2006

Workers, unions, and the globalization of production: Structural and institutional challenges for organized labor in the United States

Matthew Kohen
University of South Florida

Workers, Unions, and the Globalization of Production:

Structural and Institutional Challenges for Organized Labor in the United States

by

Matthew Kohen

A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
Department of Political Science
College of Arts and Sciences
University of South Florida

Major Professor: Michael M. Amen, Ph.D.
M. Scott Solomon, Ph.D.
Harry E. Vanden, Ph.D.

Date of Approval:
June 22, 2006

Keywords: social structures of accumulation, social relations of production, deunionization, political economy, post-Fordism

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

WORKERS, UNIONS, AND THE GLOBALIZATION OF PRODUCTION: STRUCTURAL AND INSTITUTIONAL CHALLENGES FOR ORGANIZED LABOR IN THE UNITED STATES

Matthew Kohen

ABSTRACT

In this thesis, I argue that the globalization of production has weakened the power and efficacy of labor unions in the United States. I describe the globalization of production as a set of transformations in both the institutional structure of the economy and in the organization of production, and discuss how these transformations have impacted workers and unions in the American economy. The theoretical framework I employ is the social structure of accumulation approach, which emphasizes the importance of the institutional structures of capitalist economies and how their interaction with forms of production organization and systems of labor control helps to determine levels of aggregate economic growth, the profit rates of individual firms, and the distribution of power, resources, and wealth among economic agents. I argue that the globalization of production involves the transition from the social structure of accumulation of segmentation to the globalized production social structure of accumulation, and the displacement of Fordist mass production by lean production as the dominant paradigm of production organization.

Lean production and the globalized production social structure of accumulation involve a transformation in the relationship between firms, workers, and the state. The

changing circumstances and economic conditions which these transformations have produced, and the failure of labor unions to understand, appreciate, and effectively respond to them, have been responsible for the rapid and sustained decline in the membership, power, and efficacy of organized labor in the United States. Through case studies on the automobile and clothing industries, I show how the way in which these transformations have materialized in the specific contexts of two industries with different competitive conditions, organizational structures, and levels of capital-intensity have produced very disparate and dissimilar outcomes for the workers in these industries.

I. INTRODUCTION: GLOBALIZATION, SOCIAL STRUCTURES AND THE AMERICAN ECONOMY

The impact of globalization on the American economy is a subject which has consumed both academic and public debate in the recent years. Economic globalization has been characterized by the liberalization of trade restrictions and capital controls, the increasingly transnational character of economic activity, and growing international competition in nearly every industry and sector of the economy. Concerns over the rising inequality in the distribution of income, the erosion of the domestic manufacturing base, the increasing permeability of national borders, the handcuffing of government regulatory instruments by global financial capital, the increasingly 'footloose' nature of capital and the outsourcing of domestic jobs to low-wage locations abroad, and the increasingly insecure, contingent, and flexible character of employment have been sounded against the constant assurances of pro-globalization politicians and economists that the free operation of market forces in a global economy will eventually work to the benefit of everyone. Others assert that there is no turning back, no alternative, and that the only way for the American economy to remain prosperous is more trade liberalization, the only way for American workers and businesses to survive is to adapt and compete in the global economy.

Whatever its desirability, globalization has had an enormous impact. Increasing levels of trade, investment, and migration have produced an extraordinary degree of global economic interdependence. National economies are becoming increasingly integrated into a single, unified global market, national borders are becoming increasingly irrelevant to the movement of goods, services, capital, and information, and workers in all countries now find themselves competing with one another to attract jobs and capital investments.

At the heart of economic globalization is the globalization of production. Trade liberalization has not produced a world in which separate national economies specialize in different products or industries and trade with one another, as the classical economic doctrine of comparative advantage would predict. Instead, led by multinational corporations (MNCs) and orchestrated through foreign direct investment (FDI), outsourcing, and subcontracting arrangements, production has shifted from an activity based in a national market and linked to other national markets through international trade, to a global activity based in the global market. Networks of production span national borders and draw workers in disparate regions of the globe into integrated systems of procurement, production, and distribution which flow above, beneath, outside, and around the various territorially-based national regulatory systems. The relationship among firms, states, and workers in the global economy has undergone a qualitative transformation as a result.

The consequences of the globalization of production have included the weakening of state regulatory powers, the erosion of workers' bargaining power, a dramatic decline in the strength and membership of labor unions, and growing income inequality. There is

growing consensus that *some* solution to these problems is desirable, but there is absolutely no sign of a consensus as to what that solution should be. Besides the problem of conflicting interests among different segments of society and parties in the debate, a major reason for the inability to address the negative consequences of the globalization of production has been a failure to adequately understand the phenomenon itself. There is serious disagreement over whether the problems associated with the globalization of production are the result of competition from producers in low-wage countries, the rapidly rising economic power of multinational corporations, the transition to a post-industrial American economy based on services and knowledge work rather than manufacturing, the increasing mobility of capital, or the absence of an effective international regulatory regime, to name just a few common explanations. In the absence of an adequate understanding of the nature of the problem, there can be no effective solution. This thesis is therefore an attempt to provide an enhanced understanding of the transformations occurring in the American economy, in order to facilitate a more constructive debate over possible solutions to the problems and challenges which have resulted from the globalization of production.

DESCRIPTION OF THEORETICAL FRAMEWORK AND RESEARCH PROJECT

My hypothesis is relatively simple: the globalization of production has weakened the power and efficacy of labor unions in the United States. My understanding of the globalization of production, however, is that it represents more than merely a geographical reconfiguration of economic activity. The globalization of production, rather, is symptomatic of changes in the organization of production as well as a larger transformation in the institutional structure of the American economy. I will argue that the operation of a capitalist economy is the result of the interaction among individual economic agents within a larger macro-institutional structure which regulates, delineates, influences and impinges upon the actions of these agents. The theoretical framework I shall employ is the *social structure of accumulation* approach. This approach emphasizes the importance of the institutional structures of capitalist economies and how their interaction with forms of production organization and systems of labor control helps to determine levels of aggregate economic growth, the profit rates of individual firms, and the distribution of power, resources, and wealth among economic agents (i.e. firms, workers, and the state). My basic argument is that the fate of individual agents within the system is tied to changes in the organization of production, which is related to the transformation of the macro-institutional structure of the economy. I will discuss this theoretical approach in greater depth in Chapter III. First, however, I will need to discuss the assumptions regarding power relations and the relationship between structure and agency which will underpin my analysis.

My understanding of the relationship between structure and agency is a *constructivist* one – that is, that social structures are the product of collective human

action and rely on continued collective action for their existence, and that individual actions reinforce and reproduce these structures just as these structures encourage and reinforce certain individual actions. While individual agents are relatively free to choose their own courses of action in pursuit of their goals, the nature of the social structures within which they act will play a large part in determining the likelihood of success of the various courses of action pursued by individual agents. Furthermore, as these structures change, evolve, or are transformed, different courses of action will prove to be the most appropriate and sensible. In other words, an action which generates success under one social structure may generate failure in the next. Therefore, while structures do not *determine* the behavior of individual agents, they construct incentives, assumptions, and expectations which pattern individual behavior by rewarding certain types of behavior rather than others.

Since social structures represent manifestations of collective human action, they are subject to change through collective human action. However, the ability of individual agents to bring about changes in the structure is limited, and determined by their position within the various systems of power relations of society. Although individual agents, no matter how powerful, rarely possess the ability to single-handedly transform the social structure, the degree to which an individual agent is able to produce or influence changes in the social structure is generally related to the amount of power possessed by that agent. Therefore, in times of transformation from one social structure to another, it is powerful agents – whether they be politicians, the heads of corporations, labor leaders, or influential members of civil society – which have the greatest ability to help determine what final form the new structure will take. Thus, when I speak of the "construction" or

"creation" of social structures, I generally am referring to the process by which social structures are formed through the interplay of different agents of varying degrees of power vying to realize a structure which will best serve their own (individual or collective) purposes. New social structures are "constructed" as (powerful) agents attempt to modify the conditions, terms or character of collective human interaction represented by the structure. As important as they are in shaping changes in social structures at the macro level of society, power relations are equally important at the micro level of individuals and organizations. In the specific case of the economy and the organization of production which I will explore, the property rights which give the owners of firms exclusive prerogative to organize their productive and human resources is an important source of power which places workers in a subordinate position in the employment relationship.

Related to this is the idea of historical contingency, to which I will make frequent reference. Since social structures play a part in determining the distribution of power and resources in a society, the transition from one social structure to the next is heavily influenced by the power relations fashioned by the former. The timing of a transformation is also important, since at different points in time different agents may have different degrees of influence within the social structure. Furthermore, the specific historical conditions in which the creation of a new social structure takes place plays an important role in determining the ultimate form the social structure will take. The creation of a social structure, therefore, is heavily influenced both by the system of power relations constituted under its predecessor and on the specific historical timing of its construction. Once constructed, however, it tends to have permanence until sufficient

inertia is acquired to generate the degree of collective action necessary to transform it, an event which generally comes about only during a period of crisis. The significance of the historical contingency of social structures is that they are neither inevitable nor purely accidental creations, but rather the product of the very specific historical conditions and systems of power relations in which they are formed.

In order to explore my hypothesis within this theoretical framework, I will undertake a qualitative analysis of changes taking place in the macro-institutional structure of the American economy and explore the relationship of these changes to transformations in the organization of production in two major industries – the automobile industry and the clothing industry. I will attempt to show exactly how transformations in the social structure of accumulation and the organization of production (which, taken together, represent what is referred to as the globalization of production) have been responsible for the decline of organized labor in the United States.

OUTLINE OF CHAPTERS

The following chapter will consist of a literature review which will provide an overview of the perspectives of various contemporary researchers regarding the importance and implications of the globalization of production, in order to situate my thesis within this larger body of work. I will discuss issues related to the study and measurement of the globalization of production, the relevance of the national economy as a unit of analysis, and transformations in the employment relationship, and also introduce various arguments regarding the implications of the globalization of production on organized labor and state regulation.

Chapter III will provide a detailed explanation of the theoretical framework which I will employ in this thesis, the social structure of accumulation approach to political economy. I will provide a brief overview and background of the social structure of accumulation approach, followed by my own synthesis of what I believe to be its most useful elements in order to provide a systematic explanation of the relationship between technological innovation, production organization, and social structures of accumulation.

Chapter IV will discuss the social structure of accumulation which was dominant in the American economy from the Second World War until the 1970s, under which organized labor became an important and powerful institution in United States. I will discuss the relationship between this social structure of accumulation, the Fordist mass production paradigm, and the evolution and institutionalization of the specific form of unionism which became dominant in the United States during this period. This will provide a historical background to the crisis of the 1970s and the decline of organized

labor in the decades since, as well as providing the basis for a comparative analysis between the former and current social structures of accumulation.

Chapter V will discuss the evolution of the current social structure of accumulation. I will describe the core institutions of this social structure of accumulation and discuss their construction and consolidation. I will also explore the changes in the organization of production which have coincided with the evolution of the new social structure of accumulation, and the implications of each for workers and unions in the American economy.

In Chapters VI and VII, I will present case studies to explore the impact of the globalization of production on two specific industries. Chapter VI will consist of a case study of the automobile industry. I will examine in much greater detail how the transition to a new social structure of accumulation has been manifested in changes in the organization of production in this industry, and how these changes are impacting workers and organized labor. Chapter VII will consist of a case study of the clothing industry, or the textile-apparel-retail commodity chain. These two industries provide contrasting examples of different organizational strategies being pursued in different industries characterized by different levels of technology- and capital-intensiveness, and the different implications for workers and unions in each.

