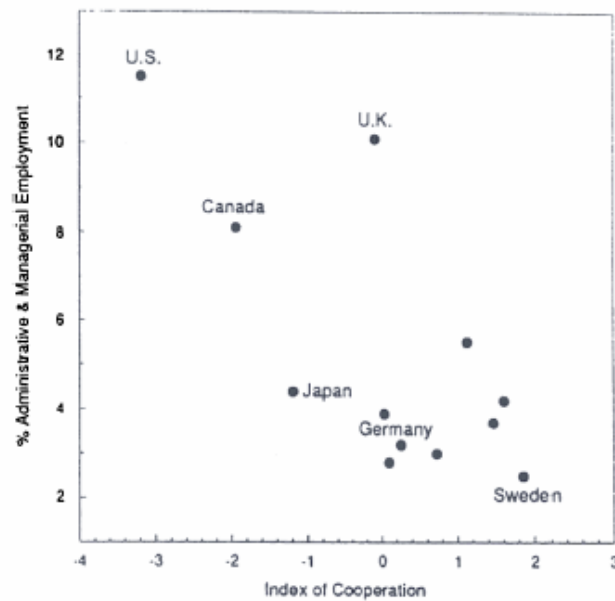
The 1945-1973 fast growth period is usually explained by the simple effect of catching up, each of the industrialized countries copying the American methods and converging approximately towards the same standards of living. This technology led explanation, even if popular, is not very convincing. For instance, contemporary Brazil experiences the coexistence of mass production methods along with very unequal and chaotic macroeconomic performances, mainly because the economies of scale cannot be deployed to the demand of the entire population, since diverging trends for upper and lower classes incomes prevent any access to mass consumption by the majority of the population. Rising inequalities are detrimental to the deployment of the benefits of modern technologies and organizations. The contrast with European countries and Japan is the more striking. First, the institutionalization of real wage increases along with productivity gains, basically synchronize the growth of productive capacity and effective demand increases. This is the often neglected root of the post W.W.II long boom. Second, the recognition of the rights of workers to have access to a decent living, a universal welfare system, to join unions and political parties has helped a lot in their acceptance of mass production methods and the related discipline. Thirdly, productivity sharing has not been restricted to the more advanced sectors or firms, but has diffused to the whole population of wage-earners whatever their skills, sex, sectors, and regions. Therefore, even the poorest could finally get access to mass-consumption and this cumulative movement has been quite instrumental in sustaining an unprecedented growth. Fourth, the constitution of welfare has diffused the feeling that the contemporary capitalist system was taking into account the needs of the workers and the objectives of a fair distribution of the so-called “dividends of progress”. It was not more exactly the same system as competitive capitalism.

These Golden Years were quite convenient for politicians since they could simultaneously satisfy the capitalist class and the vast majority of the working population, which in Japan for instance, had the feeling to now belong to middle class. But it is important to stress that this was due to the synergy between the nature of productivity increases linked to mass production -which were highly collective and could not be attributed easily to individual merits- and a very specific institutionalized compromise between capital and labor, the State and the citizens, each national State and the United States. Is this period unique and limited to a small range of capitalist societies?

GRAPH 2 - A NEGATIVE CORRELATION BETWEEN INTENSITY OF CONTROL AND CO-OPERATION

More Cooperation, Fewer Bosses?

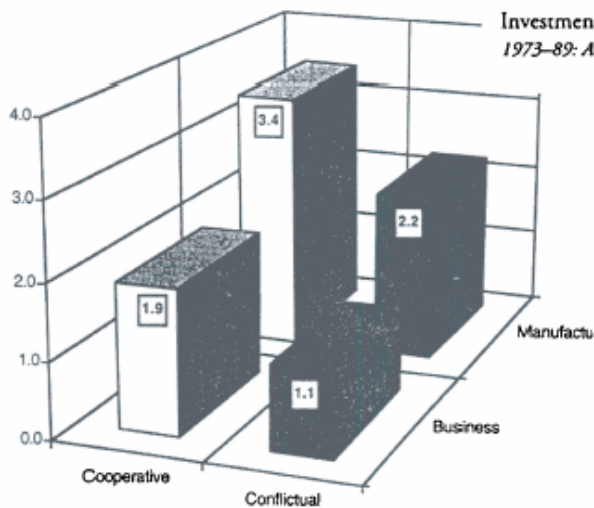
Percent administrative-managerial employment and cooperation index



GRAPH 3 - BETTER ECONOMIC PERFORMANCES FOR CO-OPERATIVE CAPITALISM

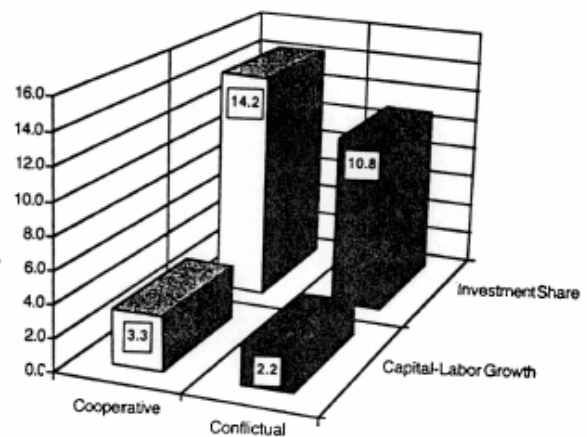
Productivity Growth in "Cooperative" and "Conflictual" Economies

Average annual % productivity growth, 1973-89, business and manufacturing sectors



Investment Performance in "Cooperative" and "Conflictual" Economies

1973-89: Average % growth, fixed capital per employee; and ratio, fixed investment/GDP



Source : D. GORDON (1996) *Fat and Mean*, p. 74, 148 et 159.

VI -3. The synergy between social justice and efficiency: many cases and evidences

The contemporary debate opposes both sides of the Atlantic Ocean: North America would be prosperous because public opinion accepts large and widening inequalities, Europe would be stuck by Euro-sclerosis in response to an excessive dedication to social justice. Therefore the United States would be a strong exception to the synergy principle just stated. One century long statistics about the relative wage across different American States contradicts this popular opinion. In America too, the Golden years have been associated with an unprecedented reduction of wage differentials (Graph 1). Therefore, the general analysis given for Europe and Japan still apply to the United States.... at least until early beginning of the 70's, i.e. the date of the entry into the structural crisis of American Fordism.

The so-called Asian miracles have called the attention of a lot economists and political scientists who try to understand the reasons of such an unexpected success: was not the club of developed countries definitively closed to non-numbers? Again if conventional contemporary wisdom was grounded and universal, these economic performances should have been paid by increasing inequalities. In fact, the observation is strictly opposite: the successful four dragons are characterized by moderate and rather stable inequalities, and this is not a surprise for political scientists and institutional economists (R. Wade, 1990; 1996 ; R. Whitley, 1992). After the second world war, all these countries have experienced ambitious land reforms, a democratization and generalization of the access to education, unions recognition, the constitution of an efficient State organizing taxation and public spending. All these reforms pointed towards more equality and the constitution of a middle class, i.e. as many positive factors in the importation and adaptation of some segments of mass-production. Conversely, the Asian countries which are prone to inequality, do not experience the same economic miracles.

More general statistical and econometric analyses have investigated the relationship between growth rates and economic performances and a series of technological, social and economic variables for the period 1960-1985 or 1990. Even if there still remain some minor disagreements among specialists, some consensus seems to emerge. When tests are run across countries for the period from 1960 until now, a negative correlation between growth and inequality indexes comes out and is quite robust since it resists to alternative tests and specifications of the variables (A. Alesina, G. Carliner Eds, 1991). This is a presumption in favor of the compatibility of some forms of justice or fairness and economic performance. They would be more complementary than substitute...and this contradicts the now fashionable idea about an iron law according which more growth has to be paid by more inequalities. This fifth paradox therefore opposes the **current beliefs** of most governments with the **empirical evidence**. It might be explained as a backlash against the Golden age orthodoxy which was strictly opposite. Is there any evidence that the synergy between fairness and efficiency has recently vanished?

VI -4. Cooperation, low inequality and performance: still the century of the equality?

Quite on the contrary, many contemporary researchers, which have investigated the discriminating factors explaining global economic performance of different firms, sectors and Nations, have recurrently found that **the degree and extension of trust and cooperation** were very important. This conclusion is shared by authors so diverse as Francis Fukuyama (1996), Edward Lorenz (1996), Andrew Glyn (1995) and David Gordon (1996). Let us

follow this last author and pay a tribute to his memory by presenting briefly some of the major results of his last book “Fat and Mean”. Basically, there seems to exist a “golden triangle” between trust, social justice and economic performance, at odds with the opposite configuration where conflict is associated with inequality and poor efficiency.



This opposition is grounded on some statistical evidences, derived from the comparison of major OECD countries. The more important the control by managers and administrative personnel, the less likely the emergence of cooperation for industrial relations and more generally for the whole society (Graph 2). In the United States, Canada and United Kingdom, the importance of supervision by specialized controllers seems to be opposed to a cooperative behavior of rank and file workers. This seems have been largely pointed out a long time ago by the radical American school (H. Braverman , 1974; S. Marglin, 1974; S. Bowles, D.M. Gordon, T.E. Weisskopf, 1983) and this feature is still observed in the early 90's. At the other extreme, Sweden and Germany benefit from a lower degree of control of the hierarchy, less income inequality and therefore a better propensity to accept cooperation.

These social and organizational differences matter for economic performance.

From 1972 to 1989, productivity increases have been faster in cooperative countries than for the conflicting ones. Similarly, from a pure entrepreneurial and capitalism point of view, the intensity of investment and the capital per employee growth are more important for cooperative configurations than others (Graph 3). We are at the core of a striking contemporary paradox: the dynamism of capitalism is more evident within societies where the ideal of social justice is imposed to the economic system and the manufacturing of trust within the social fabric is converted and applied to entrepreneurial activity. Social justice, far from being a brake to efficiency is quite on the contrary a stimulus and an incentive. But then how to assess the conservative ideology and the silent acceptance by governments of the resurgence of inequalities? They may seem beneficial to firms' performance in the short run...but they annihilate one of the main sources of legitimacy of the capitalism in the long run, i.e. the cumulative improvement of standards of living by product and process innovations (see the seven paradox, § VIII).

The two configurations are fairly stable, since they display a form of structural complementarity, in the precise sense given by recent research on managerial organization (P. Milgrom, J. Roberts, 1992). If individuals perceive to be treated fairly, they accept more easily commitment and cooperation, according to a reciprocity argument. It is then possible to fully benefit from the spill over of competence across individuals and through time: this is exactly the first configuration. By contrast, when workers are closely monitored by a plethora of middle managers, and observe large income differentials associated to the rank occupied within the firm or organization, there is a clear obstacle to the diffusion of technical change, the concern for quality, servicing and speed of delivery. The second configuration is fairly stable and can only be overcome locally, by restricting the exchanges with a highly

individualistic environment (R. Boyer, A. Orléan, 1992). This is an introduction to the next paradox.

VII - SIXTH PARADOX: NOT A SINGLE CAPITALISM BUT AT LEAST FOUR CONFIGURATIONS COMPETING BUT COEXISTING

The capitalism has won...but practitioners and social scientists discover that there is not a single capitalism but a large variety, and that these differences matter (M. Albert, 1991; M. Aoki, 1995; R. Dore, R. Boyer, Z. Mars Eds, 1994; S. Berger, R. Dore Eds, 1996). The previous opposition between cooperative and conflicting capitalisms is a good example but it can be extended to many other features and oppose coordinated and non-coordinated capitalisms (D. Soskice, 1991), or more traditionally private to public led capitalisms (A. Shonfield, 1967). To overcome this paradox, it is necessary to prove theoretically that capitalism may differ significantly and that one can propose a provisional taxonomy trying to reconcile the various dichotomies previously mentioned.

