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THE THEORY OF MACRO-ECONOMIC REGULATION  
AND  
THE CURRENT ECONOMIC CRISIS  
IN THE UNITED STATES

Michael J. Piore

Massachusetts Institute of Technology

Number 285

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In the last year, a consensus has developed in the United States about the need for economic revitalization. The economic performance of the past decade is increasingly seen as a disaster. By historical standards and in comparison to the rest of the world, labor productivity has declined and economic growth has faltered; we face high, and apparently rising, rates of unemployment and inflation. Our competitive position in international markets has deteriorated; our own markets are being invaded by imports and the survival of major industries such as steel and autos appears to be at stake. This situation has been characterized by President Reagan as an economic crisis comparable to that of the Great Depression. The single most prevalent explanation for the crisis is the expansion of governmental activity: rising expenditures, over indulgent social welfare programs and extensions of federal regulatory activities. The Reagan prescription for the crisis is a retreat of government in all of these areas. Reagan's policy proposals thus involve a major reversal of postwar trends in government activity. These proposals are distinguished largely by the vigor and drama with which they are being pursued. The understandings which underly this policy were shared by the Carter administration and propagandized by its rhetoric.

These understandings, however, are incomplete. They neglect two principle features of the current economic situation. When these are recognized, a very different interpretation emerges. The first of these neglected features is that the U.S. is not the only country whose economic performance has deteriorated over the past decade. All industrial countries have performed poorly by historical standards and especially by the

standards of earlier postwar decades. The deterioration is arguably less dramatic abroad than it is in the United States, but even this is not uniformly true. One of the reasons that foreign competition appears all of a sudden to pose such a threat is that other countries have sought to escape the weakness of their domestic markets through expansions abroad. To the extent that we succeed in recapturing our own markets, therefore, we will aggravate the problem of our principle allies, transforming our economic crisis into an international political one. If there is really a crisis, it would thus seem to be not simply an American crisis but a crisis of Western capitalism. As such, it cannot be resolved through the revitalization of our own industries; but none of the programs which have been put forth are addressed to the international economic order.

The second feature which the conventional diagnosis neglects is that the failures of policy have very little to do with the governmental institutions being attacked and eliminated. The greatest government failings have been in its efforts to maintain economic stability and to promote equality of economic opportunity for underprivileged and disadvantaged groups. The governmental activities which have been under the most severe attack, and are now being sharply curtailed, namely governmental efforts to promote health and safety through regulation of the private sector and to maintain minimal living standards have in fact been relatively successful. The expansion of governmental activities in these areas, (and their success) has been blamed for the failure of government to achieve its more traditional goals, but the relationship between these different activities is in no sense self-evident. A diagnosis based upon



some particular failing of government would be more convincing, moreover, were it not that the other major economic institutions have failed to achieve their own goals. Thus, for example, the American automobile and steel industries have lost a large part of the domestic market to foreign competition because they have made erroneous decisions about product design and productive technology. The trade union movement has made serious tactical errors and as a result has lost the major political battles in the decade. It has experienced a progressive decline in membership and failed to make major organizing breakthroughs. Although all of these institutions have looked to government to help them escape from their own failures and, in so doing, have sought to implicate the government in their errors, the causal link between governmental failures and those of individual industries and unions are obscure. It would seem more natural to look for reasons which explain why so many different institutions are simultaneously unable to function effectively by their own standards. Ad hoc explanations based upon moral failings, deteriorating incentive structures or the stupidity of one or another decision-maker do not seem very convincing given the pervasive nature of the problem, the very different types of institutions affected, and the proven effectiveness of these same institutions and many of their leaders in the past.

This paper is an attempt to explain the current economic problems in the United States which recognizes both the international nature of the crisis and the pervasive failings of our economic institutions, private as well as governmental.

## The Theory of Regulation

The basic argument is framed in terms of a view of capitalist economic development originating in France known as la theorie de la regulation. Most of its proponents are Marxist but in several respects the theory constitutes an integration of Marxist and conventional theories. The version developed here departs in places from the original in order to reflect the peculiarities of the American experience and to incorporate additional theoretical ideas which close the argument where it is otherwise incomplete.<sup>1</sup>

The argument here starts from the notion that economic growth in a capitalist economy is dependent upon the progressive specialization of productive tasks.<sup>2</sup> It is from this specialization that the innovation and rising productivity which we associate with modernity derive. The specialization is, in turn, dependent upon the steady expansion of demand. The central notion in the theory of regulation is that in normal times that expansion is ensured by a series of internal equilibrating mechanisms which coordinate the economic system and maintain a balance among its constituent elements. The classical example of such a mechanism is the price system, as it is understood in conventional neoclassical theory. Other mechanisms of this type are the monetary system and the automatic stabilizers of Keynesian economics. These mechanisms are called regulators; the theory itself takes its title from that term.

The system of regulation is embedded in a series of institutions which are adapted to a particular historical period in the evolution of the economy. Since capitalist economies must continually expand and since

that expansion implies qualitative change as well--and indeed since the basic task of a regulatory system is to ensure that these changes take place--the economy eventually outgrows a given regulatory system. The institutional structure is increasingly incapable of maintaining the constituent elements of the system in balance. The accumulating imbalance lead to an economic crisis. The crisis can be resolved, and stable economic growth restored, only by the development of a new institutional structure capable of regulating the system in its altered state. The basic argument of this literature is that the Great Depression of the 1930's was such a crisis in the history of capitalist development. It was ultimately resolved through the creation in the immediate postwar period of a new set of regulatory mechanisms. These constituted the foundation of the postwar prosperity. In the last decade, it has become increasingly apparent that the economic system has outgrown these postwar mechanisms: The present economic problems are, thus, viewed as symptoms of a new crisis in capitalist development, comparable to that of the Great Depression, which can only be resolved through global institutional innovation. The central questions to which this theory leads are What was the regulatory structure of the postwar period? What changes in the underlying economic structure have rendered the existing regulatory structure ineffective? And what kinds of new regulatory structures might enable us to escape from the current crisis?

The body of the text develops the answers to these questions. The argument there may be summarized as follows:

The Postwar Regulatory System: A Resumé

The postwar regulatory system is characterized by the term Fordism or Neo-Fordism. The term refers to the constellation of marketing, production, and labor policies developed by Henry Ford between 1908 and 1914 and symbolized by the Model T, the mass production assembly line, and the \$5.00 day. The essential idea is that the system is dominated by large scale mass production industries operating in relatively closed national economies. The regulatory structure was essentially designed to ensure that the demand for the output of these mass consumption industries would expand at a rate equivalent to their expanding productive capacity. The central institutional element has been an industrial relations system which makes money wages throughout the economy rise at a rate roughly equivalent to productivity gains plus inflation. The basic formula is established in key settlements reached between the large corporations and industrial unions in the mass consumption industries and then spread to the rest of the economy through pattern bargaining, administrative practice and legislation. The system is dependent upon a relatively permissive monetary policy which validates these wage settlements. It has also been a system in which relative, as well as absolute, prices are comparatively rigid. Prices cannot therefore function effectively as allocative mechanisms and the system has been dependent upon abundant labor reserves and raw materials available on call at or below prevailing prices and wages. These supplies, moreover, have come from closely tied, and relatively poor, regions or countries, a fact which has insured that funds spent upon them are immediately recycled through the domestic

economy and thus do not constitute a leakage of aggregate demand.

The current crisis of the system is produced by the fact that the national economies which compose the capitalist world have now developed to the point where further expansion can no longer be contained within relatively closed national markets. Internal demand, fed by the expanding wages of the industrial labor force, is in other words no longer sufficient to absorb the output which modern industry, if able freely to change productive technique and industrial organization, and to expand at the rate required to justify such changes, would produce. The crisis has thus brought the major industrial producers into direct competition with each other for mass markets, and the problems of the American automobile, steel and electronics industries are the heart of the present crises of world capitalism. The pressures upon existing labor management arrangements are also symptomatic of this crisis in the sense that arrangements which were once central to the economic well-being of the nation as a whole and of the business community itself, no longer have very much to do with economic prosperity. Renewed world economic prosperity, comparable to that which the Western industrial world experienced in the 1950's and 1960's, would require the development of a new regulatory system.

In addition to this basic regulatory crisis, the regulatory system in the United States has experienced a number of other strains since the middle 1960's. Among these were the organization of public employees and the growing power of the construction unions in the middle and late 1960's, which upset bargaining patterns and displaced the mass consumption industries as the key wage settlements; the exhaustion of domestic labor

reserves and the revolt of the black labor force, which had constituted the major element of flexibility in the labor market; the raw material shortages, especially the continuing fuel crisis; and the growing economic and political independence of raw material supplies in the third world. These problems might be termed institutional crises in the same sense that they called into question particular institutional components of the postwar regulatory structure. They did not, however, call into question the efficacy of the structure itself.

Many--arguably all--of these institutional problems were the outgrowth of a broader social crisis which manifest itself in the late 1960's and early 1970's. In the United States, this social crisis gave rise to the civil rights movement and to the student revolt against the war in Vietnam and the materialistic base of bourgeois society. That crisis is often viewed as the beginning of the economic crisis. The present situation is then seen as a continuation of problems which began to manifest themselves at that time.

The argument we are developing is not consistent with that view. It implies a very sharp conceptual distinction between the difficulties of the two periods. The social crisis of the earlier period occurred, and was more or less successfully resolved, within the postwar regulatory mode. This was so not only in the sense that, as we have just argued, the economic problems of the era were problems of particular institutional components of the system and not of the system as a whole. But also in the sense that other institutional reforms, such as the expansion of the welfare and public assistance systems and the "war on poverty," which were

directly responsive to the social pressures of the period, were conceived in terms of the postwar regulatory mode and designed to be consistent with the institutional structure which housed it. If many of those reforms now appear to be ill-conceived and misguided, it is because that regulatory structure is itself no longer viable. That was not apparent--and probably not even true--at the time.

President's Reagan's economic policy embodies this confusion. One of its central components is the elimination of the social programs instituted in the 1960's and many of the social reforms of the 1930's as well. If our current economic difficulties constitute a crisis of regulation, however, this approach will simply regenerate the social pressures which the programs were designed to relieve, without elevating the economic difficulties. For the latter it is necessary first to conceive of a new mode of regulation and then to construct an institutional structure which will implement it.

From this point-of-view, the central component of Reagan's policy is the effort to restore the price system and the competitive market place as the central regulatory institutions. It is, however, very difficult to see how these respond to the contemporary regulatory problem as it is presently emerging. The most obvious solution to that problem is the institution on a multinational scale of a system analogous to those which maintained the demand, and sustained the expansion of, the domestic economies of the major industrial nations in the earlier post war period. This solution is obvious in the sense that the several national systems provide a clear concept of what such a mode of regulation might look like.

By the same token, however, we can also see clearly what it would mean to be moving in the direction of realizing such an alternative and there are very few signs of such movement. Instead of the creation of larger, more homogeneous and expansive world markets which such movement would require, we seem in fact to be moving in the opposite direction toward increasingly small, fragmented and uncertain market situations. These situations give a special advantage to small producers using flexible technologies and skilled workers in a mode of operation which is in direct contrast to the mass production techniques which previously dominated postwar markets. This development could be simply another symptom of the crisis itself, a response to the flux and uncertainty which it has introduced into the basic parameters of economic decisions. But it may also be indicative of new technological trends and an alternative mode of economic regulation. The very last section of this paper is devoted to a discussion of what these might be and what they would imply for an evaluation of American economic policy.