In Chapter VIII I will offer a conclusion, in which I will offer a summary of my argument and findings. I will also include some remarks on the relevance of my thesis to public policy and union organizational strategies, as well as the larger debate around the importance and impact of the globalization of production.

II. Literature Review: The Globalization of Production and Relationships Between Firms, States, and Workers in the Economy

In this chapter I will review the literature on the effects of the globalization of production on the relationships among firms, states, and workers in the global economy. This will provide an overview of the various points of view held by contemporary researchers regarding the importance and implications of the globalization of production, and help to situate my thesis within this larger body of work. I will discuss some of the key characteristics of the globalization of production in order to discount the argument that globalization can be understood as simply a quantitative increase in levels of trade and economic interdependence. I will then discuss the changing spatial configuration of economic activity and whether the globalization of production has rendered the nation-state obsolete as a unit of analysis in the global economy. Next, I will describe the ways in which various authors claim the globalization of production has affected the employment relationship. Finally, I will discuss several arguments related to the impact of the globalization of production on labor unions and the regulatory apparatuses of states.

ESSENTIAL CHARACTERISTICS OF THE GLOBALIZATION OF PRODUCTION

The *globalization of production* refers to a process by which the production of goods and services has been transformed from a geographically concentrated activity to one which is fragmented and dispersed within and across national borders. Most of the authors reviewed agree that this represents a fundamental restructuring of the world economy. Factors responsible for the globalization of production are both political and technological, and include the liberalization of trade and investment controls as well as advancements in communication, transportation, and information technologies.

The globalization of production represents a qualitative shift in the nature of economic activity, from local production for local or national markets to global production networks serving global markets. It embodies a set of processes which seek to disembed production from national bases and construct an integrated global system of production. Globalized production therefore entails more than simply an increased level of international trade. Competition among the exports of territorially-bound firms for shares of national markets falls short of what is meant here. The globalization of production, rather, involves the operation of functionally integrated, geographically dispersed production networks oriented towards the global market.

A major force behind the globalization of production has been the multinational corporation (MNC). Rapid technological advances in communication and transportation systems over the past few decades have made the management of geographically dispersed production networks more and more feasible. According to Held *et al*, "MNCs have been at the forefront of those corporations exploiting new global infrastructures to organize international production within the firm itself," (1999: 255). Although difficult

to directly measure, levels of MNC participation in global production networks can be estimated using data on flows of foreign direct investment (FDI), sales of foreign affiliates, and levels of intrafirm trade (Held *et al* 1999: 246). Although MNCs play an important role in the globalization of production, many smaller firms are also highly integrated into global production networks. Small firms often participate in globalized production through subcontracting arrangements and joint ventures (Held *et al* 1999: 256).

International economists typically study *international* economic activity in terms of aggregate national data, such as levels of imports and exports, GDP and GDP per capita. When studying the globalization of production, or the *global* economy in which it is embedded, these statistics become wholly inadequate tools of analysis. For example, an ILO-sponsored study by Ajit K. Ghose (2003) sets out to assess the impact of globalization on jobs and incomes utilizing these sorts of indicators. Ghose defines globalization as "a process of integration of national markets into a global market," (2003: 5). The key operational variable used to measure globalization, however, is the increased two-way trade in manufactured goods between the developed and a set of developing countries (Ghose 2003). The data used are all aggregate national statistics, such as GDP, average wages, and manufacturing employment. The conclusions reached are predictably hollow: globalization has increased global manufacturing employment and output, decreased international inequality (in aggregate national terms), and increased overall labor productivity. This tells us nothing about the qualitative changes taking place in the organization of production and employment. Similarly, Davidson and Matusz (2004) construct a model to measure the affect of international trade on labor

markets, specifically job turnover rates. They find a correlation between trade and job turnover rates in affected industries, and recommend policies to compensate the "losers" from international trade in order to facilitate market adjustments. While a somewhat innovative and insightful attempt to measure the impacts of international trade on local and national labor markets, the authors' study is fairly useless for understanding the sort of qualitative changes brought on by economic globalization which I wish to address. The globalization of production is not only changing the quantitative composition of employment in different industries and sectors of the global economy, it is also changing in more profound ways the nature of employment in various industries, the internal structure of firms, the organization of inter-firm relationships, and the relationship between the state and the economy. I will therefore rely more on studies which address these sorts of qualitative transformations related to the globalization of production rather than simply analyses of its quantitative impact.

THE NATIONAL ECONOMY AND THE SPATIAL RECONFIGURATION OF PRODUCTION

Before attempting to understand the impact of the globalization of production on the American economy, the question must be asked as to whether there *is* such a thing as an 'American' economy any longer. National economies have long been understood as discrete units which were essentially greater than the sum of their parts, that somehow the national economy consisted of more than simply the aggregate total of economic activity that took place within its territory. This assumption is essential to the way in which the role between the state and the economy has been understood. If national economies are giving way to a single global economy, then the economic activity which takes place within the borders of a nation-state can not be studied outside of the context of its relation to the global economy, and the relationship between activities which take place in the same national territory but are not somewhat directly related becomes quite trivial.

Robert B. Reich (1992) makes a strong case for reevaluating the way we think about the national economy. According to Reich, most of the ideas which inhabit the popular imagination about the economic organization of the United States are outdated. Ideas such as national competitiveness, national corporations, and the national champion are leftovers from the mid-twentieth century, when Fordist mass production and Keynesian macroeconomic management were dominant. Under this (now defunct) system, the economy was dominated by large, bureaucratically managed, pyramid-shaped corporations. Unions were institutionalized, managing labor relations and keeping wages high for both union and non-union workers. The bureaucratic organization of enterprises provided opportunities for workers to advance up the corporate hierarchy, and guaranteed loyalty and job stability. National champions (spectacularly successful corporations)

provided a source of national pride, and the success of these companies was the success of the national economy.

Reich argues that while the idea of a national economy thus conceived was very much applicable to the United States in the decades following the second World War, it is rapidly becoming an anachronism. The newly emerging system of production has left behind the Fordist model of bureaucratically-managed mass production for what Reich calls "global webs" – flatter, more flexible production networks organized by a small creative management team whose primary function is coordination, control, and innovation (1992: 113). Whereas in the previous system the gains of one set of workers or sector of the economy would tend to be shared by the rest (as Reich argues that the collective bargaining of unions raised wages for all workers), in the new system, Reich identifies three types of workers whose fortunes in the new economy are separate and disparate. At the lower end will be the workers employed in "routine production services" and "in-person services." The welfare of these workers, Reich argues, will tend to decrease in the decades ahead. A third type of worker, the "symbolic analyst," will be the most important component of the global web. They will be highly paid, enjoy job security and satisfaction, and their skills will be the most valuable resource of the firms who employ them (1992; 174-78).

Reich's characterization of the emerging global economy and the flexible network enterprises which will dominate it leads him to conclude that the only way to increase the wealth of a nation's citizenry is to increase the value which these citizens contribute to the global economy. The nationality of firm ownership and the profits these firms generate will be less consequential for a nation than the value of the work performed by

its citizens within its territory. In other words, Reich believes that national economies in the sense of discrete, self-contained units are no more, and that national wealth is determined by the amount of value generated for the global economy within a nation's territory. The idea of shared prosperity and the national bargain is no more, and it is up to individual workers to succeed or fail in the global economy.

Thomas I. Palley (1998) is a bit more skeptical than Reich about the end of the national economy. Palley agrees that the shared prosperity of the post-war era has been abandoned, and that changes in the structure of the economy brought on by globalization and innovations in economic organization (lean production) have made the Keynesian policies which facilitated shared prosperity obsolete (1998: 195). For Palley, however, this was not an automatic or inevitable development, but rather a strategy pursued by firms seeking to reduce workers' bargaining power and thereby increase profits. These firms were aided by the ideology of neoclassical economists, who abandoned the Keynesian commitment to full employment in favor of an incessant pursuit of low inflation.

Palley invokes Schumpeter's concept of "creative destruction" to describe the process by which firms, inspired by the profit motive, innovate to reduce costs and increase profits. Firms will seek to increase profits by either attempting to cut into the market share of their rivals, or by transforming the labor-capital relationship, allowing them to change the proportion of revenue which is divided between profits and wages (1998: 17). The amount of wages workers are able to demand depends upon the relative bargaining power of firms and workers, which Palley argues is inherently tilted in favor of firms. Keynesian macroeconomic policies and a pro-union milieu had served to help

workers increase their bargaining power, but several factors have led to a definitive reduction in workers' bargaining power since the 1970s. The first is technological innovation, which allows firms to operate multiple facilities in distant locations. The second is the automation and the flexibilization of many production processes, which allow firms to hire less-skilled workers. The decline of trade unions and government policies oriented towards free trade are two further sources of reduced worker bargaining power (1998: 81-2). As a result, the shared prosperity of the post-war decades has been lost. Wages have declined and employment has become less secure, and profits have increased. The economy is growing more slowly, operating less efficiently, and generating greater inequality than in the past (1998: 49). While the ideology of neoclassical economics asserts that this is a natural process and one which cannot be reversed, Palley argues that policymakers must confront the changing economic landscape with new, more dynamic rules and regulations intended to restore the balance of power between firms and workers. Palley maintains that most of the negative effects attributed to natural processes of globalization and technological innovation are actually conscious actions by firms and economists with pro-firm biases to reduce the bargaining power of workers. Instead of abandoning the ideal of shared prosperity and the national economy, he believes that the proper policy approach can create an economic structure conducive to efficiency, full employment, high wages, high growth, and greater equality.

William I. Robinson (2001) provides a World-Systems Theory perspective for abandoning the idea of the national economy. Robinson's argument is that globalization has made the nation-state obsolete as a unit of analysis, and that development should no longer be conceived in national terms. Instead, he proposes that globalization has led to

uneven accumulation on a global scale, which has begun to create core, periphery, and intermediate social groups which are geographically dispersed and transnational in scale. In essence, Robinson argues that development has become deterritorialized by globalization, as the creation of a functionally integrated global economy has led to the distribution of the unequal rewards of capitalist production on the basis of participation and relative skill level rather than location (2001: 556). Robinson makes the point that the social element had always been the essence of development, and that this is only now more obvious as the dominance of the territorially-bounded nation-state system recedes and globalization reduces the importance of geographic location (2001: 557).

The idea that development has become deterritorialized and social groups increasingly transnational means that local labor markets are likely to become increasingly heterogeneous. Robinson claims that this represents a process of "polarized accumulation," in which affluent 'core' workers live alongside the super-exploited 'periphery' workers within the same region or nation, which represents a reversal of the historical tendency towards labor market homogenization (2001: 558). This is what Robinson means when he refers to an emerging global division of labor: a division based on social standing or skill level rather than geographic location (2001: 559). The implications are clear: if the global economy produces winners and losers in an increasingly deterritorialized, transnational fashion, the pursuit of national prosperity becomes less practical as a policy and increasingly ambiguous as a concept.