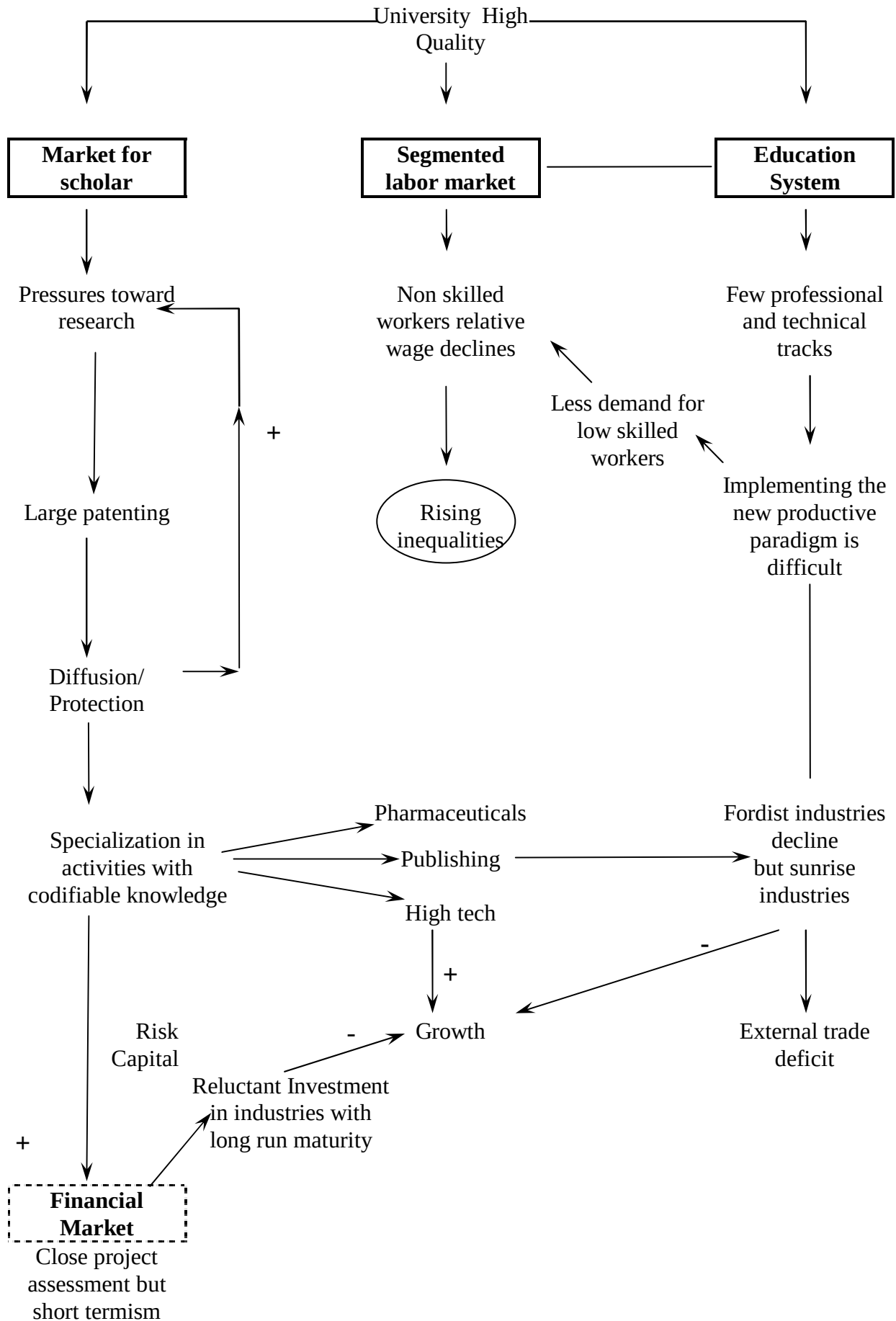
VII -1. Why does capitalism differ? A theoretical survey

This paper has already given a series of arguments in favor of the hypothesis of the diversity of capitalisms, but a short summary is useful to recapitulate the different arguments, which may belong to diverse school of thought in social sciences. The first argument flows directly from the recent advances of micro economic theory of **imperfect information**: as soon as no complete contract can be drafted, nor all contingent markets organized, many second best solutions can be given to the same economic issue. Therefore from a strict neo-classical standpoint, product markets display a lot of configurations (J. Stiglitz, 1987) and the variety is still more important for labor, credit and finance, which define far more complex relationships than typical commodities. The drama of modern contemporary theory could be the excessive diversity of the institutional settings which can be built as soon as the myth of a pure imperfect market collapses.

Political scientists add a quite different argument: since the functional role of economic institutions is not explaining their origin, their variety explicitly derives from the **intricacy of the political process** (D. Hibbs, 1987) which leads to institutionalized compromises. Actually, the diversity of political institutions seem somehow correlated with the diversity of capitalisms (G. Boismenu, 1995; J. Zysman, S. Cohen, 1987). More generally, the methods for solving conflicts among alternative principles and diverging interests differ drastically from one country to another. This is why a **constitutional order** is so important (see Diagram 10, supra): it informs and channels the evolution of institutions and organizations and therefore it induces a strong path dependency. For instance, the same issue is solved by private law and jurisprudence in the United States and by public jurisdiction in France, and these differences are piling up decade after decade and finally define quite different capitalisms (L. Cohen-Tanugi, 1984).

Specialists of technical change and evolutionary economists have developed fairly sophisticated models built upon the role of increasing returns to scale (G. Dosi, 1988; 1991).

DIAGRAM 15 - MARKET LED CAPITALISM



This is a quite general phenomenon which arises through a large variety of mechanisms: typical technical returns to scale, role of the number of adopters in the selection of a communication technique or social norm, impact of radical innovations on subsequent developments, constitution of technological and productive paradigms, tacit knowledge and its diffusion within an industrial district. Then, initial choices, which seemed marginal and reversible, turn out to propel the economic system along a trajectory, featuring strong a **path dependency** (B. Arthur, 1994). This applies to economic geography (P. Krugman, 1992), the evolution of conventions and social norms (R. Boyer, A. Orléan, 1992), the constitution of networks, the emergence of technical norms. When all these mechanisms are added, no surprise if strong localized or sectoral specificity tends to perpetuate.

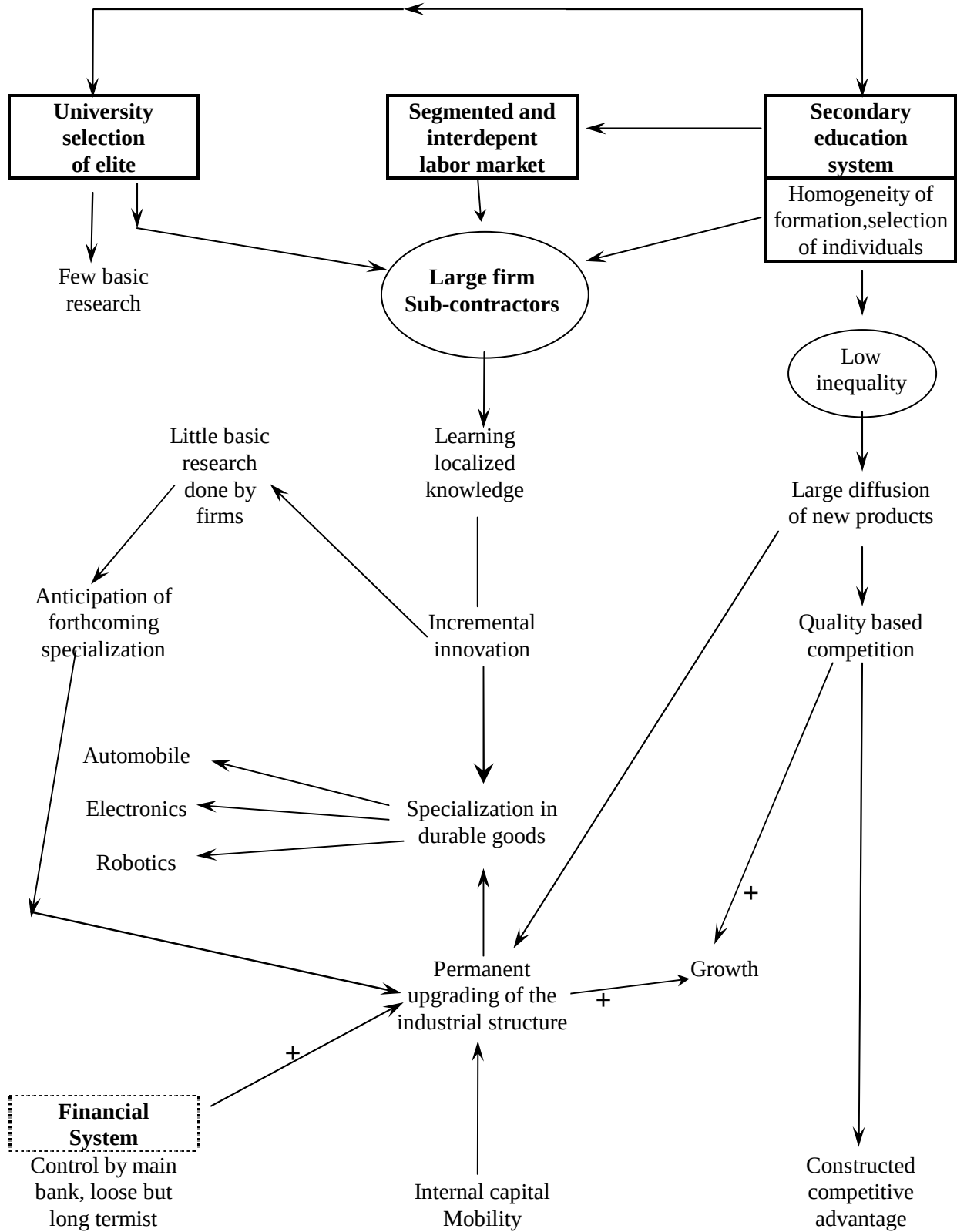
Finally, the same evolutionary framework can be extended to the issue of **co-evolution and the complementarity of institutions**, organizations and economic specialization (M. Aoki, 1995; G. Dosi, S. Fabiani, C. Freeman, R. Aversi, 1993). The institutions of capitalism can no more be analyzed in isolation, since they have to be mutually compatible. This complementarity is the more important, the more distant the economy far away from the idealized Walrasian world in which individuals are only coordinated and socialized by the price mechanisms. As soon as constitution, institutions and organizations are created to overcome the limits of individual information gathering and use (O. Favereau, 1989), the central issue is the compatibility of a **complete institutional architecture**. Institutional economics is one of the rare and serious alternatives to Walrasian economics and their contemporary legacy, since it deals with the central question of political economy: how to organize a decentralized economy ?

There are many theoretical reasons for the diversity of capitalisms...but do empirical evidences confirm such a variety? Are there as many capitalisms as cultural values, political traditions and economic specialization? A recent research has collected a large number of statistical indexes in order to capture the determinants of innovations for twelve OECD countries (B. Amable, R. Barré, R. Boyer, 1997). Data analyzes and statistical clustering techniques deliver a suggestive taxonomy: four major brands of capitalism were coexisting at the end of the 80's. This totally inductive method brings results which can be rather easily interpreted within the present framework.

VII -2. Market led capitalism...and the rise of regulatory agencies: the US, UK, Australia, New Zealand and Canada

The statistical methods for classification show a clustering of all English speaking countries around a model in which markets are the leading institutions. But since this coordinating mechanism is highly unsatisfactory for many products and sectors, these economies are featuring a large role for regulatory bodies, which exert a countervailing power upon the pure market logic, when it would become detrimental to the society as a whole or would hurt some politically well represented groups. Simultaneously, commercial laws and jurisprudence play a major role in the evolution of market relations. But these external controls should not hide that **self interest and competition** are the key mechanisms which govern nearly all the spheres of the society (Diagram 15).