This interpretation growing out of the theory of regulation can be contrasted to theories of the current crisis which emphasize the excessive demands being made upon the system. Diagnoses of that kind characterize the crisis in terms of the variety of new political pressures and social concerns which have made themselves felt and successfully command economic resources and governmental attention: consumer protection, environmentalism, job health and safety, racial and ethnic minorities; the physically handicapped, etc. The crisis is caused in these theories by the fact that such new demands have outrun our productive capacity and



overloaded our political institutions.<sup>3</sup>

The theory of regulation is not demand oriented in this sense. A regulatory crisis is characterized by a failure of the productive system; it is caused by the fact that the system has outgrown its precedent institutional structure and can be resolved only by the development of new institutional mechanisms. The excessive demands are a symptom of the crisis, but they are not its cause and the crisis cannot be resolved by reference to them. One would in these terms no more characterize the present crisis in terms of excessive demands than one would the Great Depression. The 1930's, like the 1970's, was a period in which a whole variety of groups which had not previously been influenced on the American political scene commanded concern and attention, and a wide variety of new demands were seriously entertained. But once the new regulatory system had been put in place in the postwar period, the groups which could not be accommodated within it were ignored or suppressed and their demands came to be viewed as absurd. It will not be possible in the present context to develop a detailed theory of how and why this occurred: but the elements of this process will be apparent in the discussion of the evolution of the industrial relations system. What is at stake is the way in which the system once in operation generates an ideology which distinguishes what is possible, or even thinkable, in terms of social progress. That ideology must be built upon a credible regulatory structure: when the regulatory structure begins to falter, its credibility deteriorates; all sorts of new demands then become plausible and society, lacking standards by which to evaluate them, finds itself unable to reject them.

Integrating Divergent Economic Theories: A Digression

In a certain sense, this approach to economic analysis integrates a number of different strands of economic theory, conventional and Marxist. And, before preceeding further, it may be useful to indicate what those strands are and how the integration among them occurs: First, conventional economic theories are viewed, in the context of this approach, as theories of different systems of regulation. They essentially explain how the economy behaves between major regulatory crises. Marxist economic theory, on the other hand, is a theory of the crisis: it explains how the economic system itself evolves in history and why it outgrows particular regulatory structures. In this way, the theory integrates a synchronic and diachronic approach to economic analysis. Second, different schools of conventional economic analysis are viewed as theories of different regulatory systems. In one sense, they can be treated simply as theoretically coherent systems of regulation without any actual historical reference but there is a tendency to link particular theories with particular historical moments and to explain changes in the dominant (or accepted) theory over time by changes in the underlying economic structure which they are attempting to explain and control. Thus, neoclassical (or competitive market) theory is seen as characterizing the regulatory system of the 19th and early 20th century; and Keynesian economics is seen as characterizing the regulatory system of the postwar period. The reasons for the growing rejection of Keynesian economics at this time and the return toward neoclassical, monetarist analysis would then be sought in

the nature of the current crisis (presumably a breakdown in the institutional structures which make the economy behave in the Keynesian mode, leading toward a world in which price adjustments and monetary policy became more important in governing macro-economic behavior than the quantity adjustments and fiscal policies which are emphasized in the Keynesian theory). Third, the resolution of the crisis is dependent upon the creation of new institutional structures, and that part of the theory thus draws upon the political dimensions of Marxist theory and the institutional analyses of the more conventional schools of thought. Because the resolution of the crisis is political and institutional, it is always contingent, and it is presumably in the midst of such crisis that the system is vulnerable to revolution and reform. It is here, then, that the theory of regulation promises to escape the historical determinism of classical Marxism. Finally, one may view the institutional structures which constitute the regulatory system as the superstructure of an economy evolving in history. In this sense, the theory of regulation may be understood as an effort to give an independent life to the superstructure in Marxist theory without totally divorcing it from the base which, in classical Marxism, constrains the system and governs its evolution.

II

The Capitalist Growth Process

We begin a detailed discussion of the current regulatory crisis by characterizing the capitalist growth process.<sup>4</sup> In so doing, we depart from the original French literature, which has been primarily concerned with a characterization of particular regulatory systems and with the identification of the historical periods in which those systems prevailed. It is not clear, therefore, how much of the following argument would be generally acceptable to the original proponents of the theory. Nonetheless, the growth process does seem to be the logical point of departure: It is that process which propels the economy through time and causes it to outgrow any particular regulatory system. Hence, it is that process which underlies the current crisis and which must be accommodated if the crisis is to be successfully surmounted. As will become apparent, the nature of capitalist growth also seems to explain the power and behavior of the modern business corporation, which all agree is a key institutional component of the contemporary system.

The central hypothesis is that productivity, and hence the level of output for a given resource input, is a function of the division of labor.

Smith used the transition from craft production to the pin factory to illustrate the process of the division of labor. The modern analogue is the emergence of the automobile assembly line. The assertion is that

productivity is enhanced when a productive process is broken down into its constituent tasks, or elements, and each task becomes the specialty of a particular workman. Smith had several different hypotheses about why this should be true, and much of the subsequent literature debates these, and other alternative explanations. In the hands of Marx, the basic postulate is severed from most of Smith's explanatory hypotheses: many of Smith's own examples are shown by Marx, in fact, to have a negative effect upon productivity when this is defined in narrow engineering terms and to be profitable only because they enhance the employer's control over the labor force.

The postulate, as reinterpreted by Marx, rests much more heavily upon the intellectual dynamic associated with specialization. For these purposes, the clearest example is not the extreme job fragmentation of the assembly line (or pin factory) but the transition from a subsistence economy to a specialized industrial one. One can imagine economic development as beginning in some distant historical age in which each household consisted of a self-contained, polyvalent productive unit. Each unit produced a whole array of different products, ranging from a variety of agricultural goods (wheat, barley, pigs, cows, and chickens, for example) to shoes and clothing, the farm buildings, the house itself, and a variety of tools and implements. Economic development is understood in this view as the process of splitting this hodge-podge of different activities all done in one unit into separate activities, each performed as a specialized operation. An initial division, one might imagine, is made between agricultural pursuits, manufacturing and construction. Subsequently, in agri

culture, animal husbandry is separated from crop cultivation and then one animal from another and one crop from another. In manufacturing, shoes are separate from clothing; then, perhaps, spinning is from weaving and sewing, or men's clothes from women's clothes.

The basic rationale for specialization of this kind is that each of the activities is governed by a separate and distinct set of intellectual principles: they require different forms of understanding. There is little, therefore, to be gained by combining them into a single unit, for the individuals who perform them must then master a variety of separate and distinct bodies of knowledge. When the activities are separated out, and made specialties in themselves, the people responsible for performing the productive tasks are better able to master the principles which govern their operation. They can learn more about what is already known and probe deeper into the principles of nature to expand basic understanding. And they are free to organize each activity according to its own logic unconstrained by the other tasks which have to be performed. All of this leads to more efficient operations, in the short run, for example, because one can harvest the wheat at the moment when it is ripe without diverting time to milk the cow or collect the eggs; but also in the long run because it facilitates invention and discovery, the hybrid strains of wheat being an excellent example.<sup>5</sup>

Motivated in this way, the postulate about the division of labor does not imply the extreme fragmentation characteristic of the pin factory or the assembly line. Indeed, one of the drawbacks of that form of production is that operations become so separate that the workers loose

any sense of the principles which give the productive intellectual coherence: They simply memorize their jobs. And it is necessary to add supervisory personnel whose basic task is to coordinate production, spotting and correcting mistakes which the workers themselves would take care of if the breadth of the job were sufficiently wide so that they understood their work as part of a process. Much of the Marxian literature argues, on this basis, that the assembly line is not efficient in a narrow engineering sense and that extreme fragmentation is justified only by the greater control which it gives the employer over his labor force. The division and isolation of the labor force discourages union organization; skill is minimized so workers are easily replaced; and the speed of work is more easily controlled and, hence, can be intensified. The notion of specialization as motivated by gains in intellectual understanding implies that, to the extent that fragmentation does contribute to engineering efficiency, it is because the fragmented tasks, once isolated, can be comprehended on their own terms, distinct from the workers who perform them and the product which is the outcome of the productive process, and each task understood instead as a distinct operation which could be assimilated to the logic of a machine. Fragmentation is, thus, a stage on the way to mechanization (or automation) and it is economical because it facilitates invention: The basic efficiency is, in other words, not static but dynamic. This seems to have been Marx's own understanding of the process.

While this is a very different explanation of the underlying process than that developed by Adam Smith, the basic postulate remains here, as in

Adam Smith, that the process of economic growth is essentially a process of specialization. And, as in Smith, it is limited by the extent of the market. The market limits specialization because specialization generates a problem of unemployment. When resources are non-specialized (i.e. polyvalent) and they become unemployed in one task, they simply shift to another. When it rains on the farm, the farmer does inside work; if the cow dies, there are still the chickens; if the wheat crop fails, one can always eat barley. Specialized resources cannot do this. Construction workers are unemployed in bad weather; knitters leave their jobs when the fashion turns to sportswear, etc., and hence, unless the market is organized to absorb the increased output generated through specialization on a continuous basis, the gains are simply dissipated by sustaining the unemployed.

The extent of the market was, for Smith, essentially a geographic concept. The idea is that unless the market covered a large enough territory to absorb the output of a specialized pin maker, the pin maker would be unemployed part of the time and instead of specializing in pins, he would have to take on the other pursuits. This view of the process led Smith to emphasize a reduction in geographic barriers to trade as the critical development policy. But, as the preceding discussion should make clear, the geographic extension of the market is only one way of facilitating specialization: the market could also be deepened within a given geographic area if demand within that area could be made to expand at the same rate as potential productivity. This is difficult to see through the pin example: it is after all hard to think of the market for pins expan-



ding very far except territorially: any given consumer's demand for pins will fairly quickly become saturated. The notion of internal expansion becomes more plausible when one envisages specialization as occurring in the production of component parts, utilized in a wide range of final products, and, in this sense, potentially combinable into an infinite variety of different goods (the kind of specialization involved in separating the production of wheat and cows, for example). Here the productivity gains associated with specialization have much more to do with the expansion of an economy than with the expansion of any particular economic enterprise. Specialization, interpreted in this way, however, will be influenced by several other variables besides the extent of the market. Among these are, the standardization of output and of component parts; the capacity to inventory output, and the stability and certainty of demand. I have developed these points elsewhere and will not belabor them here. Standardization encourages specialization because it increases the number of different items within a given territory and for a given level of income which purchase a common set of inputs. The operative principle is essentially the same theory as in geographic extension of the market. Inventory enables the extension of the market in time. But inventorying will be discouraged if the demand for output is unstable and uncertain. Finally, instability discourages specialization because the specialized resources become unemployed when demand turns down. This last point is relatively important for arguments about economic dualism because it encourages forms of organization which separate the sustainable increases in demand from those which are temporary, utilizing the specialized resources

for the former and polyvalent resources, which move easily to other activities, for the latter.

To summarize briefly, the view of economic growth and development which underlies the argument presented here is one in which growth is produced by the progressive specialization of productive resources. It is thus a process dependent upon the progressive expansion of demand: unless demand expands, it will be unable to absorb the increased output of the specialized resources and the latter, because they are specialized and unable to move to other pursuits, will be unemployed. In this sense, the central growth problem in a capitalist economy becomes that of how to organize demand so that the required expansion is assured. There are a number of distinct ways in which such expansion can be produced: through the geographic expansion of demand; through the deepening of demand internally; through the reorganization of internal demand by standardization of parts; by reducing uncertainty, stimulating inventorying, etc. Various regulatory systems may be understood as instruments for ensuring the expansion of demand on the macro-economic level. We shall see below that in many ways the modern corporation arises in the attempt to do much the same thing in particular markets and subsectors of the economy. It is in terms of this view of the growth process that we attempt to understand the postwar regulatory system.