Manuel Castells (1996) argues that the emerging system of globalized production will create a "network society" in which networks and the nodes at which they intersect will form the central infrastructure. According to Castells, the "enduring architecture" of

economic geography will be dissolved into a "variable geometry" which will be impermanent and subject to constant flux and reorganization (1996: 145). Production will be divided hierarchically among producers of high value, producers of high volume, producers of raw materials, and redundant producers. These four types of production will tend to be geographically concentrated, but will not be coterminous with nation-states. They will instead be organized in networks and flows around the technological infrastructure of the global economy. Castells emphasizes the compression of time and space that will accompany globalization, and goes so far as to predict that the "space of places" which characterizes the organization of our society will be superseded by the "space of flows" of the network society (1999: 378). Networks are ideal for organizing a dynamic, rapidly innovating society, Castells argues, emphasizing that "networks are appropriate instruments for a capitalist economy based on innovation, globalization, and decentralized concentration…[and] for work, workers, and firms based on flexibility and adaptability," (1996: 471). Within this framework, the territorial division of labor and prosperity envisioned by Castells will be determined by the location of nodes within the networks of global production, and the position of these nodes within the hierarchy of production (with "high value" at the top and "redundant" production at the bottom).

EMPLOYMENT AND THE GLOBALIZATION OF PRODUCTION

In addition to this changing spatial configuration of production, the globalization of production is causing fundamental changes to take place in the employment relationship. Three general themes are reflected in the literature: a trend towards increased flexibility, a redefinition of how "value" is created in the production process, and, for some authors, a complete redefinition of work itself.

A major feature of the changing nature of employment within globalized production networks is the growing flexibilization, informalization, and feminization of labor (see for example Benería 2001, Gills 2002, Chen 2001, and Parker 2002). The increased flexibility of production has created a demand for an equally flexible workforce, represented by an increase in part-time, temporary, contract, seasonal, and otherwise contingent forms of employment in both developed and developing countries. There seems to be a fairly solid link between the fragmentation of production process and the increased use of some form of informal and contingent workers. According to Sayeed and Balakrishnan, "when firms disintegrate production within a country, they typically move production out of the 'formal' sector to the 'informal' sector," (2004: 108) They also note that firms are either "pushed" or "pulled" into subcontracting arrangements: either "pulled" by productivity gains which can be achieved by specialization, or "pushed" by increasing costs or competition, or the prospects of circumventing regulations. In either case, workers in the informal sector employed by the subcontractors of disintegrated firms will have lower wages, lower skill levels, worse working conditions, and less potential for organization than their counterparts in the formal sector (Sayeed and Balakrishnan 2004).

Lourdes Benería argues that the proliferation of informal employment has been caused by economic restructuring of firms at the micro-level, together with the processes of globalization and the ideology of neoliberalism at the macro-level (2001: 28). Benería identifies several reasons related to the micro-level reorganization of the firm which favor informal employment relationships. First is the downsizing of large firms and concomitant increase in subcontracting and outsourcing arrangements, which she argues has shifted large numbers of jobs from core firms to peripheral firms (2001: 29). Second is the reduction of the hierarchical levels of core firms, reducing the number of workers benefiting from the stability of the internal labor markets of these firms. Peripheral firms, to where jobs are being shifted, are characterized by more intense competition and therefore lower wages and less secure employment (2001: 30). Benería argues that the increasing informalization of employment has created more unstable employment, unemployment, income polarization, and a tendency for workers to be less happy at work and less loyal to their employers (2001: 31-32). Perhaps the most striking observation made by Benería is that the links between the informal and formal sectors of the economy are deepening. While the informal sector was once seen as a transitional component of developing economies, it is now being recognized as a functionally integrated part of the economy (2001: 37).

Arne L. Kalleberg (2003) argues that employers have sought to restructure their workforces in pursuit of two types of flexibility: functional and numerical. Functional flexibility refers to ability of workers to perform numerous tasks within the firm and therefore be redeployed where needed. Numerical flexibility refers to the ability of employers to adjust the size of their workforce with fluctuations in demand (2003: 154-

6). Kalleberg finds that while some workers in flexible work arrangements (especially those that emphasize functional flexibility and worker empowerment) are well-paid and have high-quality jobs, the pursuit of numerical flexibility by employers has led to decreased employment security for large numbers of workers and has increased income inequality in the workforce.

James Heintz (2003) explores variations in wages and employment within a global commodity chain framework. Heintz notes that Fordist mass production was based on the logic of a link between the expansion of production and the expansion of domestic consumer markets (2003: 3). In other words, output was expanded at the same time as workers' incomes were increased so that they could afford to buy the manufactures being produced, ensuring stable demand and profitability. Globalized production, which is based on paying low wages to workers in order to stay competitive in global consumer markets, breaks with this Fordist logic. Heintz argues that within global commodity chains, core firms such as merchandisers, retailers, or multinational producers are able to earn rents by differentiating their products or limiting competition (2003: 10). Competition is pushed down the commodity chain, and so subcontractors face intense competition and therefore low wages and profits. This prevents subcontractors and production workers from increasing their profits or wages through productivity enhancements, as the gains from these advancements move up the commodity chains towards the core firms, who either retain them as rent or pass them on to consumers in the form of lower prices (2003: 17).

The general tendency observed by most authors is not only a fall in the wages paid to most workers, but an increasing income polarization between production workers

and more "high-value" types of workers. Michael Wallace and David Brady, for example, believe that the institutionalization of technocratic forms of management will lead to polarization of workers into experts and non-experts, with the former being indispensable to their firms and enjoying stable employment, and the latter being considered disposable and contingent (2001: 121). Most agree that some new hierarchy of job types will emerge, the disagreement is mostly over what form it will take.

Reich argues that making a living in the "global web" will depend not on the ability to perform labor but on the possession of skills valued in the global market (1992: 264). As products become "international composites," nations will trade specialized problem-solving, problem-identifying, and brokerage services, which are combined with the "routine" goods and services to create value (1992: 113). Within Reich's hierarchy of workers (routine production, in-person service, and symbolic analysts), the symbolic analysts will be the only ones to be well compensated. Their position will be the most important in the global web, that of controlling and coordinating production networks, and identifying and solving problems creatively. Routine production and in-person service workers will be essentially disposable (1992: 174-6).

Castells (1996) also develops a hierarchical division of labor for the "network society" he envisions. High-value production in the network society will be based on *informationalism*, production systems organized "around the principles of maximizing knowledge-based productivity through the development and diffusion of information technologies, and by fulfilling the prerequisites for their utilization," (1996: 204). Key elements of the informational work process are innovation, organization and coordination, and flexibility. Castells divides this work process into three dimensions:

value-making, relation-making, and decision-making. Within all three dimensions, hierarchies emerge. Within value-making, for example, 'commanders' and 'researchers' occupy the highest positions, while 'operators' and the 'operated' occupy the lowest positions (1996: 244). Castells also observes the division of the labor force in the informational economy into a core and periphery, with the core representing Reich's symbolic analysts and the periphery representing a more or less disposable work force (1996: 272). Finally, Castells also predicts the gradual *individualization* of the labor process. Work will become increasingly decentralized and disaggregated (allowing each worker's performance to be evaluated and compensation to be determined individually), only to be later reintegrated through the networked production process (1996: 471). "Labor," writes Castells, "is disaggregated in its performance, fragmented in its organization, diversified in its existence, divided in its collective action," (475). This prediction, if accurate, would represent a massive transformation of the labor-capital relationship and the reevaluation of the role and potential of collective bargaining and organized labor.

Jeremy Rifkin (1995) sees increases in productivity generated by labor-saving technological advancements as the force driving the changes in the global economy. Essentially, corporations are able to produce more and more goods with a smaller number of workers as worker productivity increases. These productivity increases could be used to shorten the number of hours worked while producing the same output. Instead, a sort of prisoners' dilemma has begun to emerge: companies, facing declining profits and intense competition, develop labor-saving technologies and take advantage of the increased productivity of their workers to reduce their workforce. This results in a "race

to the bottom" where competing companies are pressured to do the same. This eventually leads to higher unemployment in the economy as a whole, which leads to lower aggregate demand and therefore lower profits. The lower profits then lead to further innovations in labor-saving technology (1995: 34-5). As a result, instead of productivity gains being translated into more leisure and shorter work-weeks, productivity gains have produced the perverse outcome of longer work-weeks and higher unemployment (1995: 41). The eventual result, according to Rifkin, will be a division of the workforce into an upper class of well-paid CEOs and knowledge workers, and a vastly larger, poorly paid working class whose work is stressful and insecure (1995: 173-80). For Rifkin, it is not the globalization of production *per se* which is to blame for the deterioration of wages and working conditions for large segments of the workforce, but the fact that corporate managers are allowed to control how productivity gains are put to use (1995: 227-8). These managers, who Rifkin argues are motivated by parochial and short-term interests, pursue strategies which produce immediate profits but have the potential to cause massive destabilizations in the long run, potentially resulting in a "clash between rising population pressures and falling job opportunities" in the near future (1995: 207).

IMPLICATIONS FOR LABOR UNIONS AND STATE REGULATION

The employment trends outlined above, which predict increasing flexibilization and informalization of employment as well as growing polarization between the best and worst paid groups of workers, bode poorly for the economic "social contracts" institutionalized in the twentieth century. The ability of unions to manage labor-capital relations, the willingness of firms to pay high enough wages to satisfy workers, and the ability and will of the state to regulate the economy, provide social insurance, and defuse class conflict will all be seriously weakened if these trends continue. Therefore the question of how the relationship between firms, workers, and states will be managed at the macroeconomic level in the near future is an important one.

Much has been written about the challenges facing labor unions as a result of the globalization of production. Two general strategies for confronting the globalization of production seem to have emerged: either re-localizing organized labor, or globalizing organized labor by joining together workers located at different geographical locations within the same firm, industry or commodity chain. The transformation of space and time which have facilitated the globalization of production are the key challenges which confront organized labor. According to Andrew Herod, "space is a crucial element of political struggle, and the ability of workers or of capitalists to shape the economic geography of capitalism in particular ways can significantly shape class conflicts," (2003: 515). One of the ways in which firms have used space as a tool in class conflict has been through the relocation or threat of relocation of parts of the production process to distant geographical locations. The challenge for workers, Herod claims, is to develop ways to "come together across space" by developing networks which link together workers in

different communities with common interests and causes (2001: 515). Alternatively, Herod writes, some workers may identify with more localized interests and therefore focus on "defending their particular spaces within the global economy" by challenging attempts by capital to relocate production (2001: 516). Mark Anner (2003) advocates an international union strategy of "triangulation." Triangulation refers to the use of alliances between plant unions or workers, NGOs and human rights organizations, and anti-sweatshop or pro-labor activists in developed countries to put pressure on core corporations in global commodity chains to improve working conditions in subcontracting firms. This strategy has achieved limited success in organizing apparel sweatshops in El Salvador (Anner 2003). Ronald L. Martin (2000) argues that attempts to organize labor transnationally are premature. Instead, Martin argues that the post-Fordist "regime of localized flexible accumulation" creates the potential for organized labor to abandon its national orientation and adopt a more localized approach which would allow it to revive its membership and influence (2000: 470-1). Gapasin and Bonacich (2002) argue that organized labor must either "move down" to the individual worker as the locus of unionization, or "move up" to organize entire sectors, industries, or production networks.

However, the changing spatial configuration of production may not be the primary source of organized labor's decline. Robert E. Baldwin (2003) uses a regression analysis to compare the decline of union membership in different industries to the effects of 'global forces' (measured by increasing import and export competition) and the geographical shift of employment on those industries. He finds only a modest relationship between the decline in union membership and these variables, suggesting

"deep fundamental sources, such as growing employer opposition, unfavorable legislative trends, and declining worker trust in union institutions," (2003: 66).