DIAGRAM 16 : THE “ MESO-CORPORATIST ” CAPITALISM



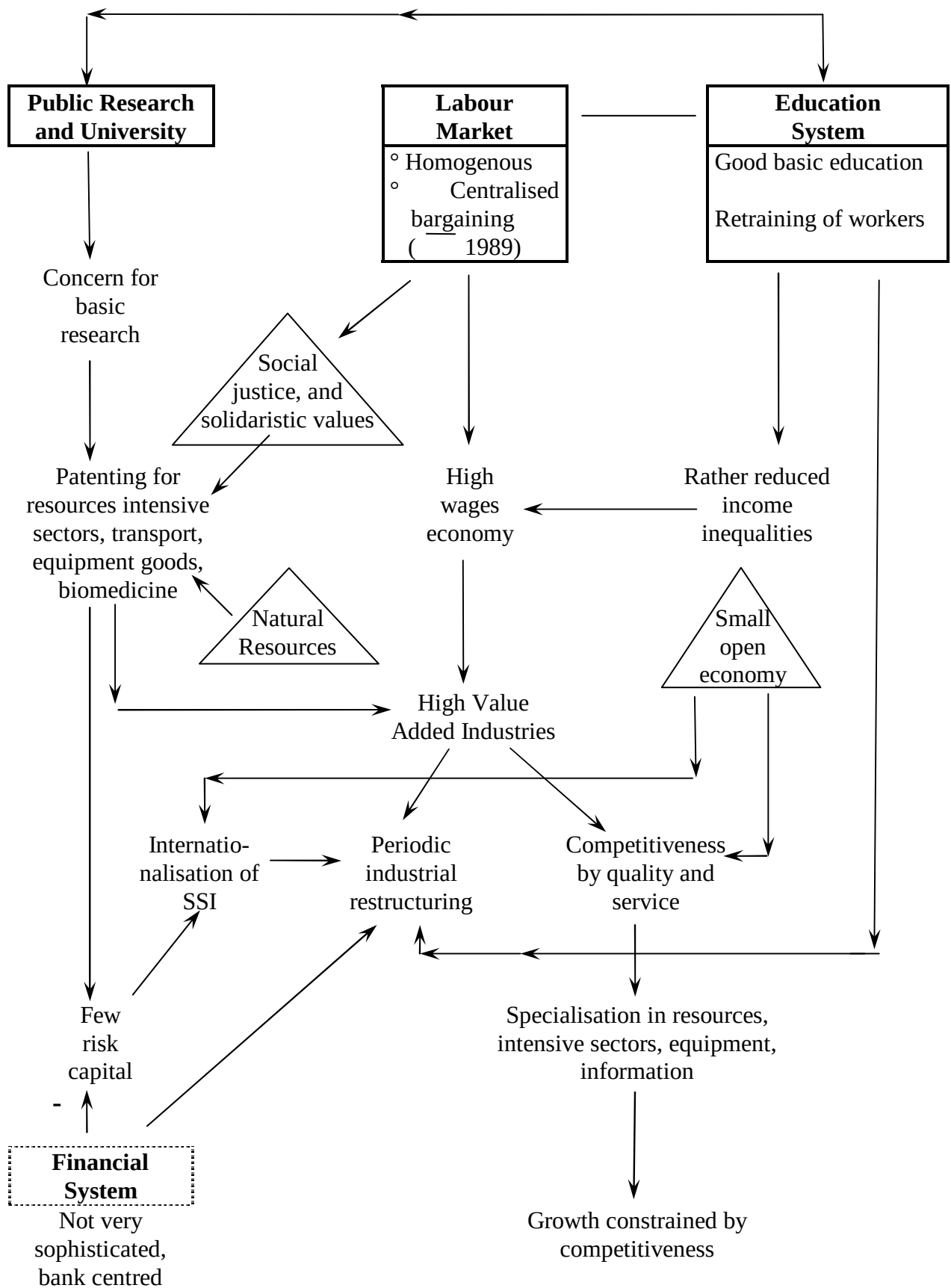
Individuals and families invest in education in accordance with the expected private rates of return of each track and generally there is few professional training, since it cannot be appropriated by the recipients. Similarly external flexibility is the more important method for adjusting labor markets, which are segmented according to the degree of skills of individuals, the sectors, the regions. Since the Fordist connective and collective bargaining has been seriously eroded, income evolution may vary drastically according to skills, localization and the firm considered. The concept of fairness is limited to the objective that each talent or competence should be paid its price, with few general diffusion of mechanisms. Innovation is governed by the question of appropriability, and the patent system is designed in order to try to work out a trade off between incentives to innovate and speed of diffusion of the technological advances associated to these innovations. Venture capital and a whole spectrum of financial instruments allows a permanent renewal of entrepreneurs in sunrise sectors.

These two features explain the specialization of the United States and United Kingdom in activities where knowledge is easily coded and formalized: pharmaceuticals, publishing, software, leisure industry, high tech sectors and so on. On the contrary, during the 70's and 80's, the market led capitalisms had lost their competitive edge in the modernization and up dating of conventional mass production sectors, such as automobile, consumer electronics. In this model, there is even a market for corporate governance, and this is quite unique with respect to other three configurations. Market led capitalism is not without merit : dynamism of radical innovations, quick adaptation to disturbances and variations in the environment, moderate unemployment,... But simultaneously, the system shows its weaknesses for sectors which require a lot of coordination among interdependent firms, it allows the deepening of inequalities and the formation of minorities. More generally market led capitalisms tend to under-invest in the public goods which would be required by the poorest fraction of the population (public transportation infrastructures, general education, preventive health care).

VII -3. The meso-corporatist capitalism and the leading role of large corporations: Japan

Data analysis suggests the presence of a singular country Japan, with specific features which contrast strongly with market led system (Diagram 16). No doubt that the Japanese economy is capitalist, even if some scholars tend to emphasize some feudalistic legacy, or more paradoxically socialist or more exactly self-managed features. But in this country, most of the economic adjustments are not operating upon external markets but are largely organized within the orbit of large corporations, their main bank, the network of related or affiliated companies or by extension within the control of some public regulations which are used to coordinate more than to coerce economic units and individuals. It is why this system has been labeled meso-corporatist in the sense that the coordination is not limited to the interior the firm (by opposition to micro-corporatist) nor does it require strong nation wide economic policy (in contrast with typical state led capitalism). The shunto process is a good example of such a subtle mechanism which is nor market led, nor state driven. Equivalent processes exist for innovation policies, trade, industrial relations.

The **central role of the large corporation** explains the structuring of the labor market between regular and non regular workers, the dividing line being precisely the entry into the career provided by an internal market specific to each large firm. Similarly, the secondary

DIAGRAM 17 : SOCIAL DEMOCRAT CAPITALISM

education system delivers a rather high and homogeneous degree of general knowledge, but the specific competence required by the firm are manufactured by internal job mobility and on the job training. Therefore, this system is specially strong in coordinating complex production processes, but conversely, rather weak in all the sectors where innovations are basic science driven such as the biomedical industry, chemistry, aerospace, and so on.... Therefore, the frequently praised Japanese competitiveness is limited to a precise set of sectors (automobile, consumer electronics, robotics) and not so overwhelming, quite on the contrary, in insurance, banking, finance, health, retailing,...

Thus, different economic institutions induce **contrasted industrial specialization**. After all, the American and Japanese specializations are more complementary than they are competing. If confirmed, this would be a good news about their international relations. More generally, internationalization could well deepen the national specificity of each institutional architecture, at odds with the prognosis of convergence theory. In a sense, no system is absolutely superior to another and therefore there is room for the coexistence of a significant variety.

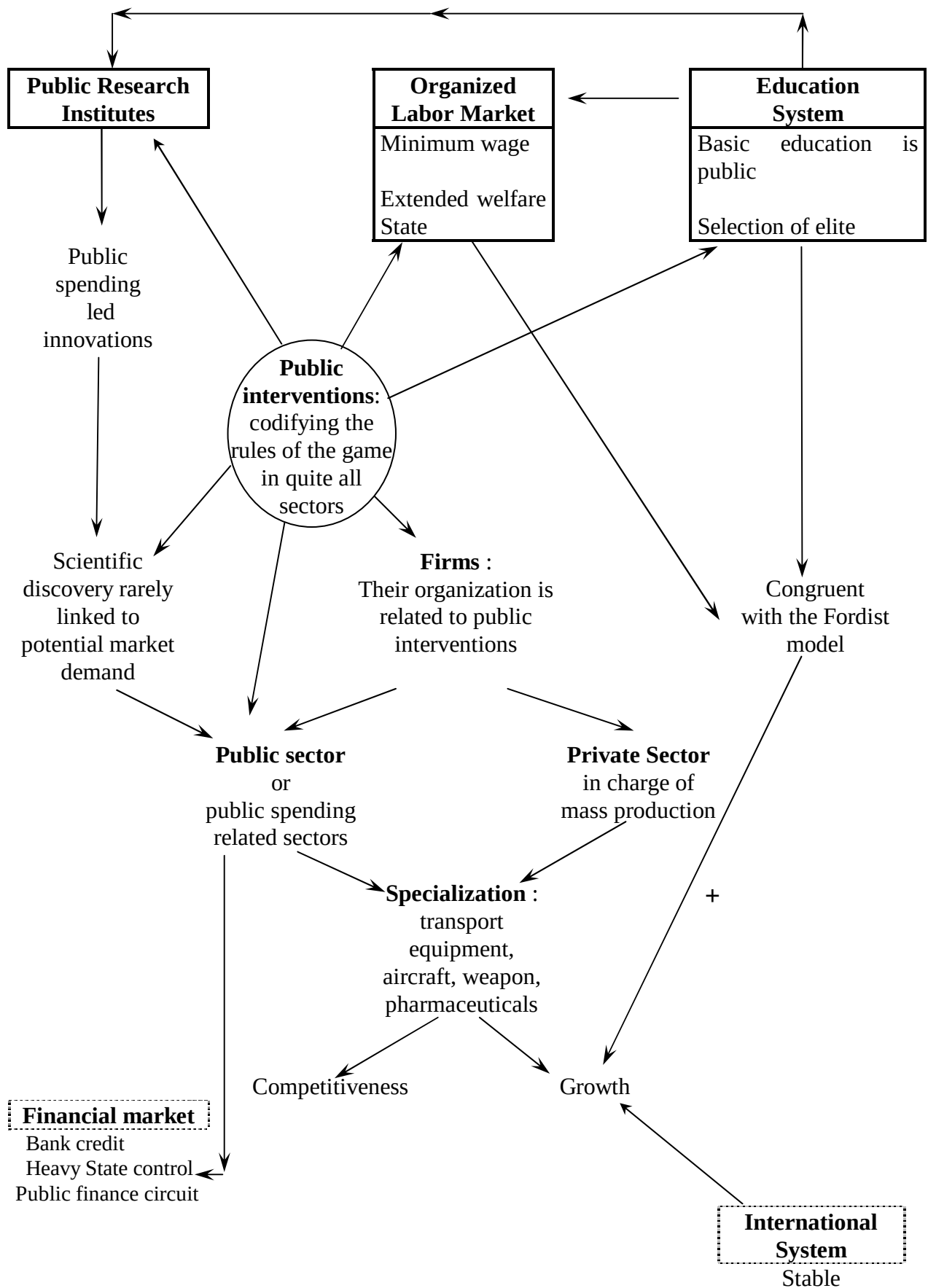
VII -4. The social democratic capitalism, or the art of bargaining between social partners: Sweden, Austria, Finland, Norway, Denmark

There is a third way in order to solve the recurring social and economic problems and unbalances associated to capital accumulation and development. If social partners are well organized and form a limited number of unions and associations which take into account the whole range of interests of their members, then it is possible to negotiate mutually advantageous compromises, and so implement institutions which cope with the most pressing issues: preserving competitiveness, promoting innovation in order to keep productivity and standards of living rising, solve emerging social problems, such as the crisis of work organization, or preserve environment. Social democratic countries belong to this third category and have in common to be small opened economies, which need to be competitive to survive in the long run, and some of them enjoy some abundant natural resources (Sweden, Finland and of course Norway).