III

The Postwar Regulatory System

The postwar regulatory system has revolved around six basic institutions: The central institutions are fourfold: 1) The large manufacturing corporations, 2) The major industrial unions who bargained with these corporations to establish the key settlements, 3) A broader industrial relations framework in which the key wage settlements are embedded and which spreads those settlements throughout the economy through systems of wage administration, pattern bargaining, and legislation, and 4) A monetary system which validates the wage levels established in this way and, arguably, a fiscal structure which corrects minor deviations from the full employment growth path which the large corporations and the unions established. The system defined by this complex of institutions involves relatively rigid prices and wage relationships: variations in relative prices or in the relative wages of different groups of workers could not be counted on, therefore, to overcome bottlenecks as they could be in a competitive system, and hence, to operate smoothly the system requires abundant supplies available at or below existing price levels. The fifth and sixth features of the regulatory system have ensured that these are not only present but can be called upon without disrupting the aggregate balance; 5) Large reserves of poor labor in the rural areas available on call to the industrial ranks. The low income levels of these workers and their ties to poor families at home has assured that virtually all their

earnings is recycled in domestic spending, 6) Extensive raw materials available at home or in third world countries closely tied economically and politically to the metropolitan market. As with domestic labor reserves, the poverty of the raw material suppliers abroad ensured that their earnings would be spent and the colonial (or neocolonial) ties guarantees that the spending would occur in the purchasing country. In this section, we will review the central features of this regulatory regime under three headings. The modern corporation, the postwar industrial relations system, and the adjustments in the system in the last 15 years.

#### A. The Modern Corporation<sup>6</sup>

The characterization of the modern corporation upon which this theory builds is most extensively developed by Robin Marris<sup>7</sup> and popularized by John Kenneth Galbraith.<sup>8</sup> Their argument is that such institutions differ from the competitive firm hypothesized in neoclassical theory in that, instead of taking market demand as given, they operate to control their market, organizing demand and calling it into being through advertising and other forms of aggressive marketing. Unlike the conventional business firms, they tend to be interested in growth and in maintaining their market share, independent of the effect upon profits, indeed, occasionally at the apparent expense of higher profits.

While the literature on such institutions and particularly on how precisely they behave, is not extensive, it is fairly clear that:

- 1) They arose as a dominant feature of the American economy in the late 19th century and 20th century,

- 2) They tend to be run by professional managers rather than by owners,  
and
- 3) They are large, relatively structured bureaucratic institutions, in which decisions are made by what Simon, Cyert and March view as "rules of thumb" (such as, for example, the maintenance of market share or historical growth rates) which have no clear relation to profit maximization.<sup>9</sup>

This characterization is broadly consistent with the firm as understood in the Marxist literature on monopoly capitalism. That literature has not, however, been very concerned with the precise characterization either of modern corporate economic behavior or of its historical origins. The major theoretical function of the corporation seems, in that literature, to be to explain the coherence of the political strategies of the ruling class. Such corporations, as opposed to the multitude of other producing units, are assumed to have a common set of interests in the class struggle, to be reasonable and rational enough to recognize these interests, and powerful enough to impose them upon the rest of the ruling class. The Marris-Galbraith firms could operate in this way, but, as we shall see, the explanation developed below does not require that they do so.\*

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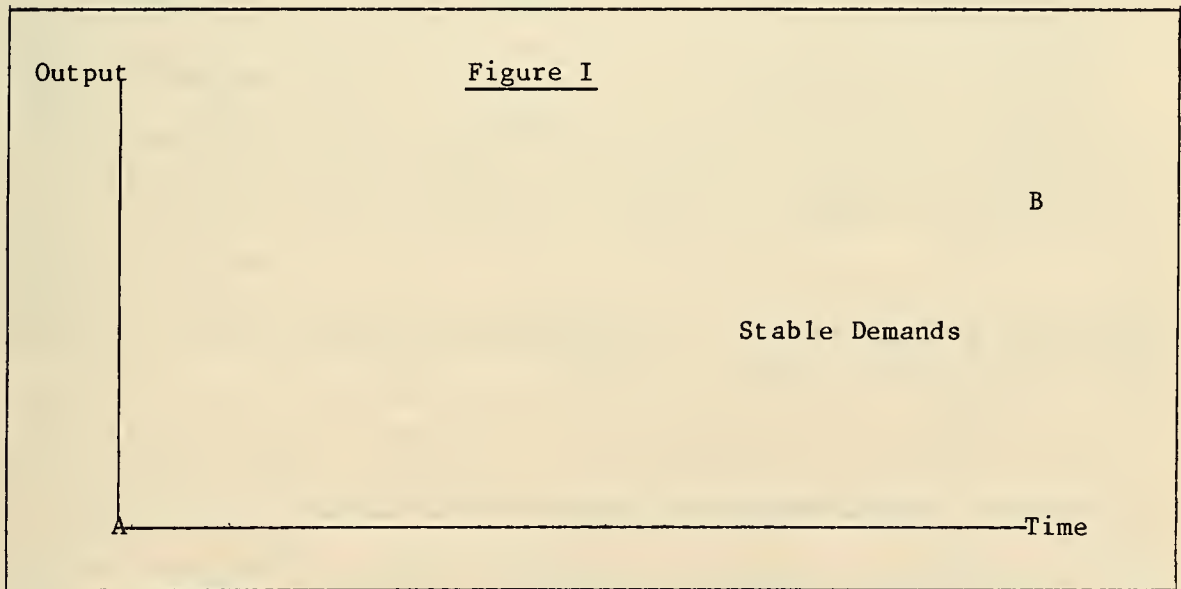
\*The Marris-Galbraith characterization might have been less readily accepted by Marxist theorists interested in the economic role of the corporation: growth as an independent goal is different from the pursuit of profit which Marx assumes in his own theory and the degree of control over their own market which Marris and Galbraith assert may not be easily reconciled with the independent historical trajectory of the system as hypothesized in Capital.

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Neoclassical theorists have tended to reject the Marris-Galbraith characterization out of hand. The "rules of thumb," they have argued, are simply surrogates for more elaborate profit calculations that assume stability in certain decision-making parameters and will be abandoned in favor of the theoretically valid formula when those parameters change. They point to the large fringe of smaller firms which exist in even the most highly concentrated industries and argue that these firms pose a competitive threat to the large organizations which force them to behave as theory assumes in order to survive.

Both the Marris-Galbraith firm and the fringe, to which this neoclassical view points, can be understood in terms of the basic Smith hypothesis about the relationship between specialization and the extent of the market. The modern corporation becomes, in that hypothesis, an institution whose basic function is to "make the market." It might do this by extending the market geographically, as for example, the British East India Company did. It could do so by political pressure of one kind or

another on major customers, e.g., military firms pressuring for military spending; railroad and steel makers creating the demand for steel rail in the 19th century U.S. But a good deal of what modern corporations in industrial society appears to do is "extend the market" by stabilizing the demand for output, i.e. by grouping together segments of demand which are separately subject to wide fluctuations into a stable, predictable unit; they are able to keep specialized productive resources fully employed and, hence, to internalize the economies of scale inherent in the progressive specialization of economic activity. The notion is relatively simple and can be seen by glancing at figure I. The corporation imposes a division of the market equivalent to line AB in this figure.



The behavior of modern corporations of this type is the behavior of the Marris-Galbraith firm. The appearance of planning and controlling the market is real: but the activity is not basically one of creating demand in the first place, (or artificially stimulating it through advertising,

to take issue with Galbraith's example), but of organizing and structuring demand which is already there so that it forms stable segments. Institutions which do this are interested in growth, as an independent goal--even apparently at the expense of profit--because growth implies an extension of the market, and they are preoccupied with market share, not as an end in itself, but as a surrogate for that portion of demand which is stable and predictable. The strategy is indicated by the quote from Arthur Moxham of Dupont.

"If we could by any measure buy out all competition and have an absolute monopoly in the field, it would not pay us. The essence of manufacturing is steady and full product. The demand for the country for powder is variable. If we owned all, therefore, when slack times came, we would have to curtail production to the extent of diminished demands. If, on the other hand, we controlled only 60% of it all and make that 60% cheaper than others, when slack times came, we could still keep our capital employed to the full and our product to this maximum by taking from the other 40% what was needed for this purpose. In other words, you could count upon always running full if you make cheaply and control only 60%, whereas, if you own it all, when slack times came, you could only run a curtailed product."

[Quoted from a letter of Arthur Moxham to Coleman du Pont, June 1903 by Alfred D Chandler, Jr. in The Visible Hand, Harvard University Press, Cambridge, Ma., 1977, page 442.]

The Problem of the stabilization of demand so as to achieve the economies of scale inherent in specialization is a basic property of capitalist systems of production but the modern corporation is probably not the only solution to that problem. Conventional neoclassical theory envisages a solution through price adjustments: presumably the idea is that if prices were extremely flexible and fluctuated much more rapidly



than output their variation would act to stabilize demand. When demand declined, price would fall very quickly to the point where new consumers were attracted into the market to replace those that had left and visa versa. One might argue, therefore, that the modern corporation is a particular solution to a general problem, explicable by some set of peculiar historical conditions which have very little to do with argue that the corporation was really invented at a time when demand was dependent upon military or colonialist ventures, which could never have been stabilized through a price system; that it was designed primarily to stabilize government policies affecting these activities; and that the strategy of stabilization was then extended as market capitalism emerged in the modern era and stabilization through price fluctuations became technically feasible.

On the other hand, it would be a mistake to think that what is being stabilized is essentially aggregate demand, or something which is crudely speaking analogous to it at the level of an industry. What is at stake here are the economies of specialization: these are threatened by a fluctuation which requires adjustments in the method of production. And price variations will not dampen all fluctuations as they do fluctuations in demand. Fluctuations in the availability of raw materials--attributable for example to changes in climate conditions--are just as threatening to a system whose productivity is built into specialized machinery and skills which are not readily shifted from one type of input to another. A system which monopolizes raw materials divides production into specialized and unspecialized segments and insures that the specialized segment

receive the base line supplies in periods of shortage will be just as effective here as it is in coping with fluctuating aggregate demand. The requirements of a price system which produces this result are much more stringent than are the requirements of a price system which would substitute for a monopoly in capturing the economies of specialization in the face of fluctuating demand. The essential point, however, is not that the monopoly is either inevitable or better, but simply that it is the institution which has played this role historically.

Because it is an institution designed to stabilize output and capture the economies of specialization, the modern corporation reacts to fluctuations in a manner very different from that predicted by conventional theory. Conventional theory sees only two possible reactions to fluctuating demand: either quantity can be varied or price can be changed. But the modern corporation exists to pursue a third alternative: to organize the market so as to stabilize production and price. This does not mean that neither prices nor production change under the pressure of demand shortages. But it does mean that this is not the natural, inevitable, and immediate response of the corporation to such pressures. And it is, in this sense, that under an economic regime characterized by such corporations, both prices and quantities are relatively rigid.

Economic downturns in which demand falls below the base line output thus place large corporations under tremendous pressure: the pressure is experienced as a kind of profit squeeze. Since the natural reaction is not to cut prices or reduce output, the profit squeeze leads the corporation to cut costs, reducing the price which it pays for raw material and

for wages. When the corporate institution is limited to the investment industries, this has very little affect upon the behavior of the aggregate economy. But as the corporate sector becomes more and more directly dependent upon mass consumption, success in cutting wages tends to undermine the very markets which must be sustained in order to maintain base line production. This in the theory of regulation is the root cause of the Great Depression.