Piven and Cloward (2000) argue that while the many aspects of the relationship between firms, states, and workers have been transformed dramatically by the globalization of production, the fundamental power relationships remain the same. This means that workers (and states) do not need to redefine their relationship with firms, only to develop new strategies to reassert their demands (2000: 415). The authors claim that threats to relocate production have always been used by employers to extract concessions from workers, so this is not a new development associated with globalization. Piven and Cloward emphasize instead that what has changed is that capital and labor are becoming increasingly interdependent, raising prospects of new opportunities for workers to organize and challenge firms (2000: 420). The authors propose that extended production chains, just-in-time inventory systems, and single sourcing of parts make globalized production networks vulnerable to disruption, and that workers should exploit these vulnerabilities. At the same time, workers should reconstruct their solidarities to adapt to the increasing segmentation of the labor force, as well as beginning to organize transnationally. Piven and Cloward refer to these strategies as the "new worker repertoires" associated with the globalization of production (2000: 423-4).

Other observers argue that labor unions should reevaluate their role in society. Advocates of "social movement unionism" such as Kim Moody propose that the labor movement should be treated as a social movement. The underlying assumption of social movement unionism is that organized labor represents the strongest of society's oppressed and exploited groups, and as such it can be used to mobilize other, more

marginalized and less powerful groups. According to Moody, social movement unionism "multiplies its political and social power by reaching out to other sectors of the class, be they unions, neighborhood-based organizations, or other social movements. It fights for all the oppressed and enhances its own power by doing so," (Moody 1997: 5). Paul Johnston argues that labor movements should be understood as citizenship movements, as they all appeal to, rely upon, and seek to achieve the promise of citizenship. This implies a reorientation of labor's claims and strategies: "no longer is the fate of a particular bargaining unit at stake, but the status and future of a community," (Johnston 2002: 241). Johnston claims that unions should recognize that they are fighting for whole communities rather than just workers, with the simple fact that workers have lives outside the workplace which are deeply connected with the place in which they live. Accordingly, the most "dynamic and powerful labor movements in the world today take on issues of democracy, human rights, and social justice" in relation to society in general, not simply the employment relationship (Johnston 2002: 243).

What is the role of the state and how is it changing with the globalization of production? The literature reveals many perspectives on this question as well. While mainstream economists generally seek a minimal role for the state, many, such as Davidson and Matusz (2004), advocate some sort of program for states to facilitate market adjustments brought on by increasing trade and international competition. Reich (1992) argues that it is the responsibility of the state to maximize the value its citizens add to the global economy and the amount of high-value-added work performed within its territory. Karoly and Panis (2004) advance another common argument when they

emphasize that the shift to high-skilled employment will require increasing investments in training and education. These and other various proposals generally argue that as the globalization of production has increased the flexibility of employment and led to an increasing polarization of workers on the basis of skill levels, states must ensure that their citizens are well trained and highly educated so as to be able to attract to highly mobile capital investments.

James H. Mittelman (2000) assigns states a somewhat larger role in the global economy. The global division of labor and power, as Mittelman refers to it, represents an interplay of state power and neoliberal ideology as well as historic and cultural forces. The state can play a role in facilitating the reorganization of production and attracting investment, as the case of the East Asian newly industrialized economies (NIEs) illustrates (2000: 42). Furthermore, since the global division of labor and power is hierarchically structured, the state can influence where in this hierarchy its territory and citizens will fall, by encouraging the development of high-value domestic industries, for example (2000: 58). This view reflects the idea that globalized production, while deterritorialized, is still geographically embedded. As a consequence, the geographical location of different parts of the production process can influence the relative affluence of different states and their citizens.

Economist Michael Porter (1990) similarly maintains that "national prosperity is created" and can be encouraged with the proper state policies. Porter argues that the prosperity of a nation depends on the competitiveness of its industries, which depends on their ability to continuously increase productivity (1990: 77). Porter's "diamond of national advantage" identifies four key determinants of the competitiveness of a nation's

firms and industries. The first is factor conditions, such as skilled labor and infrastructure which firms can use to increase productivity. The second is demand conditions, the level of demand within a nation's home market. Third is the presence of related industries which can cooperate and form networks or "clusters" to take advantage of external economies of scale. The fourth and final determinant is the level of competition within the industry, since intense competition will induce firms to constantly innovate (1990: 78). Porter believes that state policies to ensure that each of the four points of the diamond encourage the creation of competitive national industries and firms will lead to national prosperity, whatever that is taken to mean.

Thomas I. Palley (1998) argues that states play a central role in determining the structure of the economy, and that this structure is what ultimately determines the relative prosperity of both firms and workers by altering their transaction costs, incentives, and especially their bargaining power. Palley explains that neoclassical economic ideology and its associated idea of "economic naturalism," which claims that market outcomes are inherently natural and that anything which interferes with the unimpeded function of markets produces distorted outcomes, actually disguises a pro-firm bias (1998: 36). The role of the state, according to Palley, is to structure the economy so as to level the playing field and increase workers' bargaining power in their relationships with firms, while also stimulating growth and providing incentives for firms to invest and innovate (1998: 102). Palley refers to this approach as "Structural Keynesianism," advocating that states play much the same role in the future as they played in the twentieth century, albeit with more adaptive and dynamic regulatory frameworks which are not made redundant and useless by firms' innovations (1998: 199-201).

While the ability of a state to regulate the economic activity which takes place within its borders has certainly been eroded, this does not mean that the national economy is obsolete as a unit of analysis. Instead, it demands a new understanding of what a national economy consists of. As long as nation-states are the dominant political entities in the global political system, they will be the primary unit responsible for fashioning and maintaining the institutional structure of the capitalist economy which exists within their borders. Convergence among these institutional structures is not evidence of their replacement by a single, global structure. While the differences between national economies may become more subtle than the plainly visible and easily measurable contrasts in national regulatory instruments which were characteristic of national economies for most of the twentieth century, they will remain important. Differences in legal frameworks concerning collective bargaining, corporate governance, investment, taxation, and property rights are but a few examples of differences in national institutional structures which influence (and will continue to influence) the character of different national economies within the global economy.

My argument, as stated in the introduction, is that the globalization of production is a symptom of transformations in both the organization of production within firms and the macro-institutional structure of the economy, and that these transformations warrant new understandings of the role and strategies of organized labor in the United States. The transformed institutional structure of the economy – which I will refer to as the social structure of accumulation – and a new paradigm of production organization work together to create a functional economic system consistent with the current level of

economic and technological development of the American (and global) economy. The transformation of the social structure of accumulation in response to changing economic, technological, and political conditions is not an unprecedented event in American economic history, but rather a regular occurrence in the development of capitalist economies. I will argue that in order for organized labor to regain its former power and relevance it must develop strategies appropriate to the realities of the new institutional and organizational realities of the economy. These new realities, however, do not entail the end of the national economy or the creation of a unitary global market with common institutions and regulations and a single global workforce. Nor do they represent the "end of work" or the transformation of the workforce into an individualized, empowered cadre of knowledge workers. In the following chapters, I will attempt to outline what I understand to be the most important changes taking place in the American economy, how they relate to technological and economic development, and their implications for workers and labor unions.

CHAPTER III. THEORETICAL FRAMEWORK: THE SOCIAL STRUCTURES OF ACCUMULATION APPROACH

I will attempt to explain the transformations associated with the globalization of production by employing the framework provided by the social structure of accumulation approach, as developed by Gordon, Reich, and Edwards (1982) and expanded by Kotz (1994), McDonough (1994), and Wallace and Brady (2001). The social structure of accumulation (SSA) approach argues that the institutional structures of capitalist economies are of central importance for understanding the processes and outcomes associated with economic activity in a capitalist system. The social structure of accumulation consists of those institutions which effect, regulate, or impinge upon the process of *accumulation* (investment, production, and exchange). These institutions are historically contingent, not consciously crafted but arising through the political interplay of various interests in periods of economic crises in an attempt to restore profitability and economic growth. I will provide a brief overview and background of the social structure of accumulation approach, followed by my own synthesis (and modest expansion) of what I believe to be its most useful elements.

Overview of the Social Structures of Accumulation Approach

The social structures of accumulation approach has its origins in the observation that capitalist economies tend to experience "long waves" of rapid growth followed by extended periods of crisis and stagnation. These long waves are separate from the comparatively mild and self-correcting business cycles, but supposedly just as regular, with each cycle of expansion or stagnation lasting roughly twenty-five years. The idea of long waves dates back to Kondratieff (1935) and Schumpeter (1939), both of whom identified long waves as being regular patterns of vigorous economic growth spurred on by endogenous factors internal to the capitalist economy – in Kondratieff's explanation, related to the replacement of durable capital goods; in Schumpeter's, driven by clusters of technological innovation which encourage investment.

Gordon, Reich and Edwards (1982) attempted to explain these alternating periods of expansion and contraction as being neither spontaneous nor endogenous to the capitalist economy, but rather as being related to the institutional structure in which the economy is situated. A constellation of institutions, which they refer to as the *social structure of accumulation*, create the enabling conditions for rapid capital accumulation, unleashing a flurry of investment and initiating a period of rapid economic growth, which they refer to as a long-swing expansion. However, according to Gordon, Reich and Edwards, each social structure of accumulation contains within it contradictions which eventually cause it to become a hindrance to accumulation (or at least fail to encourage and support accumulation as it had during the height of the period of expansion). The authors are vague on *why* contradictions must exist within each SSA that inevitably cause a crisis, offering only that barriers develop which prevent further rapid accumulation. In

fact, they argue that each social structure of accumulation, the purpose of which is to facilitate accumulation within a *specific level* of technical, economic, and organizational development, eventually either reaches the limits of the potential of the form of productive organization with which it is associated, or becomes a victim of its own success, unleashing forces which destabilize and undermine the SSA (1982:29). In either case, it ushers in a period of stagnation and crisis which provides the impetus for the creation of a new social structure of accumulation which will restore profitability and initiate a new period of expansion and prosperity. Once the institutions which constitute the new SSA are in place and "favorable conditions for accumulation have become institutionalized," a long-swing expansion is initiated and continues until the contradictions within that structure eventually initiate a new period of crisis (1982: 28). A key element of this argument is the historical contingency of each social structure of accumulation. They arise out of a period of crisis, and are the products of various attempts to overcome what are perceived to be the limits or shortcomings of the previous institutional structure of the economy. The perception among powerful agents of what was the cause the crisis which brought about the decay of the former social structure of accumulation is of critical importance in the construction of a new social structure of accumulation, as I will illustrate in the cases of the two SSAs discussed in Chapters IV and V.

Each social structure of accumulation experiences a period of exploration, a period of consolidation, and a period of decay. The period of exploration begins with the onset of the stagnation and crisis resulting from the decay of the previous SSA. As the forms of production organization which had been profitable under the previous system

begin to lose their potential and their weaknesses and limitations become apparent, firms and entrepreneurs experiment with new forms of labor management and production organization in order to overcome the growing problems of profitability plaguing the economy. The period of consolidation begins when the more successful of these new forms of labor management and production organization are integrated via new institutions into a social structure of accumulation, which creates the conditions for rapid accumulation and high rates of growth characteristic of long-swing expansions. Finally, the period of decay occurs once the ability of the consolidated social structure of accumulation to continuously promote high rates of profit and create attractive opportunities for investment within the prevailing system of labor management and production organization reaches the limits of its potential. This sends the economy into a period of stagnation and crisis, and the process of exploration associated with the next social structure of accumulation begins (Gordon, Reich and Edwards 1982: 10-11).