The pursuit of **general interest** and the concern for **social justice** permeate nearly all economic and political institutions (Diagram 17). The educational system is organized in order to give a good basic education to the quasi totality of the population, whereas special institutions are devoted to retrain the workers when their competence become obsolete. The labor market is actively organized by public authorities, which minimize external flexibility and promote a permanent up-grading of skills in response to external competition and technological advances. The research is undertaken within public institutions and is directed towards highly specific directions to: improve the value added content of the products derived from natural resources, to innovate in order to solve ecological problems, to organize social welfare and security, to design goods with a special premium concerning quality and servicing, just to sustain a high wage economy with few income differentials.

All these institutions are complementary and the social-democratic architecture is quite different from the market led or meso-coporatist configuration. The social democrat capitalism has been developing an original industrial trajectory, with a highly specific specialization which

DIAGRAM 18 : THE STATE LED CAPITALISM



do not duplicate that of its foreign competitors. During the Golden Age, this capitalism has been very dynamic and efficient. But since a decade major sources of crisis have pointed out, specially in Finland and Sweden, but for reasons which differ: the bursting out of inner disequilibria and contradictions has suffered from the consequences of the collapse of the Soviet economy for Finland or Sweden. Capitalisms are not immobile, quite on the contrary, they develop along trajectories which remain highly specific even in the era of so-called “ globalization ”.

VII -5. State led capitalism, or what to do when the market ideology and social partners are weak: France, Italy, Spain

The last brand of capitalism is built on still another coordinating principle. Contrary to the social democrat configuration, workers unions are weak and divided and even business associations do not play a major role in the coordination and defense of firms, interests and strategies: the bargaining rarely takes place between these two partners, since public authorities have to induce such a process by various incentives. At odds with the meso-corporatist capitalism, private firms and large corporations are not strong and innovative enough to develop a coherent strategy and try to impose it to their wage earners, banks. But the market ideology of *laissez-faire* is not far from accepted, contrary to the market led configuration. Therefore the only arrangement left derives from **public interventions in all domains, including production**: public enterprises and spending are therefore quite important in the production of goods which would be provided by private firms elsewhere. (Diagram 18).

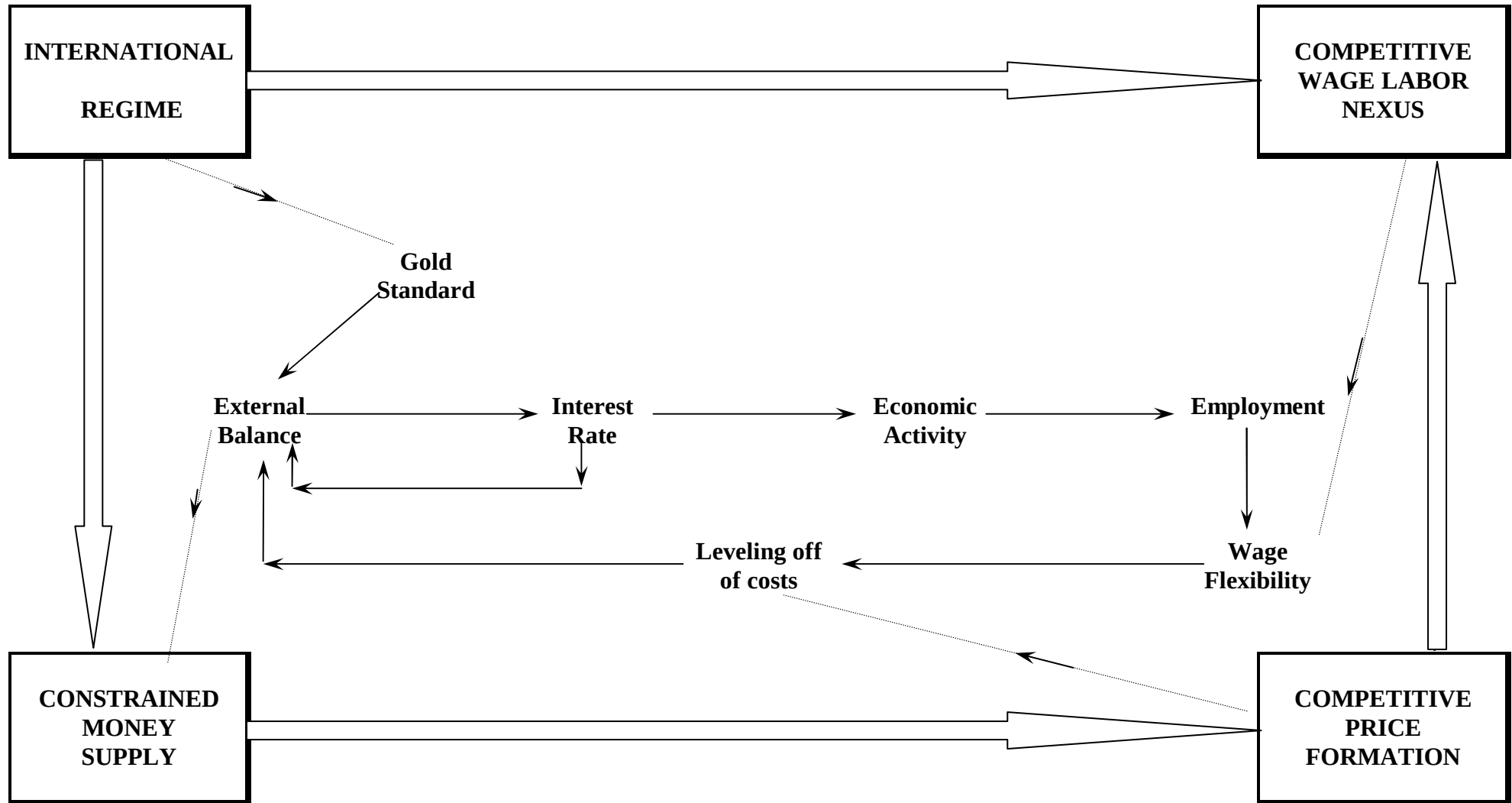
Still more, the State, either central or regional, has an overwhelming role, since in charge the detailed synchronization of many aspects of social and economic life. The education system is essentially public, aims at the transmission of general knowledge and selects an elite who works as public servants or managers of nationalized and related firms. By contrast, professional training is weak, since social partners cannot agree on curricula and wage systems which would induce apprenticeship. The labor markets are highly regulated in order to maintain a principle of fairness, even if *de facto*, internal markets are more protected than the secondary jobs. Research, basic and applied, is organized within specialized institutes which do not have necessarily good connections with private productive firms which are supposed to use productively their results. Therefore, the most successful innovations take place within or in close relation with public firms and concern mainly collective infrastructure, welfare or State related expenditures. The State led capitalism is especially strong in transport equipment, aircraft, weapons, pharmaceutical. In France is an emblematic example, and this is not a coincidence, since State interventions are present everywhere, from finance to innovations. By contrast, this capitalism is not well equipped to be competitive in the financial sector, private and consumers equipment goods or in sectors where reactivity and differentiation by quality are important. It is why Germany does not belong to this group, and is closer to the social democrat model, but shares some common macroeconomic evolutions with this group of State led capitalisms, will represented in Europe.

Within a well organized international regime, all these four capitalisms may coexist and develop their relative competitive advantages which are directly driven by the nature and the coherence of their institutional architecture. It is important to note that this plurality of

capitalist systems is more and more recognized and investigated by a large variety of scholars.

***THE THREE STAGES OF INDUSTRIAL RELATIONS AND THEIR LINKS WITH THE FORMS OF
COMPETITION AND MONETARY REGIMES***

**DIAGRAM 19 - XIXth CENTURY : NATIONAL ECONOMIC INSTITUTIONS ARE BUILT IN ORDER TO BE COHERENT WITH THE
INTERNATIONAL REGIME, SPECIALLY THE GOLD STANDARD**



VII -6. An agenda for interdisciplinary research: a theory of capitalisms

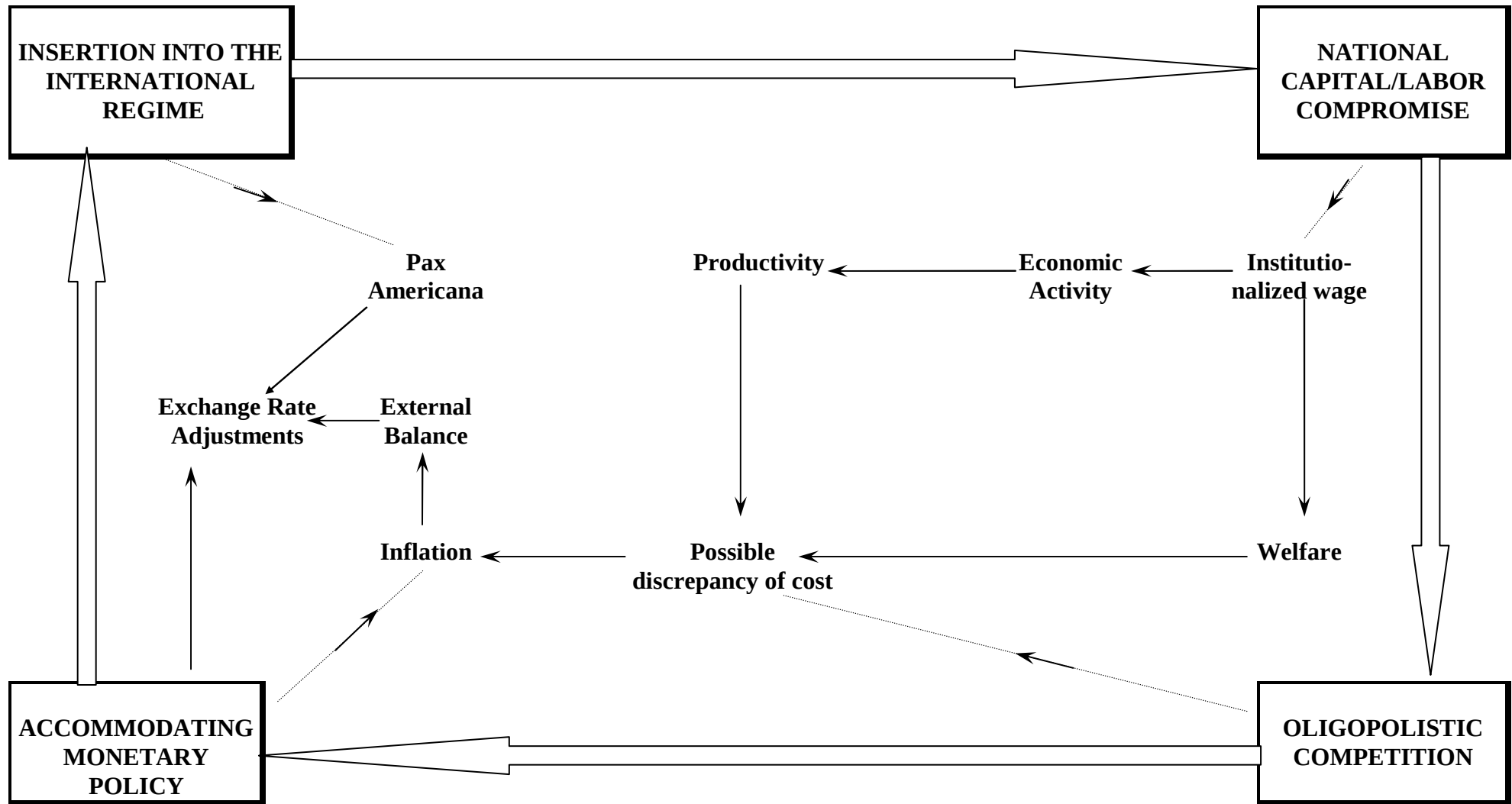
Since at least one decade, the fact that there does not exist a single capitalism but that several are coexisting, is the common conclusion of a series of independent research. Nevertheless, the precise taxonomy still differs a lot, and the related discrepancy should be reduced or even overcome by a comparative and interdisciplinary research program.