Thus, to summarize, economic growth in capitalist economies is dependent upon specialization. Specialization is, in turn, dependent upon the extent of the market, and, in this sense, an effective system of regulation must ensure the progressive extension of the market. In the late 19th century, the large modern corporation came into existence. This institution extended the market by "organizing" demand into the largest possible stable segment. The effect of operating in this way was that, in the face of fluctuating demand, prices and output were relatively rigid. When demand fell below the stable base line and the corporation experienced a profit squeeze, it reacted by attempting to cut input costs, especially wages. The asymmetry between a product market where corporations imposed rigid prices and a labor market without any comparable institutionalized wage rigidity institutions created an underconsumption bias. The effect of this upon aggregate economic behavior was initially trivial since the corporate sector was small and a good part of it was dependent upon investment demand. As the corporate sector grew, however, and became increasingly dependent directly and indirectly on production for the mass consumer market, the

underconsumption bias began to undermine macro-economic performance: the attempt to cut wages further undermined the very demand upon whose revival it was dependent. This progressive movement toward mass consumption industries was thus ultimately the cause of the Great Depression of the 1930's.

The underconsumption bias in the American economy was eliminated by the industrial relations system most of whose essential elements appeared in the late 1930's, but which was embedded in the economy only in the immediate postwar period. Conceptually, two distinct facets of the system are important:

- (a) a collective bargaining structure in the mass production industries themselves linking wage increases to a productivity plus inflation formula and
- (b) a structure of pattern bargaining, administrative regulations, and legislation making these mass production settlements key and extending them to the rest of the economy.

These are the second and third of the major institutional features of the postwar regulatory system. The industrial relations system, understood in the broadest sense of the term, also protected the internal domestic reserves and ensured their transfer to the industrial sector as required: although we view this as a subsidiary feature of the total system, it is convenient to treat it in combination with the other two features which are critical.

B. The Industrial Relations System

The industrial relations system which developed in the United States in the 1930's and 1940's has a very clear institutional structure. Substantive legislation imposes minimum standards for wages, hours and working conditions and defines certain minimal pension and insurance benefits (unemployment insurance and workmans compensation). Legislation also guarantees the right of workers to form and join union organizations and of these unions to engage in collective bargaining with employers over terms and conditions of employment above the legislated minimum. These legislative guarantees are, however, exclusively procedural. The substantive terms and conditions of employment above the floor are left to the parties to determine through collective bargaining or, in its absence, to the discretion of the employer, constrained by the market and by the threat of union organization. In contrast to the legislated conditions in some other countries, there is a wide gap between the minimal standards imposed by law and the prevailing conditions in most industries and regions of the country. In a sense, this framework may be said to define two sectors of the economy: one at or close to the minimum in which the terms and conditions are determined by laws and another above the minimum where conditions are set by collective bargaining and/or competition. Traditionally, there has been a large, third sector exempted from both the substantive and the procedural legislation composed of the agriculture and certain menial jobs in hotels, restaurants, laundries, household domestic servants, and non-profit institutions such as hospital orderlies. This sector housed the domestic labor reserves.

The precise origins of this framework are of considerable importance in understanding both how it functions as part of the regulatory structure and how regulatory systems come into being and evolve over time. The basic framework, as we have just described it, is defined by and embodied in a variety of different pieces of legislation and court decisions, almost all of which date from the 1930's. If one looks at the legal framework alone, one is tempted to think of the system as a conscious, deliberate creation, put in place as a rational whole. In fact, however, the legislative framework is probably better understood as the remains of a vast program of social experimentation undertaken in the Depression years, much of which was either abandoned or declared unconstitutional by the Supreme Court. The elements of the current system derive from several, conceptually distinct programs of social reform; and the critical events in determining what survived and in forming them into a single, more or less coherent institutional structure occurred after the legislation was actually passed, in the late thirties, during the war and the immediate postwar period.

Extra-legal developments are also important because the components of the industrial relations system as defined in law described above do not precisely correspond to the components which are of interest from a regulatory point of view. The sectors of the economy which are exempted from the legislation did tend to contain the domestic labor reserves, and the substantive legislation has more or less followed key collective bargaining settlements and have been important in spreading those to the rest of the economy. But within the collective bargaining sector itself, there

are divisions which are not reflected in the legislative framework. Those divisions, and the way in which they operate and influence each other, are important from a regulatory point of view.

In terms of the actual system, four historical episodes are central. First, as already mentioned, the development of the legislative base in the early and mid-thirties and its subsequent ratification by the Supreme Court. Second, the wave of sit-down strikes in the middle 1930's and the union organization of the mass production industries to which those strikes led. Third, the system of controls during World War II, operating through tripartite board composed of labor, management, and public representatives but sanctioned by governmental authority. And, four, the immediate postwar period, which witnessed the purge of the radicals within the labor movement, the institution of the 1948 UAW-GM accord of the productivity plus formula, and the spread of union organizations throughout the manufacturing sector. For the highly concentrated mass production industries which are key to the regulatory system, it is the last three of these period which are important: the law is decidedly secondary.

1. The Collective Bargaining Structure in the Mass Production Industries<sup>11</sup>

The organization of these industries came suddenly in a wave of spontaneous rank-and-file militancy in the middle 1930's. The chief expression of this unrest was a series of factory occupations, beginning in the Acron, Ohio rubber industry in 1935 and spreading rapidly in the

course of the following year to automobiles. The period was experienced by most who lived through it as one verging on anarchy. The major corporations, which had initially resisted the plant occupations as a usurpation of private property and held out against the unions, ultimately retreated in an effort to forestall open revolution, recognized various worker organizations, and entered into contract negotiations. The key decisions in this process were the recognition of the UAW by General Motors and of the Steel Workers' Organizing Committee by U.S. Steel in the Spring of 1937.

The initial recognition of the unions, however, was only one step in the establishment of the postwar bargaining relationship. Industrial unionism has had a long history of ups and downs in the United States. Historically, employers accepted worker organization during periods of economic prosperity and/or worker militancy, when the cost of industrial warfare was high and, then, turned to repudiate them at some later stage when the balance of power sprung back in their favor. The Wagner Act, passed prior to the sit down strike in 1935, arguably changed the labor relations climate by giving unions governmental backing and making collective bargaining an explicit goal of public policy but the initial industrial unions were formed outside the framework of this act and in a period when its constitutionality was still in question. It thus appeared at the time as if unions and the bargaining process in which they forced the employer to engage might be merely a temporary victory in a continuing series of labor wars.

On the labor side, moreover, the strategy of collective bargaining in



the late 1930's when industrial unions were first organized was also unclear. It is conventional in retrospect to make a sharp distinction between labor leaders who were prepared to accept the existing economic system and viewed collective bargaining as an instrument for the economic progress of the workers within it and those who saw worker organization as a means of effecting changes in the system itself. This distinction was much less apparent at the time. The Depression had called into question the viability of capitalism generally and basic systemic changes were widely debated within the labor movement and outside. The government had itself experimented with such changes in the National Industrial Recovery Act. The established labor unions, moreover, had very little experience with industrial collective bargaining. The old American Federation of Labor was organized along craft lines: It initially opposed the new industrial unions which grew out of the sitdown strikes, and wanted to distribute the newly organized workers among the traditional craft jurisdictions. The new industrial unions at first survived only by splitting away to form the Committee for Industrial Organization (later, the Congress of Industrial Workers.) And, if the organizational form was new, the stance which such organizations should take toward the industrial giants with which they bargained, the procedures of collective bargaining, the range of permissible weapons, the range of topics to be discussed and demands to be made were all confused and unclear. Symbolic in this respect was the sit-down strike itself: an apparently indispensable weapon in the initial wave of industrial organization, its legitimacy was suspect from the very beginning and ultimately came to be rejected even by those who first em-

ployed it and whose position seemed dependent upon it.\* In a very real sense, the emergence of industrial unions in the 1930's represented such a radical break with the past that it could be seen as itself a rejection of the old capitalist system and the fashioning of a new alternative. In terms of what industrial unionism turned out to mean in the postwar period, therefore, subsequent events were critical. Among the most critical was the experience of the war itself.

Industrial relations were monitored during the war through a system of tripartite boards composed of union, management and public representatives. Although the boards eventually obtained the power to impose the substantive conditions of employment and, in particular, to control wages, their initial purpose was to sustain war production through the maintenance of industrial peace, and this remained their basic mission. To this end, the boards sought to maintain an equitable system of compensation and work practices without undermining the basic productivity of the enterprise. That notion of equity and due process within a productivity oriented economic unit became the goal of the postwar bargaining system. The wartime experience also taught a generation of business executives, labor leaders, and "neutral" arbitrators and mediators to accept each other and work together systematically in a framework of real, but limited conflict. Many of the issues upon which postwar bargaining focused, such as the development of a "rational" wage and salary structure, the creation

\*It was declared illegal by the Supreme Court in 1939.

of job definitions, etc., also derived from the wartime experience and the priority during the war accorded wage determination as opposed to other possible worker demands. Thus, while the new unions entered the war without a clear model of what collective bargaining might mean, the war experience provided the elements of such a model, and the postwar debate within the labor movement was in large measure about the institutionalization of that type of relationship.

The issues which had been discussed by these boards and the substantive resolutions of them which the boards had made concrete were a definition of what constituted legitimate collective bargaining by industrial unions. The system had clearly worked during the war and its working had been consistent with a broad range of union participation in, and review of, personnel and productive decisions. It was thus possible after the war time experience, in a way in which it had not been before, to define a range of things which industrial unions could do without generating either revolution or anarchy. Management did not welcome the union participation in these new activities; and not every union was able to force management to accept its role in every item on the list, or even very many items. But it was clearly possible to say that one or another of these items was within the realm of legitimate demands and of feasible concessions. It was even possible, by reference to items already on the list, to discuss new demands, i.e. "innovations in collective bargaining"; if job descriptions were a feasible subject of collective bargaining, for example, then perhaps controls over subcontracting were feasible as well.

The control experience, moreover, produced a group of labor leaders, managerial officials and third party neutrals who had learned through a kind of on-the-job training the vast array of particular cases and precedents which constituted the concrete definition of collective bargaining. They were, furthermore, personally acquainted with each other and experienced in working together in tense situations where the conflict was real and intense but nonetheless understood to be limited. This group of people constituted a social community in which the definition of collective bargaining that grew out of the war resided. As such, they were capable of clarifying that definition, extending it, and passing it on to others. The community through a process of informal, unconscious, and basically unself-conscious collective judgement served to identify and apply standards of legitimacy. In the immediate postwar period, it worked in this way to separate the radicals from those labor leaders and managers who simply employed the tone and vocabulary of the radicals or anti-union campaigns of the thirties in the heat of collective bargaining. "He bargains hard but is a reasonable guy"; "he pushes to get a damn good deal if he can but he won't put you out of business"; "he'll push you to the wall, but he ain't going to break the union." The war time experience thus created a "system" of collective bargaining; it was possible after the war, in a way in which it had not been before, to distinguish between those who accepted the system and those who were trying to use worker organizations as an instrument to change it or break it.\*

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\*Because this is a controversial area, it is perhaps worth emphasizing what this argument presupposes. It rests upon the idea that America is a consensus society where adherence to the consensus is enforced, in the first instance, by social pressure. The problem with industrial unionism in the 1930's was that it emerged outside the existing consensus and this gave it a great revolutionary potential. The war time experience was thus critical in creating a definition of collective bargaining and a national group which could operate to define and adjudicate adherence to it. Only in those terms was it again feasible to say who was a revolutionary, a rebel and who was not. Whether or not adherence to this new norm was a "sell out" as the radicals would have it, or not, is another question. It is important to note, however, that this was a real change in the system as it was previously defined and was not a sham. It had a potential for expanding for it did not obviously define a static or self-contained role for unions: it was possible to finagle the precedents from the war time controls to extend the collective bargaining issues and that was done in the postwar period. It is possible, however, that if one analyzed the precedents there was behind them a set of principles implicitly at work that did limit what could actually emerge. What the argument above is ruling out is: 1) a backroom conspiracy theory and 2) an explicit sell-out. I acknowledge a debt to Pierre Bordieu whose ideas about practical reason are implicit throughout the above.