The economy of the United States has experienced three social structures of accumulation (and, I will argue, is currently in the consolidation period of a fourth). Table 1 provides a summary of the historical timing, organizing principles (see below), and the dominant systems of labor control of each. The period of consolidation of each SSA correlates with a period of prosperity, high rates of profit, and rapid economic growth, while the periods of decay and exploration correlate with periods of protracted stagnation or depression. This is the basic empirical evidence for the correlation between the consolidation of social structures of accumulation and long-swing expansions (for the

Table 1: Historical Timing of Social Structures of Accumulation

Social Structure of Accumulation	Initial Proletarianization	Homogenization	Segmentation
Period of Exploration	1820-mid-1840s	1873-late 1890s	World War I-World War II
Period of Consolidation	Mid-1840s-1873	Late 1890s-World War I	World War II-early 1970s
Period of Decay	1873-late 1890s	World War I-World War II	Early 1970s-Present
Dominant Control System	Simple Entrepreneurial	Technical	Bureaucratic
Organizing Principle		Concentrated Market Structure	Social Influence of World War II

Source: Compiled from Wallace and Brady (2001) and McDonough (1994).

evidence on the occurrence of long-swing expansions, see Gordon, Reich and Edwards 1982: 41-47).

Although fairly effective in its original form, the social structure of accumulation approach as elucidated by Gordon, Reich, and Edwards contains a few ambiguities and shortcomings which have been addressed and to some extent resolved by subsequent authors. David M. Kotz (1994) identified one major conceptual and empirical shortcoming of this approach, namely that the social structure of accumulation is presented as an integrated whole, while the specific institutions that make it up often undergo significant change, development, or modification during the period of long-swing expansion which the social structure of accumulation is supposed to have facilitated. Kotz identifies several institutions supposedly associated with social structures of accumulation underpinning long-swing expansions which were not effectively instituted until near the end of the expansion (1994: 61-4). How can these institutions act as an integrated whole if they follow different courses of evolution and development, or if some are not even created until the period of expansion is coming to

an end? Kotz resolves this problem by arguing that what is needed to create a social structure of accumulation and initiate a long-swing expansion is not the complete set of institutions which will eventually come to be associated with the SSA, but only the *core* set of institutions which will provide the bedrock for the larger institutional milieu. This core will consist of a small set of key institutions which represent the basic elements of a new social structure of accumulation, but which are subject to some degree of evolution, modification and adjustment as the social structure of accumulation becomes consolidated. Other institutions can be developed which supplement the core institutions, and the decay or modification of these institutions will not threaten the core or the SSA. But any crisis which disrupts or threatens the core institutions necessarily threatens the SSA as a whole, since these core institutions represent the unifying logic of the SSA which allows it to function as an integrated whole rather than simply as a transient grouping of separate institutions (1994: 65-7). Relying on this framework we can avoid the problems of attempting to identify every single institution which effects the accumulation process and having to determine in some arbitrary manner when the breakdown of a single institution represents the breakdown of an SSA. We must instead only identify those institutions which form the core of an SSA, and recognize that a crisis which causes a breakdown in one or several of these institutions will threaten a collapse of the SSA as a whole.

Terrence McDonough (1994) accepts Kotz' argument that SSAs are constructed around a core set of institutions, but argues that even this understanding does little to explain *how* each SSA comes to be constructed. The social structure of accumulation approach only explains *why* economies experience alternating phases of expansion and

crisis, and that the creation of an effective SSA is a prerequisite for launching a new period of expansion. Absent, however, is an explanation of how an SSA comes to be constructed during a period of crisis and whether this is a conscious or spontaneous process. Gordon, Reich and Edwards (1982) actually hint at a struggle among competing, alternative visions during each period of crisis, in which one faction wins out and becomes the new SSA, but historical evidence of such struggling visions does not exist. McDonough sets out to study the construction of previous SSAs in the United States in order to better understand how these complex institutional structures arise from the ashes of each period of crisis to initiate a new long-swing expansion. He finds that SSAs are not constructed by a coalition of interests consciously working together to resolve an economic crisis, but neither are they the spontaneous outcome of random events. McDonough argues, based on a historical analysis of two previous social structures of accumulation in American history, that SSAs are assembled more or less spontaneously but around a central *organizing principle* which has a pervasive influence during the period in which the SSA is constructed. This organizing principle refers to an extraordinary or especially significant experience, idea, or reality which assumes paramount importance in the process of constructing institutional solutions to the crisis caused by the decay of the previous social structure of accumulation. In the case of the homegenization SSA, which lasted from 1890 through the 1920s, the organizing principle was the more concentrated structure of industry and oligopolistic market structure. Around this powerful reality formed the core institutions of the new social structure of accumulation (1994: 113). In the construction of the segmentation SSA, McDonough finds the organizing principle to be the social experience of the war itself on both the

American public and powerful leaders of business and government, which had a pervasive influence on the construction of the institutions which would form the core of the postwar social structure of accumulation (1994: 115). McDonough argues that while social structure of accumulation theory is useful for studying and explaining long-swing expansions and crises, it contributes little for actually predicting *when* the next crisis will occur. Rather, if we accept the historical contingency of each period of crisis, we can attempt to identify the organizing principle which assumes predominance in the construction of the institutions which will form the core of the next social structure of accumulation. The duration of each period of crisis and expansion is dependent on a multitude of immeasurable factors and is of secondary importance once we understand how and why they occur.

Wallace and Brady (2001) generally accept the framework developed in Gordon, Reich and Edwards (1982), but argue that SSA theory should be reoriented to focus more heavily on the labor process and the dominant systems of labor control that characterize each social structure of accumulation. As Wallace and Brady emphasize, "a vital component of any social structure of accumulation is a system of labor control that is compatible with and facilitates profitability within the emerging SSA," (2001: 115). Their argument is essentially that systems of labor control are the link between the social structure of accumulation and the actual production process, and that without an appropriate system of labor control for organizing the labor process at the point of production the profits necessary to stimulate a long-swing expansion cannot be generated. While the focus on control systems places due emphasis on the struggle between labor and capital at the point of production, it simultaneously ignores the competitive

environment which makes it so vital for managers of firms to maintain control of the production process and continuously exert downward pressure labor costs. How competition is structured in the market is an important determinant of which control system will become dominant, and which strategies of labor to counter them have the best chance of success. Thus I believe we must examine the control systems used by management within a larger context of the organizational paradigms which predominate under each SSA, and the particular market structure which gives rise to them.

I will argue that each of these authors provides important insights for understanding social structures of accumulation and the alternating periods of expansion and crisis which characterize the development of the capitalist economy. In what follows, I will offer a synthesis which incorporates these insights into a systematic framework for understanding the transformation from one social structure of accumulation to another, and what implications such a transformation has on the labor-capital relationship.

ORGANIZATIONAL PARADIGMS AND THE TECHNOLOGICAL BASE OF THE ECONOMY

While there is some evidence for the existence of long-swing expansions in capitalist economies, it can be said with much greater certainty that there exist separate, discrete epochs or stages of capitalist development. These epochs are characterized by particular macro-institutional structures which are compatible with, supportive of, and designed to maximize the potential of the particular organizational paradigm existing in the economy at that period of time. These stages of capitalist development, separated by protracted periods of stagnation and crisis, are what are captured by and what constitute the explanatory power of the social structure of accumulation approach to political economy.

I follow Wallace and Brady (2001) in paying particular attention to the changes which take place at the point of production during the transition from one social structure of accumulation to the next. I am less concerned, however, with the dominant control systems which are developed to regulate the labor process, and more with the broader forms of production organization which come to be associated with each social structure of accumulation. These forms of production organization, which Robert Cox (1987) refers to as the "technical and human organization of the production process," coalesce into dominant paradigms due to the competitive pressures of the market, which causes the more successful to diffuse and the less successful to disappear. Organizational paradigms structure the relationship between labor and capital, and can be categorized into ideal types and comparatively analyzed. They represent not simply control systems used to deploy and monitor labor (although control systems are an important element), but more generally the manner in which firms combine raw materials, capital, and human labor in

the production process in order to create a *commodity* (that is, something produced for sale in the market). These organizational paradigms form an essential link between the technological and material base of an economy and its macro-institutional structure. In other words, the organization of the production process represents the way in which *means* of production (capital and infrastructure and the technology embedded in them) are transformed by individual capitalist enterprises into *relations* of production (the social structure of the economy). These relations of production produce the classes and various narrow economic interests whose fortunes are impacted by the distributional consequences of the social structure of accumulation. Thus the historical contingency of each social structure of accumulation becomes apparent: Each social structure of accumulation interacts with a particular organizational paradigm to produce a certain distribution of wealth and power in the economy. Once the economy enters into a period of crisis, the political struggle to construct a new SSA is shaped by the interests, power relations, and experiences which were fashioned by the former.

Perhaps even more importantly, the point of production represents the center of the accumulation process. If the purpose of an SSA is to promote vigorous capital accumulation, it is implicit that this must manifest itself in how the macro-institutional environment interacts with the actual production process. It is therefore of primary importance to study how these organizational paradigms interact with the social structures of accumulation to produce periods of robust economic growth and expansion, and conversely how these arrangements eventually reach the limits of their potential and break down, producing a protracted period of economic stagnation and crisis. Focusing only on control systems or the organization of the labor process (narrowly understood)

misses, I believe, important components of the production process which occur outside of confines the shop floor. In order to obtain a more complete picture of the production process, I will focus on transformations in the organization of production at the level of the *commodity chain* as well as at the level of the point of production. Commodity chains represent the flows of value in the production process, from the extraction of raw materials to the consumption of the final product. These flows of value can span across vast geographical distances and involve a number of separate individual firms, coordinated by a production system which "links the economic activities of firms to technological and organizational networks that permit companies to develop, manufacture, and distribute specific commodities," (Gereffi 1994: 96). Focusing on the commodity chain level allows for an analysis of changes in competitive pressures, inter-firm relationships, supply chains, and other various outside the narrow confines of the production process.

Technology plays a central role in social structures of accumulation and their ability to produce periods of prosperity, growth and expansion. The level of technological development of the means of production is a crucial determinant of which organizational paradigm will be most successful in the market. It is also an important form of "feedback loop" between the social structure and the material foundation of society. In order to understand why, it is necessary to make a few points about technology and its role in the production process.

An organizational paradigm is simply a particular way of combining human labor and capital in the production of a commodity. As the level of technology embedded in the capital machinery and infrastructure progresses, the organizational paradigm which

will prove to be the most productive or profitable (and therefore most successful in a capitalist economy) changes as well. Technological innovations, however, do not occur in a gradual, evolutionary manner; nor do they take place outside of the social and power relations of the society which produces them. I will make three points about technology which are necessary for understanding its place in relation to the social structure of accumulation.