The **managerial literature** has rediscovered that innovations are clustering around local patterns, which use efficiently the opportunity opened by the existing institutions and organizations. Some authors get quite similar conclusions those presented here and it is a largely unexpected result (M. Porter, 1990). Simultaneously, other research points out that the internal organization of firms have to be coherent with the national institutions and this contingency, associated with path dependency, explains the coexistence of quite various business systems, both in Europe and Asia (R. Whitley 1992; 1996). In passing, just note that it would be interesting to extend the present framework to the new Asian capitalisms, which seem as diverse as their Westerner counterparts. The role of societal factors on production regimes has been pointed out by various disciplines and given different names. Some **economists** have coined the concept of productive systems (F. Wilkinson, 1983; J. Rubery, 1994), **historians and sociologists** have stressed the social embeddedness of production regimes and their closed connection with the financial system, industrial relations and the educational system (R. Hollingsworth, 1995).

Another key concept relates to national system of innovations and has been derived from **neo-Schumpeterian and evolutionary analyses** of technical change: the path dependency of technological paradigms, economic institutions and industrial specialization is explaining the persistence of highly differentiated methods for organizing research and development (B. Lundvall, 1992; R. Nelson, 1992). By specialization, **political scientists** have focused upon the structuring role of public interventions, which are themselves the outcome of political interactions and bargaining (Ph. Schmitter, 1990; J. Zysman, S. Cohen, 1987; G. Boismenu, 1995). Furthermore, the test of the Fordist hypothesis applied to a variety of capitalist countries has led to a significant renewal of **“régulation” theory**: a variety of accumulation regimes has been unfolding even during the continuous internationalization which is taking place since the end of the 60’s (J. Mazier & Alii, 1994; R. Boyer, 1988; 1995; B. Amable & Alii, 1997).

To conclude, one could imagine the following happy end to the sixth paradox: every national capitalism could survive and develop the economic potentialities associated to a given and long lasting constitutional and institutional style. But the very nature of the capitalist forces operating at the international level is to permanently alter the sources of competitiveness and to shift the relative position of countries in relation with some structural changes, which emerge from the very interaction of interdependent accumulation regimes. Since the 90’s, we are living such an epochal change and a final paradox emerges and may well be the more important.

DIAGRAM 20 - POST W.W.II : THE STRENGTH AND THE RELATIVE AUTONOMY OF NATIONAL COMPROMISES TURNED OUT TO BE COHERENT WITH A HIGHLY PERMISSIVE INTERNATIONAL REGIME UNDER PAX AMERICANA



VIII - A FINAL PARADOX: IS THERE A GRESHAM LAW FOR CAPITALISM?

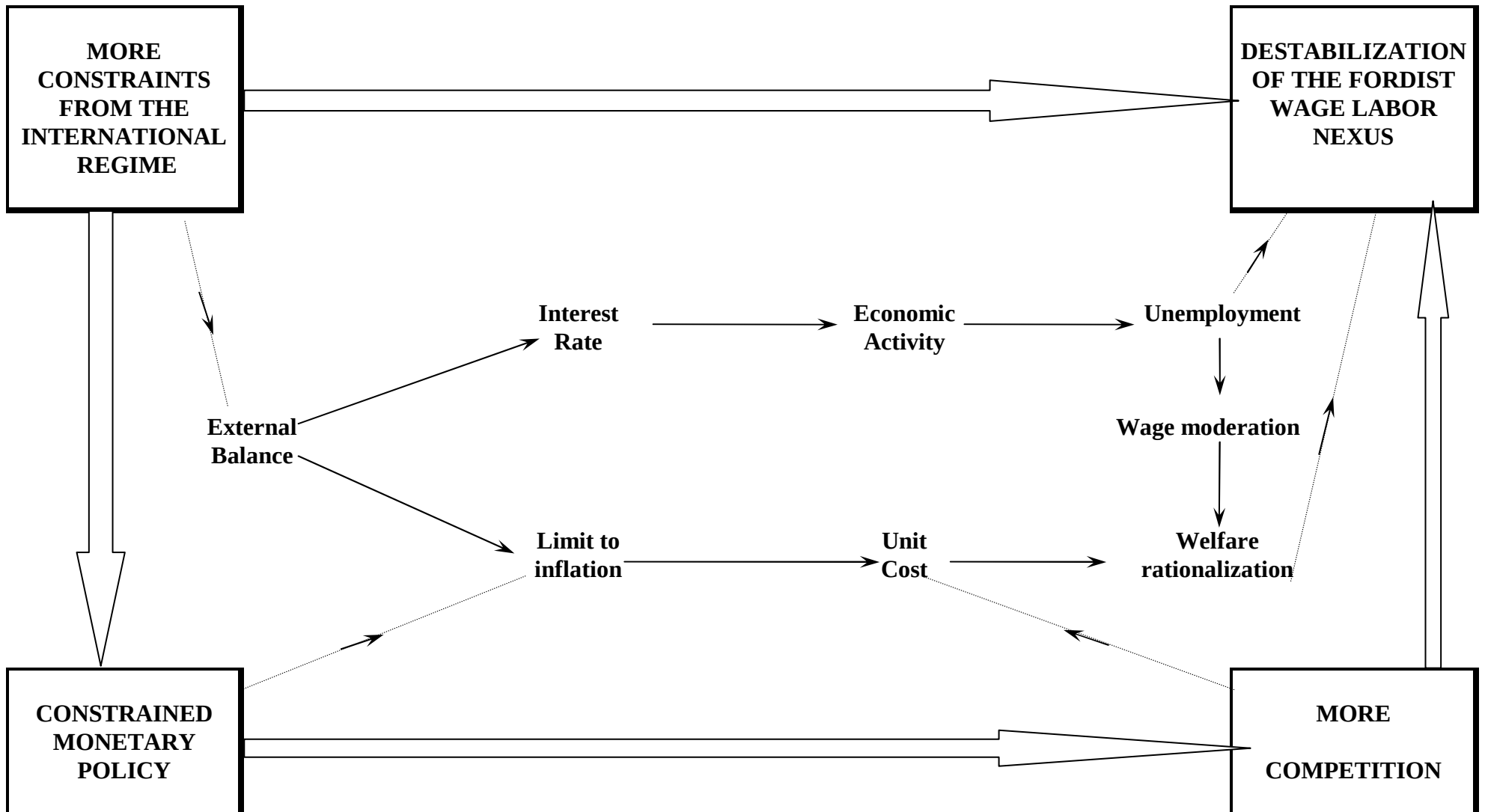
A frequent argument in favor of trade and finance liberalization stresses that the emerging international regime will push the efficiency of all forms of capitalism: regime competition is assumed to select the most satisfactory constitutional order and institutions. It is nothing else than the conventional belief in the efficiency of markets which is extended to the entire economic systems. But if the international forces do not follow any clear pattern and convey major disturbances and financial innovations which destabilize most of national architectures, then only a special brand of capitalism may resist and prosper at the detriment of much more promising ones. This is the major uncertainty of the current decade: there is a serious risk that the premium given to market led capitalism may hurt the long run viability and resilience of capitalism, as a global system.

VIII -1. National institutional forms and the international economy: the U-turn of the 90's

Nowadays, international forces exert their influence upon many aspects of national economic activity, and this is a novelty which has to be put into historical perspective. This changes the viability of national trajectories of capitalism in quite definite directions.

- During the *XIXth century*, each national capitalism was severely constrained by the international monetary regime and foreign competition. In a sense, the wage labor nexus had to be flexible and highly reactive, with few social and economic rights granted to workers because wage and employment variations were absolutely necessary to keep domestic production price in line with the global price stability which was implied by the Gold standard. Similarly, the very concept of national economic policy was absent, because the interventions of the Central Bank had not any counter-cyclical objective and they were only following the trends set by the market. In the language of “régulation” theory, the two leading institutional forms were the international regime and the form of competition. **Thus the competitive wage labor nexus was hierarchically dependent** from these two key institutions (Diagram 19).
- *The post World War II Fordist era* displays a quite different configuration of institutional forms. After the turmoil of the inter-war period and the structural changes implemented after 1945, the building block of the new social and political order is then **the capital labor compromise** which is recognizing unprecedented rights to workers. They are institutionalized and concern direct wage formation, access to welfare and a permanent improvement in standards of living of workers. But the other institutional forms had to change to cope with these far reaching reforms. The dynamism of consumption and demand mitigates competition which become oligopolistic. Since the nominal wage is now set through a bargaining process or the implementation of an indexation formula, monetary policy has to adapt and for instance accept that inflation becomes permanent. Last but not least, when the country cannot cope with the foreign competition because inflation was higher than in the rest of the world, it is easy to adjust the exchange rate, given the stability of the Bretton Woods system. By contrast with the previous century, **forms of competition and monetary regimes are now structurally determined** by the Fordist wage labor nexus (Diagram 20).

DIAGRAM 21 - THE 90's: THE NEW INTERNATIONAL CONFIGURATION EXERTS STRONG PRESSURE UPON THE REDESIGN OF NATIONAL ECONOMIC INSTITUTIONS.



- *The last two decades* have experienced a significant reversal from the Golden Age configuration towards the hierarchy which used to prevail a century ago. Since the success of each national regime of mass production triggers the surge of exportation and by extension of world trade, economies become more and more interdependent and the relative autonomy of the Fordist wage labor compromise can no more be maintained unchanged. The insertion into the international trade and financial flows become determinant for monetary policy, which is under the permanent scrutiny of the financial international community. But of course, the gentle and nationally controlled forms of competition shifts towards much more direct strategies in order to redefine market shares and competitive advantage of firms, regions and nations. Even the budgetary policy is now constrained by the assessment of financial markets and can no more sustain all the entitlements which were supporting the previous wage labor nexus. Structurally, the hierarchy of institutional forms tends to look like the configuration observed for competitive capitalism (compare diagrams 21 and 19). Again, **the wage labor nexus transformations are conditioned by the forces of competition and the return to the objective of price stability.**

This structural change is not without consequences about the viability of each brand of capitalism, since it introduces criteria of selection and viability which are quite different with respect to the Fordist era.