The immediate postwar period saw a purge within the labor movement, based upon these standards, of the radical elements who were unable or unwilling to accept the emergent structure. This purge was directed explicitly at the "communists" and discussions of it have come to merge with discussions of McCarthyism and the allegations of communist infiltration in high government levels in the early 1950's. Again, therefore, it is important to distinguish the "anti-communist" purge in the labor movement from the wave of general anti-communist hysteria and to make clear what is being argued here. We are arguing that within the labor movement the issue was not simply communism but adherence to a type of labor movement and collective bargaining which had been defined through the World War II control experience. The term "communist" was used as a shorthand for opposition to this standard because, in general, communism had come to stand before the war for an approach to worker organization which abjured limited goals of any kind. Also, many of those within the labor movement who had been temperamentally and philosophically attracted by communism and other radical philosophies before the war were also opposed to the acceptance of the newly defined system of collective bargaining after the war. The issue was not simply "communism" or the "Soviet Union," and many people who were not communists and who were opposed to the party, found themselves alienated from the newly defined labor movement in this period. There were in other words a set of real, and generally known standards--albeit a set of standards which, because they were embodied in precedent and community rather than a set of abstract principles, are difficult to define--which in this period people

within the labor movement were quite consciously accepting or rejecting.

Second, this is not to say that communism was a wholly irrelevant or manufactured issue. The "right-wing" of the labor movement was genuinely anti-Communist: some because they shared a basic commitment to the existing economic system: many more because they had been deeply offended by the twists-and-turns of the Party through the 1930's and into the war in response to changes in Soviet policy. The communists were thought to have demonstrated that their loyalty was to the Soviet Union and not to the labor movement. And the control issue in the purges of 1948 was the choice between the Communist-backed Progressive candidate Henry Wallace and President Truman, who had the support of most of organized labor.

The heritage of the 1930's was also a factor. A great many of the true radicals--true in the sense that they sought fundamental social transformation through the labor movement--had been Communists in the 1930's, and there was a strong association in everybody's mind between radicalism and communism. The battles between the Communists and the non-communists had been very, very bitter. Because of disputes within the labor movement revolving around this issue, strikes had been won or lost, people had suffered extreme economic hardships, many people had been physically injured, and some had been maimed and killed. In isolated communities, workers suffered an extreme kind of social ostracism which was worse than either economic and physical injury. The bitterness of those battles, the memories among labor leaders of the people who they had led into battle, whom they had recruited into the movement and through participation in the movement had destroyed carried over into the postwar

period, and the purges became a vehicle for expanding guilt and for revenge. Thus, people were purged from the labor movement because of the stands they had taken in the thirties even though they might have been willing to accept the new collective bargaining norms or were actually indifferent to them. To the extent that the purges were really about these new norms, these people were innocent victims. But we are explicitly rejecting the idea that the purges could be explained either by past history or as a purely cultural phenomenon: they were a part of the process through which a new system of regulation was put into place. Third, however, it is extremely doubtful that the purges involved an explicit agreement between organized labor and a group of business leaders.<sup>12</sup> The need and process of purging the labor movement of its most radical elements was very widely discussed within the labor and business community, and there were undoubtedly discussions between labor leaders and business managers at the local and the national level. This was not a purely spontaneous movement. On the other hand, the understandings involved were far more general and complete than those that might emerge from an industrial pact. The war time experience taught the business community that they could live with a labor movement which adhered to certain standards and practices: They believed moreover that it was their legal obligation to do so. They did not believe that they could operate with unions who pursued more radical, open ended goals and made clear that they would alter and break unions which did so. Labor, on its side, knew what the standards in terms of which radicalism was being judged were; accepted them either tactically or by conviction; recognized that given



the nature of industrial unionism, it was whole corporations and whole national unions which defined industrial relations policy, not individual plant managers and local unions, and it made its policy with respect to "radical" and "communist" unions accordingly.

#### The UAW-GM Agreement

The final episode in the development of the key bargaining component of the postwar regulatory system was the introduction of the productivity plus inflation formula in the 1948 bargaining round between General Motors and the United Automobile Workers.<sup>13</sup> The precise origins of this formula are somewhat obscure. The formula had been discussed by Reuther for several years preceding the 1948 settlement, and he saw it as a means of maintaining purchasing power or, in other words, as an element in precisely the kind of regulatory system which we are discussing here. To operate in this way, it was critical that the key settlement be extended to the rest of the economy but, as we shall see shortly, that extension had already been guaranteed by the institutions put in place by the labor board. The company appears also to have understood the formula would constitute a way of maintaining national purchasing power, although its statements on this matter are less explicit and less complete. From the company's perspective, a second aspect of this formula was probably more important: it effectively resolved the issue of the distribution of earnings between wages and profits on a national level; it represented an implicit acceptance by the union of the distribution of earnings between wages and profits would not itself be an issue at the bargaining table.

In this sense, the formula was the final concession by the union to the existing economic system. The union had already conceded the existing production system in the rules governing technology and discipline: those rules essentially gave the right to the company to select the technology and to set disciplinary standards which would insure that the technology was utilized effectively. The unions role in the shop was to insure that those standards were administered equitably. After 1948, union demand concentrated on non-wage, off-the-job security, e.g. retirement pensions, health insurance, guaranteed income and supplementary unemployment insurance. In this respect, it followed a kind of social democracy version of worker gains within a capitalist system.

#### 1. The Extension of Key Settlements

The second feature of postwar industrial relations critical to regulatory system was the extension of the settlements in the mass production industries to the rest of the economy. Such an extension will be produced by a system in which relative wages among industries and occupations are rigid: the key settlements in the mass consumption industries will then produce "distortions" in the initial wage structure and the forces maintaining rigidity will come into play to restore the original wage relationships. Economic analysts have always recognized the presence of strong rigidities in relative wage relationships operating in the labor market, and the force of these customary relationships is generally taken to be the major factor distinguishing labor from other commodities. Very few economists have ever argued that relative wages vary freely as, in

theory, at least, other prices are assumed to do. And it is often admitted that in socially cohesive communities, characterized by traditional craft and agricultural pursuits, customary relationships dominate wage behavior.<sup>14</sup> But one can argue that in the 19th and early 20th century in the major areas of industrialization, social cohesion was weak; and custom was so swamped by competitive pressures, that the market mastered the wage structure. One of the things which makes this argument plausible in the American context was the large, floating immigrant labor force, divided within itself by ethnic and linguistic barriers and without strong social ties to any particular industry, craft, or geographic location. This, however, began to change with the advent of the First World War, which cut off both the flow of new immigrants and the prospect of return for those already here: by the 1930's, the immigrant work force was substantially stabilized and the industrial labor force had come to be characterized by strong, cohesive, ethnic communities. I have argued elsewhere that this transition was in large part responsible for the timing of the industrial union movement.<sup>15</sup> It would, in any case, have been expected to reintroduce customary rigidities in the relative wage structure and to weaken the play of market forces. The institutional changes in the period may thus be seen as strengthening the force of custom and permitting it to dominate market pressure.

Three distinct institutional features had this effect. First, minimum wage legislation placed a floor under the wage structure: that floor tended over time to rise as wages rose generally in the private sector. Second, the wages of public employees and in public contracts

with private firms were tied to wages in the private sector by legislation and administrative practice. Finally, within the private sector, union settlements tended to be intertwined, using the mass production industries as a benchmark and a guide, and administrative practice and fear of union competition tied non-union wages to the union patterns.<sup>16</sup>

Of these three features, the last is critical: it is also the most complex, and in a certain sense most subtle because there is no single law or institution which could be said to embody or impose it. During World War II, the wage-labor boards came very close to playing this role: The wage structure was in this period imposed by government: since all labor was in short supply and there was an elaborate mechanism for direct allocation, market pressures on relative wage relationships were forestalled and the central goal became one of establishing an equitable wage structure capable of orderly administration. For purposes of equity, they relied heavily upon custom and past practice, and, in so doing, made explicit those customary relationships already present. In identifying and sanctioning customary relationships, they undoubtedly also strengthened allegiance to them and created linkages, (or the awareness of linkages) which would not otherwise have been present. A number of administrative practices, dictated essentially by the need for objective ways of comparing wages on different jobs and in different parts of the economy, were also pioneered by the wage-labor boards and introduced to labor and management officials who participated on them. The legal compulsion of the war-labor board was eliminated at the end of the war but as described above, its effects lingered in the postwar period. The labor force and

the labor and management representatives directly responsible for wage setting left the war with a greatly heightened consciousness of and attachment to the relative wage relationship which the board had sanctioned. And the standards of efficient wage administration were carried over into the postwar industrial relations practice: the administrative procedures pioneered by the boards were widely adapted both in collective bargaining and in unilateral managerial wage setting and the development of such procedures as job evaluation and community wage surveys, begun by the boards, was continued afterwards by non-governmental organizations.<sup>17</sup> The reimposition of controls briefly during the Korean War tended to reinforce the informal authority which they had achieved in the interim with renewed official recognition.

While the controls episodes were important in identifying (and to some extent creating) the customary wage structure and in the development of administrative practice, other forces operated to hold the established wage structure in place. The major industrial settlements were probably the most tightly bound together. Arthur Ross has termed the nature of the bonds "orbits of coercive comparison."<sup>18</sup> They were forged by the interdependent organizational histories, and by the high visibility of the settlements themselves. Much of leadership of the major industrial unions in the postwar period come out of the organizing committees of the CIO; they were often colonizers who were sent from one industry to organize an adjacent one and, thus, had close personal and professional ties to the industry from which they came. They also saw themselves in competition with one another for national prominence and leadership positions within

the labor movement. The rank-and-file, as well as other union leader, used the settlement in one of the key industries as a standard by which to judge the efficacy of the leadership in another. Since those industries were closely linked economically, directly through input-output relationships and sensitive to the same macro-economic events even when not bound together indirect client-customer relations, this was a sensible procedure of evaluation. But it created interdependencies which went beyond market relationships and caused the settlements to follow one another even when the product markets diverged or where the independence of the different local labor markets would have permitted different rates of wage change.

Outside the key industries, there were other orbits of coercive comparison, for example in construction, the garment settlements, the maritime industries. And wage settlements spread within these orbits. The mechanisms which spread the key industry settlements to these outer orbits and to the rest of the private economy were, however, more varied and less mechanical than the notion of orbits of coercive comparison suggests. Dunlop's term "wage contours" is thus probably more appropriate.<sup>19</sup> Individual settlements thus diverged from the key pattern to accommodate a variety of distinctive economic forces, political pressures, and the like. But despite divergence, the key acted as a magnet pulling the whole wage structure with it.