First, technology plays an important role in determining the structure of the production process and the nature of the relationship between those who control the system of production (employers) and those who participate in it (workers). The level and character of the technology embodied in the capital will play a part in determining the optimal social arrangement of the labor process. Although the ultimate distribution of power in the system of production is socially determined, for example in laws regarding the property rights of owners of capital, different levels of technology will influence whether it is more efficient and productive to employ workers who are more-skilled or less-skilled, whether control should be more horizontal or more hierarchical, whether workers should be allowed some discretion in their jobs or follow explicit orders, and so on. As Robert Cox describes it, "the transition from a workshop in which a variety of skilled craftsmen work together cooperatively, to an assembly line in which fragmented tasks are coordinated in a continuous process, to an automated factory, is a transition between three different structures of control over work," (1987: 20). The assembly line enables goods to be mass produced much more efficiently and at a much lower cost than is possible with craft production, but it also transforms the social organization of the production process, from one in which skilled craftsmen exercise discretion and expertise

to one in which semiskilled operators perform repetitive, manual operations at a pace determined by management and regulated by a machine. It is important to keep in mind that the consequences of new technologies on the social organization of production are not neutral, but benefit some at the expense of others.

Second, then, is the point that technological innovations do not take place independent of the power relations which constitute society. This is especially true of innovations with economic applications. Again, Robert Cox makes this point quite succinctly when he writes that "technology is the means of solving the practical problems of societies, but what problems are to be solved and which kinds of solutions are acceptable are determined by those who hold social power," (1987: 21). If we accept that technological innovations effect the distribution of power in the production process, it logically follows that those innovations which best serve the interests of those in a position to implement them will be most likely to be adopted, all else equal. Investment in research and development for new production technology will be likely to flow towards those innovations which enhance, or at least do not upset, the prevailing balance of power in the relations of production. Indeed: "Social control, not the invention of new and bigger machinery, began the movement to factories. Machinery appropriate to the scale of production followed," (Cox 1987: 21). The key point is that technology serves a social function as well as an economic function, and its implementation is subject to considerations of power and control as well as efficiency and productivity.

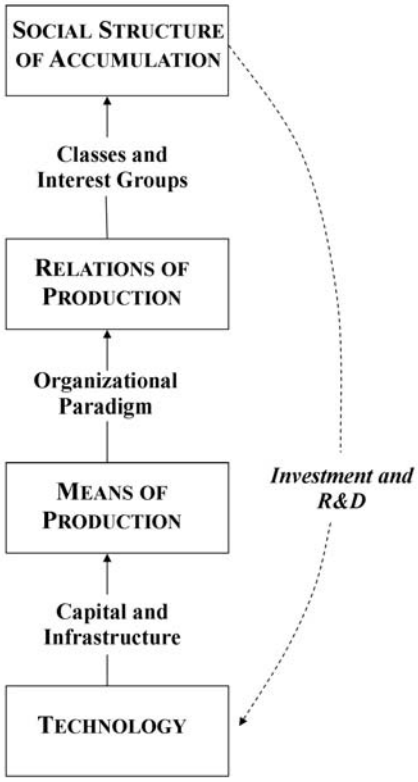
Finally, it is important to recognize that technological development does not proceed in a linear fashion, but rather occurs in a series of discontinuous paradigms (Atkinson 2004). A brief illustration will help make this process clear. A paradigmatic

breakthrough, such as the invention of the steam engine, occurs which has the potential to transform the organization of production and the economy. Around this epoch-making invention, countless innovations and refinements are directed which develop it and perfect it until no further refinements are possible or practical. At the same time, these technologies diffuse to more and more industries and firms, resulting in growing productivity throughout the economy. Eventually, there are no more possibilities for significant improvements on the existing system of technology and there are no new areas of the economy into which for it to diffuse, and therefore it is no longer able to produce steady increases in productivity. Eventually, however, another epoch-making invention, such as the electric motor, is developed which overcomes the limitations of the former and allows for a new wave of incremental innovations and refinements and another techno-economic paradigm is born. Productivity takes off once again as the new technological system is developed and refined and diffuses through the economy (Atkinson 2004: 147). The discontinuous nature of this process is important for understanding the alternating periods of expansion and crisis in capitalist economies.

The level of technological development, therefore, is a key determinant of the types of organizational paradigms employed by firms, but technological development is also influenced to a significant extent by the relations of production already existing in the economy. This is essential for understanding the historical contingency of technological and economic development: the problems of one epoch prompt solutions – developed within the context of the social structure of the economy and the dominant form of production organization – which eventually become the basis of the dominant system in the following epoch. While there are always multiple potential paths of

development and these transformations are ultimately the product of the creative energies of individuals, the specific path of development which is ultimately followed helps determine which potential paths of development are available to subsequent generations, through both the material conditions and systems of power relations it generates as well as the experiences, ideas, and cultural manifestations it engenders in the society. A graphical illustration of the relationship between technology, capital, the organization of production, and social structures of accumulation is provided in Figure 1.

Figure 1: Technology, Production Organization and Social Structures of Accumulation



RELATIONSHIP BETWEEN TECHNOLOGY, ORGANIZATIONAL PARADIGMS, AND SSAS

Institutions shape the accumulation process in countless ways. The market economy itself is a social institution. In order to operate, a market economy requires at the very least laws protecting private property and guaranteeing the enforcement of contracts, as well as a monetary system. In addition to these minimal institutions, however, markets are embedded in societies which have, over the course of capitalist development, erected various institutions which go further and actually structure the operation of the economy and the accumulation process. It is safe to say that all capitalist economies, as well as the *global* economy, contain institutions which directly affect, constrain, or regulate the decisions of capitalist enterprises and shape the choices they make regarding investment and production. Institutions facilitate accumulation by reducing uncertainty and supplying critical expectations and assumptions about the behavior of economic agents, which enable individual firms and entrepreneurs to engage in long-term planning and make investments based on reasonable and informed understandings of the operation of the economy.

Some institutions contain explicit provisions dealing with specific areas of economic activity, such as labor laws. Others are more implicit ideological or moral values which prejudice attitudes towards different participants or different sorts of economic activities; some societies exalt the workers, others the entrepreneurs who create jobs; some societies exalt small business owners, others celebrate the giant "national champion" corporations that dominate the economy. Some of the basic economic issues determined by institutions include: (1) What is ideologically or morally acceptable: *Which is more important, the rights of labor or the property rights of business owners?*

Whose well-being is most important to the economy, the average worker or the average investor/entrepreneur? (2) What types of economic relationships are legally permissible: *Indentured servitude, slavery, wage labor? Inter-firm cooperation? Monopolies, trusts, or cartels?* (3) What types of economic activities are legally permissible: *Are there prohibitions on certain types of transactions?* (4) How is investment organized: *Incorporation? Availability of financial capital and debt financing? Legal protections against bankruptcy and bad investments?* (5) Who are the legitimate stakeholders in business decisions: *Workers and unions? The state? Communities? Shareholders? Suppliers, customers, and consumers?* These are some of the important areas in which institutions impinge upon the accumulation process. Institutions affect where an entrepreneur can acquire the start-up capital to fund a business venture, how expensive labor will be and on what terms labor and management will deal with one another, where the final product can be sold and to whom, and how much of what part of the proceeds will be taxable. A social structure of accumulation represents a functionally integrated set of institutions which addresses these and other important issues in a way which provides a favorable climate for investment and encourages robust economic growth.

SSAs promote economic prosperity by maximizing the effectiveness of a specific organization of production associated with a prevailing techno-economic paradigm. This means that not only are social structures of accumulation historically contingent, they are also associated with a specific level of technological and economic development. As technology evolves, new paradigms make more productive and more (potentially) profitable forms of production organization possible, but these are to one degree or another hampered by the existing SSA (or at least unabetted by it). For an illustration of

this, the postwar SSA, segmentation, provides a useful example. The postwar SSA (1945-1970s) was constructed upon an economy oriented towards corporate mass production, operating within an electro-mechanical technological paradigm (Atkinson 2004). This sort of technological and organizational paradigm operated most efficiently when large economies of scale could be achieved, producing standardized products with special-purpose machinery. This entailed large investments in capital machinery and the employment of a large, semiskilled industrial workforce. Furthermore, it required a large and stable market for manufactured goods in order to recoup the massive start-up, engineering, and research and development costs necessary to remain competitive and profitable. Within this sort of economic environment, the institutions of the postwar SSA provided the conditions for rapid accumulation and robust growth. Keynesian demand management and the labor-capital accord provided for rising wages and income security, and therefore a healthy market for mass produced goods. An oligopolistic market structure in the core mass production industries such as automobiles limited the extent of destructive cost and price competition, and therefore justified huge investments which could take many years to pay off. Finally, American dominance in the international economy limited the extent of foreign competition. The decay of the postwar SSA began once the era of corporate mass production started to wane, as mass markets grew saturated, increased competitive pressures and the eroding position of American industry demanded more flexibility and improved quality, consumer tastes became more differentiated, and – critically – technology began to become available which was capable of satisfying these demands. This prompted a decay of the postwar SSA and began the exploration period of a new SSA, more appropriate to the realities of the

economic environment and exploiting the possibilities of a new digital technological paradigm. In the following two chapters I will deal in detail with the transition from the postwar segmentation SSA to the current SSA, which I term *globalized production*.

SOCIAL STRUCTURES OF ACCUMULATION AND ORGANIZED LABOR

I will conclude this chapter by briefly summarizing the essential elements of the social structure of accumulation approach as outlined above, and then offering an explanation of how SSAs impact the labor-capital relationship and collective bargaining, which is the focus of this paper.

A social structure of accumulation is necessary for the healthy functioning of a capitalist economy. Whether or not SSAs produce long-swing expansions is unclear and muddled by problems of definition, measurement and sample size, but it *is* clear that the breakdown of an SSA is a prelude to a protracted period of crisis, and that the consolidation of a new SSA is necessary to restore the conditions for stable growth and accumulation. Whether these periods of healthy growth constitute long-swing expansions is tangential to the fact that the consolidation and decay of social structures of accumulation delineate successive stages of capitalist development.

An SSA consists of a functionally integrated set of core institutions whose existence and effectiveness is essential for its operation, as well as a constellation of various supplemental or peripheral institutions which assist but are not vital to the SSA.

SSAs are formed during periods of economic crisis, assembled around a central *organizing principle* which shapes and guides efforts to construct institutional solutions to the economic crisis. Although the formation of a social structure of accumulation is not a consciously managed political project, the overwhelming influence of the organizing principle may give the appearance of a political project.

Finally, SSAs facilitate the healthy operation of the economy by promoting *accumulation*. They do this by providing the conditions for maximum effectiveness of

the prevailing (or emerging) techno-economic and organizational paradigms. As these techno-economic and organizational paradigms reach the limits of their potential for increasing productivity, accumulation slows down and the economy begins to stagnate. The period of crisis which emerges prompts the exploration of new technologies, forms of production organization, and eventually the institutions which will be consolidated into a successive social structure of accumulation. Figure 2 shows the progression through four successive social structures of accumulation in U.S. history and the different technological and organizational paradigms associated with each. Note that the *segmentation* and *globalized production* SSAs and their associated features, described in the right half of Figure 2, will be the subjects of Chapters IV and V, respectively.

Figure 2: Social Structures of Accumulation and Associated Control Systems, Ideologies, Organizing Principles, Forms of Production Organization, and Techno-Economic Paradigms in U.S. History

1800 1810 1820 1830 1840 1850 1860 1870 1880 1890 1900 1910 1920 1930 1940 1950 1960 1970 1980 1990 2000				
Social Structure of Accumulation	Initial Proletarianization	Homogenization	Segmentation	Globalized Production
Dominant Control System	Simple Entrepreneurial	Technical	Bureaucratic	Technocratic
Dominant Political-Economic Ideology	Laissez-Faire	Social Darwinism	Keynesianism	Neoliberalism
Organizing Principle		Concentrated Structure of Markets	Social Influence Of WWII	Competition-Induced Flexibility
Dominant Form of Production Organization	Mercantile/ Craft	Factory-based Industrial	Corporate Mass Production	Entrepreneurial Knowledge-Based
Techno-Economic Paradigm	Craft/Artisanal	Metals and Machines	Electro-Mechanical	Digital

Source: Compiled from Wallace and Brady (2001), McDonough (1994), and Atkinson (2004).