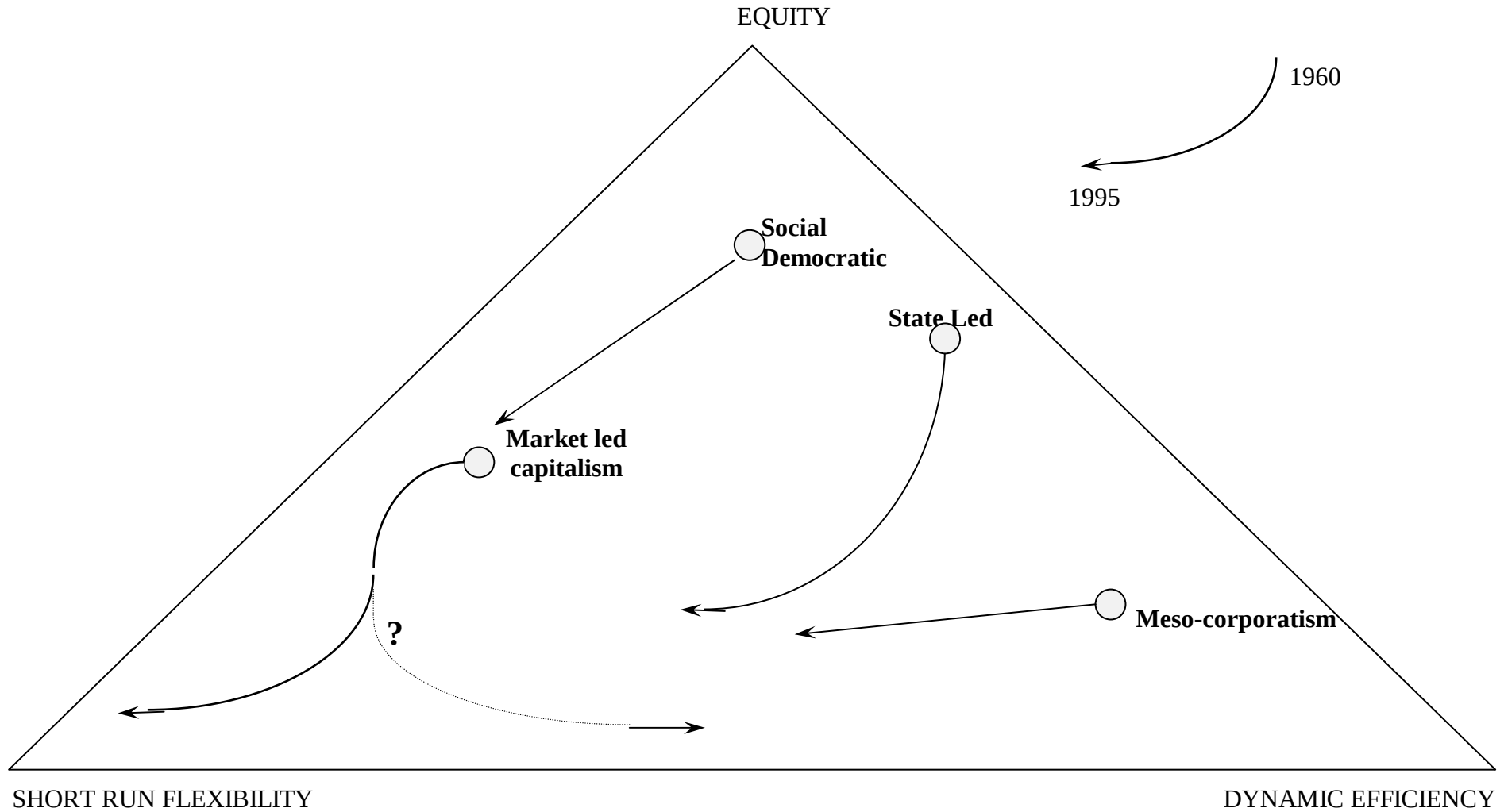
VIII -2. The international context of the 90's is pushing capitalisms towards short term flexibility

A priori, the viability of any capitalist system is up to its aptitude to satisfy more or less three different criteria. During the Golden years and in the very long run, the best argument in favor of this economic system is simple enough: it is the more efficient in promoting the improvement of average standards of living. The irony is that this was the largely unintended effect of the struggle of firms for profit and productivity in a world where workers had gained voice and bargaining power. Then the leading criteria was **dynamic efficiency**.

But simultaneously, democratic constitutions have given a say to citizens, mainly wage earners, about the conduct of economic policy, taxation, public goods and income distribution. If the dynamism of capitalism is not to be blocked by State interventions in reaction to major social problems, such as inequality and unemployment, a second criteria has to be fulfilled, that of **fairness or social justice**. It has been argued previously (§ VI, supra) that reduction of inequalities and dynamic efficiency have been closely associated since W.W.II and until the early 90's.

Nevertheless, the most conventional argument stresses the ability of capitalism to react to innovation, to experiment with new products and organizations, to flexibly respond to uncertainty and business fluctuations, to correct quickly past investment errors by highly reversible price systems. The Austrian school, which has become so influential again in the 80's, seems to have imposed its vision of capitalism: it should react easily to disturbances and this property is captured by the criteria of **short run flexibility**. It becomes specially important if growth rates drastically slow-down, when short run dynamics becomes erratic or at least quite difficult to predict and of course if financial markets frequently change their assessment about the relative competitiveness of various economies.

CAPITALISM AGAINST CAPITALISM UNDER THE PRESSURE OF INTERNATIONALIZATION
DIAGRAM 22 - A GENERAL EVOLUTION TOWARDS SHORT RUN EFFICIENCY AT THE COST OF LONG RUN PERFORMANCE AND SOCIAL JUSTICE?



VIII -3. Towards the XX1st century: will “bad” capitalisms drive out more promising ones?

The **Golden Age** had exhibited a quite unprecedented mix of these three criteria. The growth was so fast and steady, due to the catching up and the modernization of technologies and organizations, that economic fluctuations were minor and uncertainty very low. Therefore, the criteria of short run flexibility had not to be considered so much. The name of the game was then to develop production, productivity, standards of living, i.e. **dynamic efficiency**. But simultaneously, the post-W.W.II political deal was putting on top of the agenda of governments the question of **social justice**, and the competition with the Soviet regime has been playing a role in such an aggiornamento of capitalism. In the 60's, quite all capitalism forms were successful, but especially the social democratic, state led and meso-corporatist. At that time, American scholars were so impressed, that they come to doubt about the superiority of market led capitalism and tend to emphasize the European and Japanese **miracles** (Diagram 22).

The contemporary period has experienced a complete reversal of the discriminating criteria and the model of capitalism to be emulated. For the reasons already given, a form of short termism has invaded economic and political life. Any disequilibrium has to be corrected as quickly as possible, public deficits are blamed for being at the origin of unemployment and financial instability, product markets and labor are deemed to react as quickly as financial markets. The objective of dynamic efficiency is considered to be a consequence of short run malleability, whereas the equity principle is now restricted to the payment of each individual according its competence, with few or no concern for the less skilled and poorer members of the society. In other words, the criteria of **short run flexibility** is again ruling, as it used to do during the XIXth century and even the inter-war period. Some chapters of General Theory are still worth to be read, since they give still valid arguments which show that this obsession for pure market adjustments is totally counter-productive, both economically and politically.

Mutatis mutandis, we are observing a similar intellectual mood during the 90's. Some of the representative social democrat capitalisms experienced the most severe crisis since the inter-war period. Simultaneously, State led capitalism is everywhere blamed for being sclerotic and irrationally attached to an extended welfare and too much income redistribution. Even the meso-corporatist capitalism, which was so admired and tentatively copied during the 80's, is now considered as archaic and inefficient. By contrast, **market led capitalisms are the Phoenix of the present decade**. Less concerned with social justice than ever, unable to develop again productivity and average standards of living, they are nevertheless considered as the reference, because they fit quite well to the uncertain and difficult context of the period, they are able to extend the legitimacy of their institutions and life style. Finally the US economy is playing a major role in setting what should be the rules of international relations and sound economic policies and good economic systems. On the contrary, other capitalisms experience severe difficulties in redesigning their basic institutions and their business and political elite tends more and more to consider market led capitalism as THE norm.

TABLE 6 - THE SEVEN PARADOXES OF CAPITALISM

FIRST PARADOX	Capitalism has won over alternative systems...but there is not any theory about its implementation
SECOND PARADOX	Politicians “ follow the market ” but theoreticians doubt more and more about its overall efficiency
THIRD PARADOX	Economic theory analyses the details not the functioning of the whole capitalist system.
FOURTH PARADOX	Containing the market may be good for the resilience of capitalism.
FIFTH PARADOX	The search for social justice at the roots of the dynamic efficiency of capitalism.
SIXTH PARADOX	More than “ capitalism ” a variety of configurations driven by politics, history, path dependency.
SEVENTH PARADOX	The 90's : A Gresham law for capitalism?

Thus, the more unfair and less efficient in the long run, but highly reactive capitalisms are driving out the more solidaristic and efficient ones, precisely because they are quite clumsy in reacting to a rather erratic international system. Will the Gresham law apply to capitalism? It would be tempting to conclude so, but the very reference to this monetary theory introduces some caveats, since it has been true only during quite exceptional periods of high uncertainty and major unbalances. It is difficult to prolong the present trends over a long period. First, according to a Polanyian argument, it would be not surprising if some political and social protests were soon blocking the general process of “marketization” of the society. Second, the long run history of advanced capitalist countries shows the permanence of strong social and economic differentiation, deeply embedded into each society system of values and political institutions. Third, it would be dubious to extrapolate the present trends and specially the power of financial markets indefinitely. Therefore the ruling of the short run flexibility criteria could quite soon be replaced by a more balanced mix, which would give a chance to all the three other forms of capitalism.

IX - AN AGENDA FOR THE NEXT CENTURY

This paper has argued that modern economic theory, in spite of its prolific development and technical achievements, is far away from delivering an intelligibility of the transformations of contemporary capitalism. The inability to analyze a system as a whole is quite detrimental to the relevance of economics. This explains some of the discrepancies between the development of theory and the requirements of the current period (Table 6).

But it is not at all a fatality, since first steps in the direction of a more relevant theory of modern capitalism and its transformations have already been made by various scholars who are historians, sociologists, political scientists, heterodox economists and philosophers. Economic issues are too serious to be left as the exclusive responsibility of neo-classical economists. “Régulation” theory is immersed into this melting pot and research agenda and aims at rejuvenating the ambition of the old political economy.

Could this interdisciplinary research program be a voice when disenchanted politicians will realize the limits of the current policies, before or after a major world financial crisis...or unexpected but some devastating domestic social unrest? This is a difficult but necessary ambition.

X - REFERENCES

- Aglietta Michel (1982) *Regulation and Crisis of Capitalism*, Monthly Review Press, New York.
- Albert Michel (1991), *Capitalisme contre capitalisme*, Seuil, Paris.
- Alesina Alberto and Carliner Geoffrey eds. (1991), *Politics and Economies in the Eighties*. The University of Chicago Press, Chicago and London.
- Amable Bruno, Remi Barre, Boyer Robert (1997), *A la recherche des systemes d'innovation et production :Theorie, configurations et evolutions*, A paraître Economica, Paris.

- Amable Bruno, Boyer Robert and Frédéric Lordon (1995), L'ad hoc en économie : la paille et la poutre, dans D'Autume Antoine et Carletier Jean Eds. *L'Economie devient-elle une science dure ?*, Economica, Paris, p. 267-290.
- Aoki Masahiko (1988) : *Information, Incentives, and bargaining in the Japanese Economy*, Cambridge University Press, Cambridge MA.
- Aoki Masahiko (1995), Towards a Comparative Institutional Analysis : Motivations and Some Tentative General Insights, *Working Paper Stanford University*, October 4.
- Arrow Kenneth J., Hahn Frank (1971), *General Competitive Analysis*, Holden Day, San Francisco.
- Arthur Brian (1988a), Self-Reinforcing Mechanisms in Economics, in Anderson P.W., Arrow K.J., Pines D. *The Economy as an Evolving Complex System*, Addison-Wesley Publishing Company, Santa Fe, US., p. 9-31.
- Arthur Brian (1988b), Competing technologies: an Overview, in G. Dosi et Alii. (Eds), *Technical, Change and Economic Theory*, Frances Pinter, Londres, p. 590-607.
- Arthur Brian (1994), *Increasing returns and path dependence in the economy*, The University of Michigan press, Ann Arbor.
- Barou Yves and Keizer Bernard (1984), *Les Grandes Economies*, Editions du Seuil, Paris.
- Barro Robert J. and Sala-Martin Xavier (1995) : *Economic Growth*, ed. Lucille H. Sutton and Scott D. Stratford.
- Basle Maurice, Mazier Jacques, Vidal Jean François (1994) *Quand les crises durent...*, Economica, Paris, 2nd Edition.
- Becker Gary (1996), Pourquoi le chômage est-il si élevé en Europe, *Le Monde*, 14 Mai.
- Benassy Jean Pascal (1982), *The Economics of Market Disequilibrium*, Academic Press, Boston.
- Benassy, Jean Pascal (1992), Imperfect competition and unemployment, *Couverture Orange CEPREMAP*.
- Berger Suzanne, Dore Ronald (1996), *Globalization and national diversity*, Cornell University Press, Ithaca.
- Boismenu Gérard 1995: Modèles politico-institutionnels et politique macroéconomique, *Etudes Internationales*, Institut Québécois des Hautes Etudes Internationales, Montréal, juin.
- Bowles Samuel, Gordon David M. and Thomas E. Weisskopf (1983), *Beyond the Waste Land*, Double Day, Garden City NJ.
- Boyer Robert. (1988). *The Search for Labour Market Flexibility*. Oxford: Clarendon Press.
- Boyer Robert. (1990). *The Regulation School. A critical Introduction*. New York: Columbia University Press.
- Boyer Robert. (1991). "Justice Sociale et performances économiques: De l'alliance cachée au conflit ouvert?", *Couverture Orange CEPREMAP* 9135 (Aout).
- Boyer Robert (1992), D'une série de National Labour Standards à un European Monetary Standard ? Théorie et histoire économiques face à l'intégration monétaire européenne, *Couverture Orange CEPREMAP* n° 9212, Mai.
- Boyer Robert. (1993). "La grande transformation de l'Europe de l'Est: Une lecture régulationniste". *Couverture Orange CEPREMAP* n° 9319 (Mars).