The forces responsible for the creation of the mechanisms were similar to those within the mass production industries: an underlying tendency for customary wage norms to rigidity relative wage relationships in stable industrial communities; the explicit identification of these

norms, the sanctions accorded to them by the war-labor boards during World War II, and the nature and role of union organizations in the postwar period. But the strength of union organization outside the key industries was very different and hence, the legal framework created by the National Labor Relations Act does seem critical to the spread of the key settlements. Because that threat has now altered, it is important to remember that union membership continued to expand until 1955. The memory of an offensive labor movement lingered well into the 1960's. Finally, administrative instruments such as wage surveys operated to pick up and spread union settlements even where there was no direct union competition.

The other institutions which operated to spread the key settlement-- minimum age legislation and wage setting practice in the public sector-- require less comment because they are easily identified. The relationship between the minimum and the average wage can be seen in Table \_\_\_. The maintenance of this relationship was not automatic. Periodic legislation action was regulated, but the action was insured by the importance of the minimum wage in limiting non-union competition in certain politically active unions, such as garments, and by political pressure from the labor movement as a whole. In this sense, the minimum wage is an integral part of the industrial relations system put in place in the 1930's and, in fact, the strongest argument in its favor at the time it was passed was the maintenance of our national purchasing power.

While the basic organization in the key industries occurred outside that legislative framework and the decision of those industries to accept

the legitimacy of collective bargaining probably had more to do with its basic political and constitutional viability than visa versa, the same cannot be said of the rest of the manufacturing sector. The spread of unionism was largely a postwar phenomenon; it occurred within the framework created by the NLRA, utilized the procedures created by the Act, and depended very much on the legitimacy which the act conferred upon collective bargaining and often upon the explicit legal protections which the Act offered as well. There was, thus, a great disparity in basic strength between the mass production industries and the rest of the unionized sector. This gave the mass production industries a leadership role and insured that the rest of the industry would follow them and not visa versa. The size and coherence of these industries, and the impact of even potential labor unrest upon the national economy, moreover, meant that enormous publicity surrounded their settlements and in this way served to make them a standard against which settlements by weaker unions were judged even if the standard could not be reached. And union settlements were reflected in the non-union sector as companies, under a threat of union organization made credible by the legal protection which the NLRA offered, tried to maintain the allegiance of their unorganized member.

The ties between the wage structure of the public and the private sectors probably require less of an explanation. It seems natural in a democracy with a strong distrust of government to resolve the question of public salaries in this way. But certain elements of this system--such as the Davis-Bacon Act which extends private sector union wages in the



construction industry to public contractors--are part of the larger industrial relations structure, imposed and maintained by union political clout. And the "naturalness" and inevitability of their arrangements was suddenly thrown into doubt by the organization of public employees in the 1960's. In the meantime, however, the significance of these administrative procedures in the overall economy grew with the growth of governmental activity and its concomitant of public employment in the postwar period.

C. Adjustments in the Postwar Regulatory System:

Beginning in the middle sixties and extending through the early 1970's, the regulatory system which we have just described was subject to a series of shocks. These shocks produced several economic disturbances and dislocations, which we have come--we shall argue somewhat erroneously--to associate with the end of the prosperity of the postwar era. They also led to a variety of reforms and adjustments in the postwar regulatory structure. The most important of these shocks were, beginning in the middle sixties: the Civil Rights Movement and the concomitant shift in the attitude of black workers; the progressive organization throughout the decade of public employees; and, in the early 1970's, the Arab oil embargo and the Russian wheat deal.

1. Civil Rights

From an economic point-of-view, the major significance of the civil rights movement was that it signaled the end of our domestic labor reserves. Throughout the first two postwar decades, the Southern rural

labor force had greased the wheels of a labor market in which relative prices were rigid and, hence, incapable of operating to allocate labor. The rural labor force was maintained apart from this structure by the exemption of agriculture from the minimum wage. The low wages which resulted encouraged the continuation of the traditional agricultural technology. The technology required a mass of unskilled labor at harvest which was left largely idle the rest of the year to live through subsistence farming on marginal agricultural lands. The system was capable of tolerating the goings and comings of a large proportion of its potential labor force. Since the plantations did not care how many people shared the subsistence plots so long as there were at least enough to cover the harvest. Given the low wages and living standards, therefore, this Southern rural labor force was on call to employers within the fixed wage sector who recruited when labor in their own areas was in short supply. The new recruits were employed under specialized institutional arrangements where their wages were part of the fixed wage structure but with different work rules and much more flexible employment security arrangements than those prevailing elsewhere. When no longer required, the newly recruited workers were encouraged to return to their rural homes.

Gradually in the course of the postwar period the bulk of the labor available in this was, however, absorbed into permanent fixed wage employment. The migration process, moreover, also operated over time to change the attitudes of those who remained outside of, or only marginally attached, to the prevailing wage system. Workers who had settled in the

North and their children who were raised there became increasingly intolerant of differential employment conditions on jobs to which even second generation black urban dwellers were confined: Managers saw this intolerance as insubordination and recalcitrance. In the South, the civil rights movement imposed changes in the social structures, voting patterns, and working relationships which led employers to adopt a new technology, which eliminated the need for surplus labor and permitted them to expel the black labor reserves once and for all, and close off the possibility of return. Finally, in the overall political climate of the 1960's, the minimum wage exemption which placed the agricultural labor force outside the fixed wage structure was finally eliminated. Together these changes rendered the whole labor market structure extremely rigid and potentially threatened the viability of the regulatory system as a whole.

In the event, however, employers developed substitutes for the rural labor reserves which operated, relatively quickly, to restore flexibility to the labor market. The most important of these substitutes were immigrants from rural agricultural areas abroad who accepted work in much the same way and for much the same reasons as black workers from the rural South had before them. A second source of elastic labor available on call for prevailing wages were youth: the exhaustion of the rural labor reserves coincided fortuitously with the arrival on the labor market of the demographic bulge produced by the postwar baby boom, and the number of students and adolescents seeking tuition and/or pin money in part time and short time vacation work expanded rapidly. Several people have argued that the public assistance system, which underwent an enormous expansion

in response to the social pressures emanating from the civil rights movement, also worked to enhance the elasticity of the settled urban labor force. Welfare in this view worked like rural agriculture to provide a cushion upon which people who could fall back when out of work. At the same time, it substained a number of people (not so much the clients themselves as ancillary members of the welfare household such as boyfriends, older children, transient relatives) who were willing to work at prevailing wages when work became available. To the extent that welfare payments rose with prices and productivity, the public assistance solution to the problem of wage rigidity was also consistent with the need of the postwar regulatory structure to maintain internal demand.

## 2. Public Employees and Construction Workers

The second threat to the postwar regulatory structure came from the organization of public employees in the course of the 1960's. Prior to that time, public employment was essentially outside the scope of union organization and public employees were denied the right to strike. Wage levels in the public sector tended to be linked by law and administrative practice to private wage settlements. A typical procedure was for public bodies to survey private wages for jobs comparable to their own on a regular basis and to adjust their wages accordingly. To the extent that the private sector was essentially governed by the productivity plus inflation formula, this practice transferred that formula to the public sector, insuring that it played its role in sustaining national purchasing power. But, at the same time, the formula itself was derived from the private sector and adjusted there to conform with the requirements for a

stable expansion.

The organization of public employees, however, disrupted this linkage. It made settlements in the public sector dependent upon the bargaining power of public employees. To the extent that most employees performed vital services, their power appeared unlimited. Because their organization concided with an enormous expansion of the public sector, the bargaining power, even when the services were not vital, was substantial. The disassociation of the public and the private sector was, thus, itself disruptive of the stability of the system. But it appeared for a time as if the high visibility of the public sector would enable it to displace the automobile industry as the key settlement for the private sector as well, and that the whole wage system would become tied to the bargaining power of public employees, a parameter which was essentially independent of the regulatory requirements of the system.

In the event, however, these affects either never fully materialized or were short lived. There was some realignment in pubic sector wages: the demonstration effect caused by public settlements may have been responsible for some of the wage inflation in the late 1960's and early 1970's. But the bargaining power in the sector was not as great as anticipated. Citizens learned to live with and wait out strikes of many public workers whose services had previously seemed indispensable: teachers strikes have become commonplace: major cities have survived strikes by sanitation and hospital workers: even police and fire strikes have come to be accepted. Ultimately, the tax payer's revolt has led to an increasing resistance to public workers, and their settlements have by

and large been forced back into a pattern of following the private sector or lagging behind it.

In the late 1960's the construction industry threatened for a time to similarly displace the automobile industry as the key settlement. Competition among the leaders of a set of local unions highly fragmented geographically and by craft vying for political dominance by outdoing each other in forms of wage settlements in a period of very strong demand led to astronomical construction wage settlements. In 1969, at a time when the wages of autoworkers were rising at 5 and 6% construction settlements reached 18 to 20%. Industrialists began to feel pressures emanating both from unions and from the markets upon the wages of their own skilled crafts. Ultimately, however, the displacement of the key settlement which this implied was averted, first, through the creation of special wage stabilization machinery for the industry by the Federal government and, ultimately, by the growth of nonunion construction utilizing an industrial technology which was not amenable to craft control and paying wages tied to other settlement patterns.

### 3. The Food and Fuel Crises

The more serious and lasting disruptions appear to have been not in the labor market and wage setting arrangements of the postwar regulatory structure but in the product and price setting institutions, particularly those which provided an elastic source of raw material supplies in the face of rigidities which prevented prices of varying in a way which would draw them forth. In basic food stuffs, this elasticity was created by the

American agricultural price support system and the enormous commodity surpluses which it generated. These surpluses provided stocks which cushioned the impact of crop failures upon world commodity prices. The price support system has always been looked upon with disfavor by the American economic professor and in the course of the 1960's, it was revised so as to forestall further growth of commodity stocks. The result was that when the Russians experienced a major crop failure in 1973 and entered the world market on a large scale, their purchases were reflected immediately in sky-rocketing food prices, which reverberated throughout the price structure to produce a major inflation.

The Arab-Israeli War of 1972, and the subsequent Arab oil embargo produced a similar effect on world food prices. Again, one can attribute this change to the exhaustion of what had previously seemed to be unlimited oil reserves at the prevailing prices and/or the disruption of a set of colonial and neo-colonial arrangements between industrial and under-developed countries which insured the availability of these reserves on world markets.

The food shortage has proved to be transitory, largely because crop failures of comparable magnitude have not reoccurred. Certain institutional reforms designed to control the access of communist countries to U.S. markets have been introduced but it is doubtful that they are sufficient to contain the Soviet Union (or any other large country for that matter) determined to meet domestic demand through large scale purchases. In this sense, the new vulnerability of the postwar system revealed in 1973 remains.

The effects of the energy crisis, however, have proved more long lasting. Over the decade, the system has adjusted to that problem in three ways. First, it has succeeded to some extent in severing fuel prices from the rest of the price structure so that these can vary without fully leveling all of the other prices in the system. Second, we appear to be moving--but only very gradually--toward new sources of fuel that are not in tight supply. Finally, we are learning to live with the inflation which periodic fuel shortages seems to produce: Price stability may be less of a threat to the smooth functioning of the postwar regulatory structure than it seemed. The inflation has, however, undoubtedly aggravated the current economic crises.

### III. The Postwar Regulatory System and the Economic Crisis

We now turn, in the light of the preceding characterization of the postwar regulatory system, to an examination of the current economic problems and an evaluation of the solutions which have been proposed to them. In order to do this, it is necessary to introduce several conceptual distinctions. The basic distinction is between a regulatory crisis and a crisis of a particular regulatory institution. Behind this lies a second distinction between a mode of regulation and a particular constellation of institutions in which that mode of regulation is embodied.