Social structures of accumulation affect organized labor in several important ways. SSAs influence the organization of the production process as well as determining macro-level relationships between labor and capital and the structure of labor markets. I will make several general conceptual points regarding the role of SSAs in the labor-capital relationship.

The first point is that firms have a *proactive* role in organizing the production process, while labor generally has a *reactive* role. The property rights of owners of capital bestow them with the discretion to organize production as they see fit, within a set of legal and technical constraints. Firms seek to maximize the revenue generated through the production process in a variety of ways; they also seek to maximize the *share* of revenue (profit) which accrues to the owners of the firm and its shareholders – it is this second motive which gives the relationship between capital and labor its antagonistic character. Labor's position in the production process occupies a reactive role, seeking to improve its lot (in terms of working conditions, control, share of revenue, etc.) within the general organizational system determined by the owners of capital.

Since each social structure of accumulation is biased towards a certain form of production organization (as described above), the SSA plays a role in determining the character of the relationship between workers and their employers. An SSA may encourage an organizational paradigm in which workers can demand and obtain a large share of revenue and exert a substantial degree of control over the production process; conversely, an SSA may encourage an organizational paradigm in which workers are unskilled, dispersed, and disposable and unable to command a large share of revenue or

exert any control over the production process. Every organizational paradigm has distributional consequences (in terms of bargaining power, control, and resources) which may be more or less favorable to workers, and in which it may be more or less difficult for workers to organize and engage in collective bargaining.

Similarly, SSAs may be more or less conducive to collective bargaining at the macro level. An SSA which enhances workers' bargaining power via a low rate of unemployment, a generous social safety net, or extensive legal protections for workers and unions will result in better prospects for organized labor than one which does less to protect workers financially and legally. The ideological or moral predisposition towards labor organizations is important in this respect, as can be observed in the changing attitudes towards organized labor in different periods in American history (see Zieger and Gall 2002).

Finally, the specific strategies by which labor is able to confront capital and improve its economic and social position are particular to each SSA. The strategies utilized by organized labor must, in order to be effective, be appropriate or consistent with the economic and institutional milieu created by the SSA, and therefore the transition from one SSA to the next will require new strategies and forms of organization by labor just as it requires new forms of production organization by firms.

The theoretical approach elaborated in this chapter will provide a framework for understanding the transformations taking place in the American economy, and how these transformations are affecting organized labor. In the following two chapters, I will examine the transition from the segmentation SSA, which began to decay in the 1970s, to

the globalized production SSA which began a period of exploration at the same time and is now entering a period of consolidation. I will pay special attention to the relationship between changes in the core institutions and changes in the organization of production. I will also emphasize the importance of these changes on the strategies and general fortunes of organized labor under each social structure of accumulation.

CHAPTER IV. FROM SEGMENTATION TO GLOBALIZED PRODUCTION: THE RISE AND FALL OF THE POSTWAR SSA AND THE CAPITAL-LABOR ACCORD

Understanding the current plight of organized labor in the United States requires an understanding of the postwar social structure of accumulation of segmentation, under which organized labor became an important and powerful institution in the American economy. During this SSA, which was in its period of consolidation approximately from 1945 to the early 1970s, many of the strategies, institutions, and legal precedents related to collective bargaining were established and consolidated. The institutions of the segmentation SSA, both at the macro level of the regulatory apparatuses of the state and the micro level of production organization, had a profound influence on the historical development of organized labor. The social structure of accumulation constitutes the institutional milieu in which the struggle between labor and the owners of capital is played out. Organized labor reached its zenith during the segmentation SSA; understanding the decay of this social structure of accumulation can therefore do much to improve our understanding of the rapid decline in the position of organized labor as the institutions which underpinned segmentation were eroded and replaced with those which would come to be consolidated into its successor.

In this chapter I will discuss each of the core institutions of the segmentation SSA, with a specific emphasis on how they complemented the Fordist mass production

paradigm. I will also describe in detail how Fordist mass production and segmentation helped to construct the adversarial, contractual, job-control form of unionism which characterized the capital-labor accord and shaped the institutionalization of organized labor in the United States. Finally, I will discuss the decay of the segmentation SSA and explain how the protracted crisis which resulted contributed to the creation of the globalized production social structure of accumulation. I will emphasize the importance of the experience of the Second World War on each of the core institutions of the segmentation SSA, especially with regards to Keynesian macroeconomic management and the institutionalization of organized labor. This will emphasize the historical contingency of this social structure of accumulation and the policies and institutions it produced.

THE SECOND WORLD WAR AND THE CONSOLIDATION OF SEGMENTATION

McDonough (1994) identifies the social influence of World War II as the organizing principle of the segmentation SSA. The war indeed had a pervasive influence on all of the institutions which would form the core of the new social structure of accumulation. These core institutions were: the conservative Keynesian state; U.S. international dominance; the limited capital-labor accord; the Democratic coalition; and Cold War ideology (McDonough 1994: 115-23). As the homogenization SSA (ca. 1890s-1920s) began to decay and ushered in the period of crisis known as the Great Depression, the period of exploration of a new SSA began. In the 1930s we can observe many of the institutions which would eventually constitute the core of the segmentation SSA developing and in some cases becoming dominant. But it is not until the culmination of the Second World War that we see these institutions become consolidated into a functionally integrated social structure of accumulation. It was the experience of the war and the great mobilization of will and resources which is responsible for this.

The organizational paradigm upon which segmentation was founded was corporate mass production, or Fordism. The essence of mass production is the manufacturing of large quantities of standardized goods through the use of specialized machinery and large numbers of semi-skilled workers. Large production runs, specialized machinery and a minute division of labor allows for substantial economies of scale and therefore the production of large quantities of relatively low-priced goods. However, since the quantity of goods which must be produced in order to achieve the economies of scale capable of producing widely affordable goods is generally very high, mass production necessitates mass consumption. In addition, the necessary investment in

plant and equipment (not to mention engineering, research and development) requires substantial start-up capital and a long-term planning horizon. This system entailed quite a different sort of market pressure and competitive environment than an economy based on smaller-scale production for local markets. In the latter, the costs of inputs and price levels for final products are the major motivators of changes in output; in the former, the ability of the market to effectively demand large enough quantities of a product is the key determinant of investment. As Piore and Sabel explain, "individual productive units became so large relative to the total market that the propensity to invest in manufacturing plants was determined by the prospective level of capacity utilization, rather than by the cost of inputs," (1984: 76). The economies of scale of mass production create a barrier to entry which retards the ability of competition to stabilize the economy and harmonize the levels of supply and demand for a product; producers cannot simply drop in and out of a market with every fluctuation in price and demand.

Absent the supply-adjusting pressures of more competitive markets, in a mass production economy the large corporation provides a similarly stabilizing role, smoothing out fluctuations in demand by adjusting capacity utilization and enabling longer-term forecasting and planning (Piore and Sabel 1984: 77). Mark Rupert relates the development of the mass production system to the development of the hierarchic, bureaucratic corporate enterprise for controlling production and large-scale marketing for stimulating demand for the product. "Modern corporate capital – in the form of the multidivisional, soon also multinational, firm – emerged in large measure as a response to these twin organizational imperatives of orchestrating and making more predictable both the production and sale of huge volumes of standardized commodities," (Rupert 1995:

66-7). The bureaucratic corporate system of ownership and management is therefore a direct consequence of the technical development of the mass production system. The evolution and diffusion of mass production coincided with the development of bureaucratic organization, professional management, and giant, vertically-integrated enterprises which sought to reduce uncertainty by replacing arms-length market transactions with direct control of large portions of the supply chain. The eventual result was an oligopolistic market structure in the core mass production industries. The imperatives of planning, control, and coordination which mass production made central helped to shape the development of the corporate system of ownership and management. In turn, the need to facilitate planning, control, and coordination would also be reflected in the institutions of the segmentation SSA.

Fordist mass production, thus, demands a particular set of macroeconomic conditions in order to ensure its optimal and efficient operation. The primary requirement is a high level of aggregate demand. Long-term stability and managerial control, which facilitate planning, are requirements as well. Each of the core institutions of the segmentation SSA supported the operation and expansion of the mass production economy. In what follows, I will discuss the role of each of the core institutions identified by McDonough (1994) and explain how the impact of the Second World War helped to consolidate these institutions into a coherent social structure of accumulation – one which would produce a 'golden age' of rapid and sustained economic growth the likes of which has not been seen before or since.

The conservative Keynesian state had its origins in the Great Depression and the New Deal. The Great Depression was widely perceived by contemporary observers to

have been caused by a crisis of overproduction – low wages, insecure employment, and cyclical downturns in the economy led to insufficient effective demand for the products of the expanding mass production economy, generating chronic overcapacity which impeded profitability and resulted in further cost-cutting pressures which only served to exacerbate the problem of demand deficiency (Babson 1999: 88). Keynesianism emerged as an ideological solution to this crisis. Keynesian economic theory argued that the state could reduce the impact of business cycles and generally improve the health of the economy through its fiscal and monetary policies, particularly via government spending and wealth redistribution. Keynesian theory is vague, however, on exactly *which type* of government policies would best stimulate the economy, leaving a range of possible options available to the Keynesian state, including state ownership of industries, direct cash transfer payments, social insurance programs, defense spending, public works projects, and of course Keynes' own infamous recommendation that the government employ workers to dig holes in the ground one day and re-fill them the next. But although the Roosevelt administration began to apply a few of these economic stimulants in the 1930s in an attempt to pull the economy out of the Great Depression (especially public works and social insurance programs), the budget of the federal government was too small and the impact of the projects too minor and uncertain to prove the success of Keynesian macroeconomic management. The Second World War simultaneously ended the depression and proved the validity of Keynesian theory. Not only that, but, as McDonough points out, it did so in such a way that involved neither excessive government intervention in markets nor fundamental reform of the private sector economy, but rather through "waste, plain and simple," (1994: 116). The war

demonstrated that the government could stimulate the economy and restore prosperity without increasing consumption or improving productivity, but simply by purchasing vast quantities of armaments to be subsequently incinerated; by hiring millions of American workers to produce them and millions of American soldiers to destroy them. The war also convinced the American public and politicians of the virtues of full employment (McDonough 1994: 116). These twin pillars of the conservative Keynesian state of the postwar era – massive defense spending and a commitment to full employment – were born directly of the war effort. Had the war not occurred or had the effect it did on the United States, American macroeconomic policy could have followed a quite different path of evolution.