- Boyer Robert (1993), About the role and efficiency of markets : History, theory and policy in the light of the nineties, *Couverture Orange CEPREMAP* n° 9320, August.
- Boyer Robert (1994), Les capitalismes vers le XXIème siècle, *Notas Economicas*, n° 3, Avril (1ère partie), p. 8-39. ; et n° 4, Novembre, p. 6-29.
- Boyer Robert (1995), The Capital Labor Relations in OECD Countries : from the Fordist Golden Age to contrasted national trajectories, in J. Schor Juliet, You Jong-Il Eds *Capital, The State And Labour. A Global Perspective*, Edward Elgar, Aldershot Uk, p. 18-69.
- Boyer Robert (1995), The Contemporary Transformations of the Japanese Wage Labor Nexus in Historical Retrospect and Some International Comparisons, *couverture Orange CEPREMAP* n° 9517.
- Boyer Robert (1995), *Wage Austerity or/and An Educational Push : The French Dilemma*, *couverture orange CEPREMAP* n° 9516.
- Boyer Robert (1997), Markets : History, Theory and Policy, to appear in R. Hollingsworth and R. Boyer Eds *The Social Embeddedness of Capitalism*, Cambridge University Press.
- Boyer Robert, Drache Daniel, Eds (1996), *States Against Markets. The Limits Of Boyer Globalization*, Routledge, London.
- Boyer Robert, Orléan André (1992), How do conventions evolve ? *Journal of Evolutionary Economics*, n° 2, p. 165-177.
- Boyer Robert, Saillard Yves Eds (1995), *Théorie de la régulation. L'état des savoirs*, La Découverte, Paris.
- Braudel Fernand (1979), *Civilisation matérielle, économie et capitalisme XV-XVIIIe siècles*, 3 Tomes, Armand Colin, Paris.
- Braverman Harry (1974), *Labor and Monopoly Capital. The Degradation of Work in the Twentieth Century*, New York: Monthly Review Press.
- Campbell John, J. Rogers Hollingsworth, and Leon Lindberg, eds. (1991), *The Governance of the American Economy*, Cambridge and New York: Cambridge University Press.
- Chote Robert (1996), Middle Class Insecurity, *Financial Times*, 8 janvier.
- Clague Christopher and Gordon C. Rausser Eds (1992), *The Emergence of Market Economies in Eastern Europe*, Blackwell, Cambridge.
- Cohen-Tanugi Laurent (1984), *Le droit sans l'Etat. Sur la démocratie en France et en Amérique*, Presses Universitaires de France, Paris.
- Commons John R. (1974), *Legal Foundations of Capitalism*, Augustus M. Kelley, Publishers, Clifton.
- Commons John R. (1990), *Institutional Economics : Its Place in Political Economy*, New Brunswick, New Jersey, Vol. 1.
- Crockette Andrew D., (1996), La stabilité financière sur les marchés mondiaux, *Revue d'Economie Financière*, p. 47-63.
- Crouch Colin, Streeck Wolfgang Eds (1996), *Les capitalismes en Europe*, Coll. Recherches, La Découverte, Paris.
- Debreu Gérard (1959), *Theory and Value : An Axiomatic Analysis of Economic Equilibrium*, Cowles Foundations Monograph n° 17, John Wiley, New York

- Delorme Robert and André Christine (1983), *L'Etat et l'économie*, Seuil, Paris.
- Dewatripont Mathis and Roland Gérard (1996), Transition as a Process of Large-Scale Institutional Change, *Economics of Transition*, vol. 4(1), P. 1-30.
- Dore Ronald, Boyer Robert and Zoe Mars Eds (1994), *The Return to Incomes Policy*, Pinter Publishers, London.
- Dosi Giovanni (1988), Sources, Procedures and Micxoreconomic Effects of Innovation, *Journal of Economic Literature*.
- Dosi Giovanni (1991), Perspectives on evolutionary theory, *Science and Public Policy*, Vol. 18, n° 6, December, p. 353-361.
- Dosi Giovanni, Fabiani Sylvana, Freeman Christopher, Aversi R. (1993), On the process On Economic Development, WP C.C.C. n° 93-2, University of California at Berkeley, January.
- Edey Malcolm, Hviding Ketil (1995), Une évaluation de la réforme financière dans les pays de l'OCDE , *Revue économique de l'OCDE*, n° 25, vol. II, p. 7-40.
- Esping-Andersen Gosta (1985), *Politics Against Markets. The Social Democratic Roadto Power*, Princeton University Press, Princeton, NJ.
- Esping-Andersen Gosta (1990). *The Three Worlds of Welfare Capitalism*, Princeton University Press, Princeton, NJ.
- Favereau Olivier (1989), Marchés internes, marchés externes, *Revue Economique*, n° 2, Mars, p.273-328.
- Freeman Christopher (1995), The “National System of Innovation” in Historical Perspective, *Cambridge Journal of Economics*, Vol. 19, n° 1, February, p. 5-24.
- Fukuyama Francis (1996), Trust, Lecture presented at the 8th conference on Socio Economic (SASE) and communitarian networks, Geneva University, 13-14 July.
- Galenson David W. Ed. (1989) *Markets in History. Economic Studies of the Past*, New York: Cambridge University Press.
- Garcia M.F. (1986) La construction sociale d'un marché parfait : le marché au cadran de Fontaines-en-Sologne, Actes de la Recherche en Sciences Sociales, n° 65, Novembre, p. 2-13.
- Glyn Andrew (1988), Contradictions of Capitalism, *New Nelgrave Dictionary Dictionary*, MacMillan, London, p. 638-640.
- Glyn Andrew (1995), The Assessments : Unemployment and Inequality, *Oxford Review of Economic Policy*, vol. 11, n° 1., p. 1-25.
- Gordon David M. (1996), *Fat and Mean*, Martin Kessler Books, The Free Press, New York.
- Granovetter Mark and Richard Swedberg (1992), *The Sociology of Economic Life*, Westview Press, Boulder, San Francisco CA.
- Guesnerie Roger (1996), *Le marché*, Flammarion, Paris.
- Hampden-Turner Charles and Trompenaars Fons (1993) : *The Seven Cultures of Capitalism*, Judy Piathus, London.
- Heilbroner Robert L.(1988), Capitalism, *New Nelgrave Dictionary*, MacMillan, London, p. 347-353.
- Hibbs, Douglas A.Jr (1987). *The Political Economy of Industrial Democracies*. Cambridge MA and London UK: Harvard University Press.

- Hirst Paul, Thompson Grahame (1996), *Globalization in Question*, Polity Press-Blackwell, Cambridge, MA.
- Hollingsworth Rogers, Boyer Robert Eds (1997). *The Embeddedness of Capitalism Institutions*, Oxford University Press, To appear.
- Hollingsworth Rogers J., Philippe Schmitter and Wolfgang Streeck, eds. (1993). *Governing Capitalist Economies : Performance and Control of Economic Sectors*. New York: Oxford University Press.
- Ingham Georffrey (1996), Recent Changes in Economics and Sociology, *Cambridge Journal of Economics*, 20, p. 243-275.
- Ingrao B., Israel G. (1990), *The Invisible Hand. Economic Equilibrium in the History of Science*, The MIT Press, Cambridge.
- Kebabdjian Gérard (1995), Métamorphoses du pouvoir, *Sciences Humaines*, numéro hors série, Décembre-Janvier 1996.
- Keizer, B., and L. Kenigswald (1996). *La triade économique et financière*, Seuil, Paris.
- Knight Jack (1992), *Institutions and Social Conflict*, Cambridge University Press, Cambridge.
- Kornai Janos (1996), La connaissance du socialisme permet de mieux comprendre le capitalisme, *Le Monde*, 2 juillet, p. 16.
- Krugman Paul (1992), *Economic Geography*, MIT Press, Boston.
- Lordon Frédéric (1993), Endogenous structural change and crisis in a multiple time-scales growth model : A stylized formalization of the exhaustion and crisis of the fordist growth regime, *Couverture Orange CEPREMAP*, n° 9324, Novembre, 37p.
- Lorens Edward (1996), Trust and institutional change, conference presented at the INRA Winter School on “ Technological and organizational change ”, Dourdan, 4th-7th December..
- Lucas Robert E. (1983), *Studies in Business Cycle Theory*, The MIT Press, Cambridge MA, USA..
- Lucas Robert (1988) On the Mechanisms of Economic Development, *Journal of Monetary Economics*, Vol. 72, July, p. 3-42.
- Lundvall Bengt (1992), *National Systems of Innovation*, Pinter, London.
- Mansfield Edwin (1996) : *Leading Economic Controversies of 1996*, W.W. Norton & Company, New York, London.
- Marglin Steven (1974), What Do Bosses Do? The Origins and Functions of Hierarchy in Capitalist Production, *Review of Radical Political Economics*. I(6): 60-112.
- Milgrom Paul, Roberts John (1992), *Economics, Organization and Management*, Prentice-Hall International Editions, Englewood Cliffs, NJ, US.
- Mjoset Lars, Cappelen Adne, Fagerberg Jan, Tranoy Bent Sofus (1995), Norway : Changing the Model, *Working Paper 95/1*, The Research Council of Norway, Arena, University of Oslo, Norway.
- Nelson Richard(1993), *National Innovation Systems. A Comparative Analysis*, Oxford University Press, New York
- North, Douglass (1990), *Institutions, Institutional Change and Economic Performance*. Cambridge and New York: Cambridge University Press.