A. Regulatory Crises and Institutional Crises

As we have developed the concept of a regulatory system it actually carries two separable meanings. First, it is a constellation of specific institutions. Those institutions, operating as a group, have certain properties in allocating resources within and among specific markets (micro-economic regulation) and in maintaining growth, price levels, and employment (macro-economic regulation). These properties can be described in abstract theoretical terms, distinct from the particular institutions through which they are effectuated in a given country at a given time. That theoretical abstraction constitutes a second meaning of the term regulatory system. We shall refer to it as a mode of regulation.

This distinction is important. Virtually all industrial countries in the postwar period have used the same mode of regulation: they all maintain employment, growth, and price levels by insuring that national purchasing power expands at a rate equivalent to productivity plus inflation. They all involve systems of rigid relative wages and prices, excess labor and raw material reserves, and direct allocation by large corporate enterprises. But the institutional structure in which this regulatory regime is housed varies substantially from one country to another. In France, for instance, the State is the key institution both in setting the basic wage formula and in extending it and thus substitutes for the role play by the GM-UAW settlement and informal wage contours and orbits of coercive comparison in the United States. These variations among countries reflect differences in their social structures and peculiarities of their national histories. For a normative evaluation of

the systems, the differences among institutional structures across countries within the same regulatory mode may be much more important than the variations produced by the historical changes in the mode of regulation itself.

In the same sense that the constellations of institutions varies across countries, particular institutions within any given country also change without changing the theoretical properties of the system as a whole. These institutional changes are presumably a reflection of changes in the underlying social and political structures in which they are embedded. Sometimes the social and political changes are a reflection of the same technological evolution as that underlying a fundamental regulatory crises. But it is important nonetheless to maintain a sharp distinction between the social changes related to the evolving technology and the changes in the requisite mode of regulation. The distinction is important first because the two processes do not coincide, either in their timing or in their effects and second because social and political changes are produced not only by the shifting technology but by a number of other factors as well.

In what follows, we shall reserve the term regulatory crisis for a situation in which a system with given theoretical properties (a given mode of regulation) can no longer maintain macro-economic stability. The resolution of such a crisis requires the invention of a whole new complex of institutions: and results in a new system with theoretical properties which are distinct from the old.

## 2. Social Crisis

If a confusion between a regulatory crises and an institutional crises is one of the factors which has complicated the diagnosis of our current economic problems, a second complicating factor has been the confusion between these economic difficulties and the social difficulties which accompanied them. The period of the late 1960's and early 1970's was one of social crisis in most western industrial countries. In the United States the major elements of that social crisis were the Civil Rights movement and the student protest in the universities centering around the Viet Nam War but often aimed more broadly at the materialistic social structure of industrial societies abroad. Elsewhere student protests directed at the social structure were often accompanied by organization and protest among diverse elements of the industrial working class. An important thrust of the analysis here is that the regulatory crisis which we are currently experiencing is separable and distinct from the social crisis which preceded it. The two crises have, however, become confused in our thinking. This is so in at least three ways.

First, some of the crises of particular regulatory institutions were directly linked to these social movements. This is clearly true, for example, of the depletion of the black labor force as a domestic labor reserve. Others of the institutional crises may be indirectly linked to these social crises. For example, one might argue that the organization of public employees was a response to the demonstration effect of the black civil rights protests and facilitated by an expansion of the public

sector which was a response to that same black pressure. One might be able to tie all of the institutional problems of the late 1960's and 1970's to social problems in this way, although the argument would probably be rather forced. To the extent that one begins to think in this way, however, the social crisis and the institutional crises become confused.

A second source of confusion is that the social crises can be traced to the evolution of the technology and/or to the regulatory structure which grow up in response to that evolution. Thus, for example, it can be argued that the foundation of the civil rights movement was laid in the second world war when we began to draw upon the Southern black labor force as a labor reserve for industrial society. Had we not needed such a labor reserve to make the system function or had we found an alternative and left the black labor force alone in the South, we never would have faced the Civil Rights protests at all. Thus, the longrun social consequences of particular regulatory institutions, and their feedback effects upon the viability of those institutions both become confused with the technological evolution which seemed to require the regulatory structure itself. It is on this point that the analytical thrust of this paper differs from much of the Marxist writing in the current period, including some of the work conceived in the framework of the theory of regulation. The third source of confusion is that the solutions which we sought to the social crisis of the late 1960's were predicated upon a vision of the particular regulatory structure then in place. Now that it has become clear that the prevailing regulatory structure is no

longer satisfactory, the solutions are perceived as misconstrued; and we tend to confuse the problems presented by these new institutions created in an attempt to solve the social crises both with the broader problems generated by the regulatory structure in terms of which the solutions were conceived and with the attempt to address those social problems at all. Thus, for example, an expansion of the public assistance system in the attempt to respond to civil rights pressures was broadly consistent with the postwar regulatory system both in the sense that it helped to sustain aggregate purchasing power and it enhanced the flexibility of the labor force in the face of a rigid wage structure. It is now, however, being blamed for our economic problems.

This distinction between the current economic crisis and the preceding social one is a basic point of divergence between my argument and other Marxist interpretations conceived in a similar framework. Marxist analysis generally makes a sharp distinction between the base of the economy, rooted tightly in technology, and the institutional and ideological superstructure. Classical Marxism sees the superstructure as a reflection of the base. Crises are generally produced in this view by the evolution of the base, the failure of the superstructure to keep pace with it and the consequent need to resolve the conflict between them. In more recent Marxist theory, there is a tendency to give the superstructure an independent life of its own, permitting it to evolve according to its own laws of motion. This creates the possibility of a second type of crisis, one that could occur even if the base stood still.

Most Marxist theories of the current crisis tend to be of this second

kind. Generally, they view the crisis as consisting of excess demands generated by carrying to its extreme the logic of certain ideological principles which arose originally to facilitate the operation of the system. Bowles and Gintis, for example, emphasize the conflict between notions of democracy, which originate in the attempt of the bourgeoisie to free itself politically from the feudal classes but which, when applied in the economic sphere, conflicts with totalitarian control of the work place under a Fordist regime. Weiskoff emphasizes institutions like social security which arise to sustain purchasing power and eliminate the under consumption bias of the economy but which have a logic of expansion which eats into profits to the point where investment is eventually choked off. A similar notion of contradictions built into existing institutions underlies arguments about immigrants and peasant workers who are recruited into industry because their farm background leads them to accept working conditions which their children, raised in urban areas, rebel against and seek to change. Many of these notions are plausible explanations of the social crisis. I myself am particularly attached to the last. But in the distinction between a social and a regulatory crisis, we are essentially rejecting them as an explanation of present economic difficulties and turning instead to a much more classic Marxist interpretation. This is not to deny the importance of the social crisis. It very nearly brought down the system. But--perhaps unfortunately--it failed to do so; and it now shows very little promise in this regard for the future.

The Reagan economic prescription also seems to embody this confusion between the current regulatory crisis and the preceding one.u

The basic prescription for the economic ills growing out of the regulatory crises is a repeal of social programs developed in the 1960's (and apparently in 1930's as well). If, as we are arguing, we face a genuine regulatory crises, however, this approach will not succeed. The underlying regulatory crisis can only be resolved by reference to a new mode of regulation. An institutional implantation of that new mode is the only program which will resolve the crises. As part of such a program, social legislation might be revised and reshaped to fit the new regulatory mode. But the repeal of existing legislation alone is likely only to revive the social problems to which it was originally addressed. The essential problem, therefore, is to envisage an appropriate mode of regulation. It is to that problem that we turn in the next section.

#### IV: Resolving the Current Crises

A full discussion of the alternatives for resolving the current crisis will require a separate paper. Here we can do no more than mention the major issues. We do this under three headings: The New International Order, Nicheism, and Competition.

##### A. The New International Division of labor

The most obvious solution to the current crisis is a reproduction on an international scale of the mode of regulation which governed the domestic economies of the major industrial nations in the period of postwar prosperity. The solution is most obvious because we already have

in the postwar regulatory system a conception about the basic properties of such a system and how it might be organized. Indeed, given the variation in the postwar institution arrangements across individual nations, we have several different models of actual institutional arrangements. And, in fact, probably because it is so easy to conceptualize, most of the writings about economic reform in recent years draw upon such a model, explicitly or implicitly. That model is generally termed, "the new international division of labor."

The idea is direct and simple: if the domestic markets of the existing industrial nations have expanded to their geographic limits and internal demand for mass consumption goods has become saturated, why not open a new economic frontier, as it were, by incorporating into the system the untapped potential for mass consumption of the underdeveloped world. The developed markets, it is to be emphasized, cannot simply be abandoned: it is the total size of the market which is critical in determining the productivity of the mass production industry. Hence, this is not a project which an underdeveloped world could realize on its own, in isolation from the industrialized nations. But, because they will supply the increments to demand which enable continued technological progress and productivity gains, the developing countries--or at least some of the developing countries--are pivotal to the realization of the new system. Actually they are pivotal in two ways:

First, their consumer markets are unsaturated and, hence, have the potential for the kind of expansion over a long period necessary to



realize the economies of scale apparently still available in mass production industries. Second, their labor force has shown a willingness to accept the kinds of employment associated with the mass production of standardized goods; the income which they will gain through acceptance of these employments will presumably serve to create these expanding markets. The literature on the new international division of labor has sometimes emphasized the reluctance of the labor force in the industrial world to accept those jobs, and this may be an additional factor in the redistribution of production but this is not critical to the explanatory model which we are using here. The literature on this subject generally suggests that the older industrial countries would then produce specialty items or technological innovations, or something where the more highly educated labor force has a special comparative advantage.

Because such a model is implicit in a good deal of popular discussions, the difficulties here are relatively well known. Essentially, they amount to the fact that it is not clear that either the developing or the developed countries are really interested in such schemes. Nor is it clear how, if there were an interest--either among the relevant countries or, more realistically, among significant economic and political forces within them--such a regulatory scheme could be realized in practical political forms. The developing countries, for their part, actually seem more interested in the consumption of a relatively limited upper and middle class than in expanding the income of the industrial working class en masse. They have been more concerned about basic

industries and military potential than about mass consumption industries producing automobiles and washing machines and they have been preoccupied by an economic independence to which the integration into large multinational corporations directed abroad poses a considerable threat. None of the major industrial nations, on the other hand, have shown a great interest in such schemes either. There has been a general reluctance to see industrial production move abroad. Nor is it clear how or why, if mass production does move abroad, the specialty and prototype production should remain in older industrial areas. Some of the developing countries have shown a considerable capacity for this kind of work. Brazil, for example, whose demand has probably the greatest potential of any single country as a new motor for Fordistic development has been one of the new leaders in certain kinds of prototype development. But, as we have just seen, the markets of the older countries are an essential base for the whole system, and it is not clear how these markets can be maintained if all industries move abroad. Finally, it is difficult to see how a system of this kind would come into being. A dominant international power could presumably impose it. But there is no such power capable of doing so at the moment. The Reagan administration is pursuing a policy designed to restore the dominant position of the United States, but the use of this power to restore such a conception of international order is not part of its vision. Moreover, the resurgence of American power to a point where it could dominate the world economic order in the way it did after the war seems extremely problematic. Absent a single dominant nation on the world scene, the structure would have to

be imposed either by the multinational corporations, who presumably have their own interests, or by multi-lateral negotiations among sovereign states.

The issue, however, is not so much the difficulties. Most of the institutional arrangements which lie at the heart of the passing (dying) economic order must have seemed equally remote in the period before they emerged. This is certainly true of most of the important nation states. The difficulty is that there are no signs that order--or rather an order--of the kind we are envisaging here is in any sense emergent. While an eventual resolution of the crisis through the construction of an "international" Keynesian (or "Fordist") system cannot exactly be ruled out, this mode of regulation is clearly not going to be realized in the near future. In the meantime, a very different technological structure appears to be developing.