- Olson Mancur (1965), *The Logic of Collective Action*, Harvard University press, Cambridge MA.
- Ostrom Elinor (1990), *Governing the Commons: The Evolution of Institutions for Collective Action*. New York: Cambridge University Press.
- Phelps Brown Henry (1988), *Egalitarianism and the Generation of Inequality*, Oxford University Press.
- Polanyi Karl (1944), *The Great Transformation*, Traduction française (1983), Gallimard, Paris.
- Porter Michael E. (1990), *The Competitive Advantage of Nations*, Mac Millan, London.
- Posner R.A. (1981), *The Economics of Justice*, Harvard University Press, Cambridge MA.
- Powell Walter W. and Paul J. Di MAGGIO Eds (1991), *The New Institutionalism in Organizational Analysis*, The University of Chicago Press, Chicago.
- Romer Paul (1986), Increasing returns and long-run growth, *Journal of Political Economy*, 94, 1002-1037.
- Rubery J.(1994), Productive System, *Cambridge Journal of Economics*, Vol. 13, n° 3.
- Sabel Charles F. (1997), Constitutional Ordering in Historical Context, in Fritz W. Scharpf, ed. *Games in Hierarchies and Networks*.
- Samuels Warren J. (1995), The Present State of Institutional Economics, *Cambridge Journal of Economics*, Vol 19, n° 4, August, p. 569-590.
- Sapir Jacques (1989), *Les fluctuations économiques en URSS, 1941-1985*, Ed. de l'Ecole des Hautes Etudes en Sciences Sociales, Paris.
- Sapir Jacques (1996), *Le Chaos Russe*, La Découverte, Paris.
- Sautter Christian (1996), *La France au Miroir du Japon : Croissance ou Déclin*, Editions Odile Jacob, Paris.
- Schelling Th. C. (1977), *The Strategy of Conflict*, Oxford University Press.
- Schelling Th. C. (1978), *Micromotives and Macrobehavior*, W.W.Norton and Company, New York.
- Schmitter Philippe C. (1990). "Sectors in Modern Capitalism : Models of Governance and Variations in Performance", in Renato Brunetta and Carlo Dell'Aringa, Eds. *Labour Relations and Economic Performance*, London: MacMillan and International Economic Association.
- Schmitter Philippe C. and G. Lehmbruch, eds. 1979. Trends Towards Corporatist Intermediation. New York: Sage Publications.
- Schor Juliet, You Jong-Il (1995), *Capital, The State And Labour. A Global Perspective*, Edward Elgar, Aldershot Uk.
- Schotter Andrew (1990) *Free Market Economics*, Cambridge MA: Basil Blackwell, 2nde edition.
- Shonfield Andrew (1967), *Le capitalisme d'aujourd'hui. L'Etat et l'entreprise*, Gallimard, Paris.
- Soskice David (1991), Reinterpreting Corporatism and Explaining Unemployment : Co-ordinated and no-co-ordinated market Economies, in BRUNETTA R., DELL'ARINGA C. Eds, *Labour Relations and Economic Performance*, MacMillan, Basingstoke, p. 170-211.

- Stark David (1990), Privatization in Hungary : From Plan to Market or From Plan to Clan ?, *East European Politics and Societies*, Vol. 4, n° 3, Fall, p. 351-392.
- Stark David (1992), Path Dependency and Privatization Strategies in East-Central Europe, *East European Politics and Societies*, Vol. 6, n° 1.
- Steinmo Sven, Thelen Kathleen and Longstreth Frank (1995), *Structuring Politics : Historical Institutionalism in Comparative Politics*, Cambridge University Press, p. 1-32.
- Stiglitz Joseph E. (1987), The Causes and Consequences of the Dependence of Quality on Price, *Journal of Economic Literature*, vol. XXV, mars, 1-48.
- Streeck Wolfgang and Philippe C. Schmitter, eds. (1985), *Private Interest Government: Beyond Market and State*. London and Beverly Hills: Sage publications.
- Streeck Wolfgang (1991), On the Institutional Conditions of Diversified Quality Production." pp. 21-61 in Egon Matzner and Wolfgang Streeck, eds., *Beyond Keynesianism: The Socio- Economics of Production and Full Employment*. Aldershot, Hants, England: Edward Elgar.
- Streeck Wolfgang (1995), On the beneficial role of constraints, mimeograph University of Wisconsin-Madison, to be published.
- Villon Dominique, Nygard Peter (1995), La politique industrielle, *Revue Cadres CFDT*, octobre.
- Villon Dominique, Nygard Peter (1995), Regards sur l'économie, *Revue Cadres CFDT*, octobre.
- Wade Robert (1990), *Governing the Market : Economic Theory and the Role of Government in East Asian Industrialization*, Princeton University Press, Princeton, New Jersey.
- Wade Robert (1996), Japan, the World Bank, and the Art of Paradigm Maintenance : The East Asian Miracle in Political Perspective, *Revue d'Economie Financière*, p. 3-36.
- Weil Philippe (1989), Increasing returns and aminal spirits, *American Economic Review*, 4, p. 889-894.
- Whitley Richard (1992), *Business Systems in East Asia. Firms, Markets and Societies*, Sage Publications, London, Thousand Oaks, New Delhi.
- Whitley Richard Ed. (1992), *European Business Systems : Firms and Markets in their National Contexts*, SAGE Publications, London.
- Whitley Richard, Kristensen Peer Hull (1996), *The changing European Firm*, Routledge, London.
- Wilkinson Franck (1983), Productive Systems, *Cambridge Journal of Economics*, vol.7, p. 413-429.
- Williamson Olivier E. (1996), *The Mechanism of Governance*, Oxford University Press, New York.
- Wolf Charles Jr. (1990), *Markets or Governments: Choosing Between Imperfect Alternatives*, Cambridge MA and London UK: The MIT Press.
- Wolf Martin (1996), The global economy myth, *Financial Times*, 13 février.
- Zysman John and Stephen S. Cohen (1987), *Manufacturing in Matters*, Basic Book,

THE SEVEN PARADOXES OF CAPITALISM

Robert *BOYER*

TABLE OF CONTENT

I - AN OLD ISSUE FOR POLITICAL ECONOMY, A RENEWED CONTEMPORARY INTEREST.....	1
II - THE FIRST PARADOX : THE CAPITALISM HAS WON...BUT SOCIAL SCIENCES DO NOT HAVE ANY COMPLETE THEORY ABOUT ITS NECESSARY AND SUFFICIENT INSTITUTIONS.....	5
II -1. FROM THE COLLAPSE OF THE SOVIET REGIME TO THE INABILITY TO INITIATE A FULLY-FLEDGED MARKET ECONOMY : CAPITALISM IS NOT SELF IMPLEMENTING.....	5
II -2. THE DANGER OF IMPORTING A COMPLETE SET OF INSTITUTIONS : THE GREAT CRISIS OF FORMER EASTERN GERMANY.....	9
II -3. A FALSE REDUCTION OF CAPITALISM TO MARKETS, SELF-EQUILIBRATING BUT NOT SELF-INSTITUTING.....	11
III - ANOTHER PARADOX : POLITICIANS FALL IN LOVE WITH MARKETS, AT THE VERY MOMENT WHEN THEORETICIANS SHOW HOW RESTRICTED ARE THE HYPOTHESES NEEDED FOR AN EFFICIENT ALLOCATION BY MARKETS.	14
III -1. THE SUCCESS OF THE MARKET IDEOLOGY: A METHOD FOR ERODING/REFORMING FORDIST INSTITUTIONS AND OVERCOMING POLITICAL UNCERTAINTY?.....	16
III -2. MODERN MICRO THEORY SHOWS HOW RESTRICTED ARE THE HYPOTHESES REQUIRED FOR THE SECOND WELFARE THEOREM : IN REAL ECONOMIC LIFE, MARKETS ARE NOT NECESSARILY EFFICIENT. ..	18
III -3. DEREGULATION, PRIVATIZATION, LIBERALIZATION HAVE NOT DELIVERED THE EXPECTED RESULTS: IS THE EFFICIENCY OF MARKET A MATTER OF SCIENCE...OR BELIEF ?	22
IV - A THIRD PARADOX : MODERN ECONOMIC THEORY MAINLY STUDIES SUB-DOMAINS AND DETAILS, RARELY THE FUNCTIONING OF THE WHOLE CAPITALISM SYSTEM.	23
IV -1. THE FAILED HOPES OF A “ GENERALIZATION ” OF GENERAL EQUILIBRIUM THEORY	23
IV -2. THE MAIN ECONOMIC INSTITUTIONS NECESSARY FOR THE VIABILITY OF A CAPITALIST ECONOMY.....	26
IV -3. ACCUMULATION REGIMES AND “ RÉGULATION ” MODES: A METHOD FOR ANALYZING CAPITALISM AS A SYSTEM.....	30
IV -4. A TAXONOMY FOR AN INSTITUTIONAL ECONOMY: A PRELIMINARY STEP TOWARDS THE UNDERSTANDING OF CAPITALISM AS A SYSTEM.	32
V - THE PARADOXICAL RESILIENCE OF CAPITALISM : THE CONSEQUENCE OF THE EXPANSION OF MARKET MECHANISMS... OR THEIR CONTAINMENT ?	37
V -1. IS CAPITALISM SELF-EQUILIBRATING OR IS IT STRUCTURALLY UNSTABLE ? AN OLD DEBATE SINCE THE BIRTH OF POLITICAL ECONOMY.	37
V -2. REMOVING SOME CONFUSIONS ABOUT THE NATURE AND SCOPE OF MARKET MECHANISMS.	38
V -3. SELF INTEREST, COMMUNITY VALUES AND THE POLITICAL PROCESS: THREE ORIGINS IN THE BUILDING AND TRANSFORMATION OF CAPITALIST INSTITUTIONS.....	42
V -3..1 - <i>Institutions are the outcome of the interaction of rational economic strategies.</i>	42
V -3..2 - <i>Some key ingredients of economic institutions, such as trust, are manufactured by communities: capitalism is an open system.</i>	44
V -3..3 - <i>The long run viability of capitalism: the consequence of constraints imposed by the political process to economic rationale.</i>	46

VI - A FIFTH PARADOX : SOCIAL JUSTICE, USUALLY PERCEIVED AS A NEGATIVE CONSTRAINT, HAS BEEN A STIMULUS FOR CAPITALIST DYNAMIC EFFICIENCY.	50
VI -1. THE RELATIONSHIP BETWEEN INEQUALITY AND GROWTH: A BRIEF HISTORICAL RETROSPECT.	51
VI -2. THE “ GOLDEN AGE ” UNPRECEDENTED GROWTH: THE INSTITUTIONALIZATION OF THE WAGE LABOR NEXUS AND REDUCTION OF INEQUALITIES.....	53
VI -3. THE SYNERGY BETWEEN SOCIAL JUSTICE AND EFFICIENCY: MANY CASES AND EVIDENCES.	54
VI -4. COOPERATION, LOW INEQUALITY AND PERFORMANCE: STILL THE CENTURY OF THE EQUALITY?.....	55
 VII - SIXTH PARADOX : NOT A SINGLE CAPITALISM BUT AT LEAST FOUR CONFIGURATIONS COMPETING BUT COEXISTING.	57
VII -1. WHY DOES CAPITALISM DIFFER? A THEORETICAL SURVEY.....	57
VII -2. MARKET LED CAPITALISM...AND THE RISE OF REGULATORY AGENCIES: THE US, UK, AUSTRALIA, NEW ZEALAND AND CANADA.....	59
VII -3. THE MESO CORPORATIST CAPITALISM AND THE LEADING ROLE OF LARGE CORPORATIONS: JAPAN.....	61
VII -4. THE SOCIAL DEMOCRATIC CAPITALISM, OR THE ART OF BARGAINING BETWEEN SOCIAL PARTNERS: SWEDEN, AUSTRIA, FINLAND, NORWAY, DENMARK.	63
VII -5. STATE LED CAPITALISM, OR WHAT TO DO WHEN THE MARKET IDEOLOGY AND SOCIAL PARTNERS ARE WEAK: FRANCE, ITALY, SPAIN.	65
VII -6. AN AGENDA FOR INTERDISCIPLINARY RESEARCH: A THEORY OF CAPITALISMS.	67
 VIII - A FINAL PARADOX: IS THERE A GRESHAM LAW FOR CAPITALISM ?	70
VIII -1. NATIONAL INSTITUTIONAL FORMS AND THE INTERNATIONAL ECONOMY: THE U-TURN OF THE 90's.	70
VIII -2. THE INTERN ATIONAL CONTEXT OF THE 90's IS PUSHING CAPITALISMS TOWARDS SHORT TERM FLEXIBILITY.	72
VIII -3. TOWARDS THE XXIST CENTURY: WILL “ BAD ” CAPITALISMS DRIVE OUT MORE PROMISING ONES? ..	74
 IX - AN AGENDA FOR THE NEXT CENTURY	76
 X - REFERENCES	76