#### B. Nitchism

The hallmark of this alternative structure is its flexibility; its capacity to shift quickly from one product to another; the way in which it avoids a commitment to long runs of standardized products. In contrast to the mass production techniques of the preceding era, this technology appears to be associated with much smaller productive units, much more versatile equipment, and a labor force which is generally more highly skilled and better educated than the workers in older manufacturing facilities. The country which seems to have gone furthest in terms of development along these lines is Italy. But even the U.S. there are

signs that it is emerging in older industrial areas of New England, and the mid-Atlantic.

How should one interpret these new technological and organizational forms. In their origins, they are probably explicable in terms of the crisis itself. The characteristic of an economic crisis--all crisis, not this one in one in particular--is profound uncertainty; the loss of control over, and consequent fragmentation of, markets. Indeed, in Italy, the decentralization of industry actually began as a response to the confusion generated by the social (and in our terms institutional) crisis of the late 1960's which preceded the international world economic crises.

This shift toward a more flexible set of markets appears, in recent years, to have been greatly expedited by new developments in technology itself. Beyond a doubt, the most important of these developments has been in the application of computers.... But as there are others; the steel industry technology.... What is not clear is whether there is something inherent in the new technology which lends itself to this kind of flexibility or whether the particular climate in which it has developed--namely the climate of uncertainty generated by the world economic crises--has led a development of this particular aspect of the technology's potential. To answer that question, we need a much fuller theory of technology than that which we have developed in the context of this paper.

Supposing for the moment that, either because of something inherent in the new technology itself or because of the particular historical

moment in which it was introduced and its development pursued, we have reached a new era in which economic growth is no longer linked to the creation and expansion of mass markets: we are then presented with a second question: What might a regulatory structure based upon this new alternative look like? And in particular, can one envisage a structure of this kind coordinated by the market as neoclassical economists seem to envisage it? Again, this is a question which we will attempt to deal with in a subsequent paper. To briefly anticipate the answer; it seems unlikely. The reasons it is unlikely are twofold: First, on empirical grounds, the market does not appear to be playing this role in these parts of the economy where one can see this new fragmented market structure emerging. (Prices are possibly more flexible in these markets, but they do not serve to coordinate the allocation of resources). The second reason is theoretical: The competition in these sectors centers around the adaptability of the product to a specific use. Thus there is a tendency to attempt to overcome a cost disadvantage, not by reducing price, but by increasing the "efficiency" of the product in the use for which it is intended (i.e. by enhancing its quality) or by moving to a new market. Thus, in a sense, it is like mass production with respect to price: The mass production firm attempts to overcome competitive pressures by expanding (or stabilizing) the market; the specialty firm attempts to do this by finding a new position within existing markets. In both endeavors, it seems firms operate with mark-up pricing rules and depend as much as possible upon stability in the economic environment

outside the particular dimension (quantity for the mass producer, quality for the specialty producer) along which they are operating.

The above, however, really speaks to the question of micro-economic regulation. What about the macro-economic system. This is a much more complicated question. One can imagine a return to a kind of national Keynesianism under the new system. One might need to close the economy domestically in order to produce this. But it could also happen simply because national producers are in a better position to forecast their own markets than are foreign producers. The difficulty with envisaging such a system is that experience with small scale technology is limited to produce goods or high fashion luxury goods. This type of production has yet to enter into direct competition for mass consumer markets.

Meanwhile, what seems to be happening is that the new flexible production techniques are simply being drawn into the vortex of the world system. It is a system in which individual countries seem to be able to survive more or less well, but only at the expense of each other. How, in this light, might one evaluate the economic policy of the Reagan administration?

### C. The Reagan-Carter Competitive Solution

The announced thrust of the Reagan administration economic policy is the withdrawal of government and the restoration of the competitive market place as the governor of economic activity. This policy would in our terms make sense if one could envisage a resolution of the crisis in terms of a regulatory system built around a regime of flexible prices as

it is construed in neoclassical theory. This, as we have just seen, is extremely difficult to do. In terms of the types of regulation which it does seem possible to envisage, the policy basically amounts to a dismantling of a set of institutions, inherited from the old regulatory structure, in a way which will enable the mass production industries upon which that structure was built, to survive by competing more effectively in the world economy. Interpreted in this way, the essential thrust of the policy is not the restoration of competition, but the radification of the industrial relocation from the older urban areas of the North and Midwest, where the labor movement was strong and the political support for social legislation was based, to the South and Southwest, where labor is weak and social legislation relatively unpopular. Managers seem to believe that, in this atmosphere, they will be better able to adapt the technology which will enable them to compete with the Japanese and Europeans on world markets. This policy is being pursued in a way which implies the abandonment of the older industrial areas. The two aspects of the policy, it should be noted, are not inherently related. Alternative employments might be sought to replace the industries which are moving South: but, to do so it is necessary to sustain the infrastructure, something the older communities, given their declining tax base, are having great difficulty doing on their own.

American reindustrialization through a resurgence of our mass production industries on world marketing is not, as was made clear in the introduction, a solution to the world economic crisis. If successful, it

will at best transfer our own economic problems to our principle international competitors. Because these countries are also our principle political allies, we are not in a position to ignore the distress which would ensue. Thus, realistically, this economic policy makes sense only if combined with a policy for ensuring the expansion of the world economy at a pace which will absorb the combined output of the industrial world. Administration officials do not seem to have recognized this problem. Even if they recognized it, it is not clear that they are in a position either to impose or to negotiate the international order which would resolve it. Since most regulatory systems which are feasible to envisage conceptionally and to implement politically are built on precisely the Keynesian model which the administration in its pursuit of competition has abandoned, Reagan seems in fact to have precluded in advance any of the institutional structures which would resolve the problems.

Meanwhile, in abandoning the older industrial areas, the United States appears to be giving up the opportunity to actively pursue the potential available in the new flexible technology of small batch production. Elsewhere, these developments have occurred in the older established industrial urban centers. This appears to be no accident: the new technology requires the skilled labor force and entrepreneurial skills available in these areas but not ordinarily in new industrial centers. The network of small interdependent firms and the sophisticated sense of shifting markets upon which effective exploitation of the new



technology depends also seems to develop only in established, urban conglomerations. The older centers of industry may of course move in this direction without active governmental encouragement: indeed, in the Northwest and Mid-Atlantic areas, they seem already to have done so. But there is a very real question as to how long they can continue to buck the costs imposed by the deteriorating urban infrastructure. To the extent that the flexible technology developed in small batch production ultimately becomes dominant in mass production industries, the failure of the U.S. to keep pace in this area will ultimately handicap the industries toward which our economic policy seems best suited as well. Indeed, since some spillover of the technical advances in small scale production would seem inevitable, the total abandonment of this area which the Reagan policy taken in its face would imply cannot be optimal even in its own terms. If small scale technology and the diversification of final demand which it permits becomes the fulcrum of the new regulatory structure in our principle trading partners, of course, abandonment will turn out to have been a disaster.

The greatest risk to the implied development strategy of the Reagan administration, however, may well be social rather than economic. Industrialists tolerated the strong unions and elaborate social legislation of the New Deal in the period of postwar prosperity because they were basic to economic stability, but these institutions did not come into being for this reason. They arose because an industrial labor force, which in the early part of the century had been dominated by recent

immigrants, mostly from agricultural backgrounds, in the thirties come to be dominated by a second generation of settled, mature industrial workers. The parental generation had accepted a system which gave management unilateral control over wages and working conditions, but their children, with the prospect of permanent industrial labor and without any previous agricultural experience in terms of which industrial work might seem especially attractive, did not. The result was the sudden explosion first of political and then of economic organization which imposed the New Deal and industrial unionism. The industrial labor force, to which the Southern strategy of the mass production industries is turning is not an immigrant work force but it is composed of people drawn out of, and still rooted in, agricultural pursuits. In this sense, it is exactly like the immigrants at the turn of the century. As time proceeds, it too will come to be composed of a second generation, and one can then expect--perhaps just as suddenly as in the 1930's--a revival of militant industrial unionisms. If it is true--as the industrialists believe--that unionism is handicapping American mass production in international competition, they will have no choice but to go abroad. If, Southern industrial development is our only real industrial strategy, we will then have no industry left. Reagan's policy will have proved to be completely bankrupt in terms of all the paths potential in the current world economy.

All of this should be particularly disturbing, because the weaknesses of the current policy will not be apparent in the immediate future.

If our problems are rooted in a series of serious strategic errors in terms of long run development, they have certainly been aggravated by tactical errors in the choice of technology and design in the automobile and steel industries, that can be corrected simply by imitating our more successful competitors. The decisions to do so have in fact already been made. Their force will be enhanced by the short run effects of the Southern strategy and the increased bargaining strength with that strategy (along with a growing awareness of the foreign competitors) give to management in dealing with unions in the North. As a result, the next several years are likely to witness a resurgence of American mass production industries in our own markets and perhaps even abroad. This resurgence will have little to do with the policies of the Reagan administration, but to the extent the resurgence is attributed to those policies, and seems to affirm the Administrations' choices, it will,-- maybe more than anything else--contribute to the country's economic demise in the long run.

## FOOTNOTES

1. My introduction to this literature has been the work of Robert Boyer: Boyer & Mistral (1978); Boyer (1978); Boyer (1979); Boyer (1980) and Boyer (1981). The interpretation below differs from Boyer on two principle points. First, it introduces a specific hypothesis about the movement of the capitalist system through history. Boyer appears to be primarily concerned with characterizing different regulatory regimes. Second, the current crisis is understood in terms of a tension between the postwar regulatory institution and the system's historic trajectory. Boyer seems to view the crisis as the outgrowth of contradictions inherent in the regulatory institutions themselves. [See, esp., Boyer (1981)]. See also Aglietta, (1976).
2. It is on this particular point that I have departed from Boyer.
3. Leading examples of theories of this kind are Bowles and Gintis (1980) who are radicals or Marxists and Thurow (1980), which is essentially a liberal theory. A conservative version of the same argument is Bell (1976).
4. The characterization which follows is developed in Berger and Piore (1980) pp. 55-82, in an essay entitled, "The Technological Foundations of Dualism and Discontinuity."
5. Note the contrast between this view and that of Joseph Schumpater. In Schumpater's view, innovation is an act of individual will and courage. Inventions are made by man of uncommon insight and introduced by people of unusual determination. In the view developed above, innovations are generated by the historical evolution of the system: the elements of production are shifted in the evolutionary process (like the turning of a kalidascope) enabling us to "see" things in ways that were not previously possible. The individual innovator is thus not at all critical: if one person did not "discover" the innovation another surely would. The "stylized" fact of the innovative process highlighted in this view is simultaneous discovery.
6. Much of this argument is also anticipated in Berger and Piore, (1980) op cit.
7. Morris (1964).
8. Galbraith (1967): Galbraith later broadened this view to recognize a dual economy, but the relationship between the sectors as he views them is rather different than that hypothesized here. Galbraith (1972) pp. 179-214.
9. March and Simon (1958); Cyert and March (1963).
10. For example, Solow (1967).

11. Galenson (1960) and Cochran (1977).
12. Contrast with Bowles and Gintis (1980) p. 19ff.
13. I am indebted to my colleague Harry Katz who made me aware of this agreement and helped me to appreciate its significance.
14. Eg. Hicks (1963) pp. 316-319.
15. Piore (1979).
16. Ross (1948) and Dunlop (1957).
17. Steiber (1957).
18. Ross (1948).
19. Dunlop (1957).

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