American international dominance, another direct consequence of the war, complemented the mass production economy in several ways. The most important was the commitment to free trade and a liberal international economic order. The Bretton Woods agreement, the Marshall Plan for the reconstruction of Western Europe, and the General Agreement on Trade and Tariffs (GATT), were all attempts by the United States government to ensure an open, liberal international capitalist economy. This system would ensure foreign markets for American investment capital as well as American exports, as American corporations enjoyed unmatched supremacy in manufacturing. The Marshall Plan also allowed the United States to rebuild Western Europe in its own image, imposing stipulations that receiving governments structure their postwar economies along American principles. It also amounted to a strange brand of Keynesian demand stimulation, as American aid to Western Europe financed the importation of American exports (Eichengreen and Kenan 1994: 13-17). According to Mark Rupert, the Marshall

Plan enabled the export of the "American vision of social harmony through productivity, growth and prosperity," which would underpin the American postwar SSA as well as the international economic order (1995: 44). The Bretton Woods system established an international monetary system based on a hybrid gold-dollar standard, where the dollar was convertible to gold at a fixed rate ($35 per ounce) and most other currencies were pegged to the dollar. This represented in practice a sort of 'soft' gold standard with enough flexibility to allow Keynesian macroeconomic management. While it was intended to allow flexibility and national macroeconomic autonomy for all countries, the size of the American economy and the practice of pegging currencies to the dollar forced other countries to generally follow American macroeconomic policy (Eichengreen and Kenan 1994: 34-5).

The Democratic coalition was marked by the electoral supremacy of the Democratic party in national politics from the 1930s through the 1970s (the previous SSA had been characterized by Republican dominance from the McKinley to Hoover administrations). The Democratic majority reached ascendance in the 1930s and was consolidated with the successful conduct of the war effort. Born of a coalition which mobilized the lower-class vote as well as the support of the capital-intensive, internationalist business sector, the Democratic political program "consisted of liberal Keynesian policies at home and support for US dominance abroad," (McDonough 1994: 121-122). Republicans who were able to ascend to national office generally followed the same program, offering more efficient administration or slightly modified policy prescriptions. Those, such as presidential candidate Barry Goldwater, who diverged sharply from this program met with humiliating electoral defeat (Atkinson 2004: 78-80).

Cold War ideology was an extension of the consensus-mobilization of the war. The common enemies provided by fascism in the Second World War and the Soviet Union during the Cold War would foster a general spirit of cooperation in American society. Cooperation, coordination, and planning had proven to be effective and efficient in the war effort. In both industry and government, the idea of rational management and planning coordinated through a top-down bureaucracy were recognized as both legitimate and desirable. As Robert D. Atkinson puts it, "[A] new set of governing principles came to be accepted, partly through trial and error, partly through a slow, if not always conscious realization that the world had changed. These principles included a belief that top-down rational planning made sense, both in business and government," (2004: 78). Belief in the existence of a common enemy, and therefore the existence of common fundamental interests and principles, were necessary prerequisites for running a society according to the idea of rational management.

The final core institution of the segmentation SSA – the limited capital-labor accord – was the cornerstone of capital-labor relations in the postwar era. The so-called capital-labor accord was less of an industrial peace treaty than a sort of workplace Geneva Convention. It did not mean an end to the conflict between labor and management nor to the adversarial relationship which produced it, but rather limited the scope of this conflict, delineating which issues were on the bargaining table and which issues would be deemed off-limits. It was a shared understanding of what demands organized labor could press for, and what prerogatives management could pursue, without risking the eruption of an all-out war. Piore and Sabel refer to the capital-labor accord as "a shared set of understandings about the continuation of the struggle," (1984:

98). Since it is key to understanding both the structure and role of organized labor in the American economy, I will discuss the capital-labor accord at length, with reference to both its historical evolution and its relationship to the organizational paradigm of mass production and to the other institutions of segmentation.

THE RISE OF INDUSTRIAL UNIONISM AND THE CAPITAL-LABOR ACCORD

As the system of industrial factory production evolved and achieved predominance in the decades following the Civil War, there emerged two competing strategic visions of unionism: industrial unionism and craft unionism. Industrial unionism is based on the principle of "one shop, one union" – that is, that the basic bargaining unit of organized labor is the workplace, and that all those workers who assemble under the same roof and under the direction of the same employer should organize and negotiate as a single entity (Begin and Deal 1989). This differs considerably from the craft-based unionism which originated in the pre-capitalist guilds, which were organized to control access to the trade secrets of artisans and craftsmen and thereby protect the value of their special skills. In modern economic parlance, craft unions seek to limit the supply of particular forms of skilled workers in order to increase their bargaining power and therefore the price they are able to demand for their labor. Craft unions are also able to keep control of the production process in the hands of skilled workers, whose talents are essential to the quality of the final product and indispensable to the employer.

Despite some attempts at industrial unionism during the period of industrial factory production, craft unionism remained dominant until the consolidation of mass production. Craft unionism was typified by the American Federation of Labor (AFL). Craft unionism as practiced by the AFL was conservative, attempting to protect skilled workers against the progressive erosion of their crafts by industrialization – which had the effect of fostering antagonism between the relatively well-paid skilled workers and the growing hordes of less-skilled workers who they saw as a threat to their well-being

(Babson 1999: 13). In craft unions, workers were organized according to the type of work they performed rather than according to where they worked. A single factory could contain bargaining units representing several different craft occupations, all negotiating separately with management.

Craft unionism was the only organizing strategy capable of achieving widespread and long-term success under the homogenization SSA (ca. 1890s-1920s) for several reasons. The most important was that the balance of power in capital-labor relations was tilted overwhelmingly in favor of capital. The growing concentration of industry, gradual erosion of the skill content of work, and the hostility or indifference of government at all levels towards unions and workers' rights created extremely unfavorable conditions for organized labor (Gordon *et al* 1982: 143-4). In this environment it proved much easier and more realistic to focus on organizing skilled workers, who were in limited supply and difficult to replace with strikebreakers. Absent political and legal protection, industrial unions could only hope to succeed by organizing all of the workers in unit at once (before management could retaliate) and by physically controlling access to the workplace to prevent the use of strikebreakers (Begin and Beal 1989: 34). Where attempts at industrial unionism did emerge, they were characterized by sporadic outbursts of resistance, violent confrontations with management, and generally short lifespans.

As industrial factory production evolved into mass production, the importance of skilled workers in the production process grew more marginal. Mass production led to an increasing homogenization of the workforce and the growing concentration of workers. The assembly line, first implemented in 1913 by Henry Ford, transformed both the organization of production and the skill content of the labor force in industry. In 1910,

prior to the introduction of the assembly line, the workforce employed by Ford Motor Company was nearly evenly divided among skilled, semi-skilled, and unskilled labor, with each comprising approximately one-third of the workers. By 1917, a few years following the introduction of the assembly line, semi-skilled workers made up more than sixty percent of the workforce; the proportion of skilled and unskilled workers fell to 21.6 percent and 16.4 percent, respectively (Gordon *et al* 1982: 133). The assembly line and related innovations also produced dramatic increases in productivity (Rupert 1995: 63). Taylorism (or "Scientific Management") and Fordism became the managerial ideologies of the day, and both were characterized by the quest to separate conception from execution and progressively reduce the control of the worker over the production process (Babson 1999: 27-8). These were the building blocks of the mass production paradigm, and marked the proliferation of mass industrial employment which would make the semi-skilled production worker the core of the American economy.

This evolving mass production paradigm was coordinated through a system of bureaucratic control. Bureaucratic control enabled the owners of massive corporate empires to exercise control over thousands of workers and rationally manage increasingly complex enterprises. It operated through very detailed and explicit rules and job classifications, and a hierarchical, pyramid-shaped organizational structure:

> Bureaucratic control rests on two pillars. The first is the intricately detailed codification of conduct within the firm. Explicit seniority ladders within the firm's own "internal" labor market assure that employees who abide by the rules will eventually better their occupational status. Each job has a tightly prescribed description and defined standards of performance. The second pillar is the bureaucratic hierarchy. The great mass of workers in an enterprise is divided into finely graded divisions and strata with multiple levels of supervision. Lines of communication are clearly designated and the chain of command is explicit (Bluestone and Bluestone 1992: 130).

At the same time, managerial authority became increasingly arbitrary, harsh and overbearing. Workers wanted to increase the security of their employment and impose limits on the often absolute authority exercised by management. Management had developed complex systems of rules and regulations for coordinating the labor force and reducing workers' discretion in the production process, yet when it came to issues of wages, working conditions, the pace of work, and job security, management exercised caprice and favoritism. Employees in the Fordist enterprises increasingly "resented the favoritism, arbitrariness, and cruelty of hiring practices that forced workers to abase themselves for preference in employment and that discarded older workers in favor of presumably more vigorous younger ones," (Zieger and Gall 2002: 68). As such, a sort of explosive, militant discontent began to simmer in the growing industrial workforce.

Some employers attempted to coopt the desire for collective bargaining through the establishment of company unions and worker representation schemes. This system, the so-called "American Plan," emerged in the years following the First World War. It was a more or less paternalistic arrangement which substituted company welfare programs and the appearance of employee representation for genuine collective bargaining, but it did give some support to the advancement of industrial unionism by establishing the "one shop, one union" format in many enterprises. In fact, several of the company unions established in the 1920s would eventually be taken over by militant industrial unions of the CIO. The American Plan – a form of enterprise corporatism which would have entailed a quite different system of industrial relations had it been institutionalized – collapsed when corporations abandoned their "generous" paternalism at the onset of the Great Depression (Piore and Sabel 1984: 128).

The Great Depression and the misery it brought with it led to an explosive outburst of militant unionism among the mass of industrial workers who now constituted the core the American economy. With the passage of the National Industrial Recovery Act (NIRA), a New Deal initiative of the Roosevelt Administration, which in Section 7(a) extended legal recognition to unions for the first time, an eruption of unionization in the mass production industries brought millions of semi-skilled industrial workers into the AFL and other unions. Spontaneous resistance and organization spread through the masses of unskilled and semi-skilled industrial workers (Babson 1999: 64-5). The AFL and its craft model of unionism did not know how to cope with this influx of membership; the leadership attempted to organize the masses of industrial workers according to craft lines, dividing the workers among different unions based on the types of jobs performed. The AFL was reluctant to engage in any type of mass organizing (even when the workers were taking all the actual risk of organizing and bringing management to the bargaining table). They believed that the industrial workers should be divided up and controlled by veteran craft unionists (Zieger and Gall 2002: 82). It soon became apparent that the AFL's strategic orientation was ill-suited for the reality of the corporate mass production economy.

The Coalition of Industrial Organizations (CIO) was founded in 1935 by a dissenting faction of AFL unions, led by John L. Lewis of the notoriously militant United Mine Workers. Lewis believed that for the labor movement to succeed, it had to find way to organize the millions of industrial workers who made up the core of American industry (Zieger and Gall 2002: 83). The CIO adopted a militant style of mass organizing which met with substantial success. In contrast to the bureaucratic, arms-length style

characteristic of AFL unions, CIO unions maintained a shopfloor presence and used grassroots tactics (Zieger and Gall 2002: 92). By the end of the 1930s, the unions of the AFL would be emulating the organizational style of the CIO and expanding the definitions of various crafts to include broad segments of the industrial workforce (Zieger and Gall 2002: 100). The CIO's success, however probably would have been either ephemeral or impossible without the state sanction provided by the new labor laws of the New Deal.

Pro-union legislation was essential to mass industrial unionism. The NIRA spurred some organizing, but it was vague and weak and eventually overturned as unconstitutional. The National Labor Relations Act (or Wagner Act) established explicit rights to organization and established labor relations in the United States as we know them. This legislation, and the state support that it implied, was critical to the mass organizing of the 1930s and 40s (Zieger and Gall 2002). Bipartism is the term which denotes this the form of labor relations, where representatives of labor and capital bargain as antagonistic parties while the state provides the legal and procedural framework but does not endorse or attempt to achieve any specific outcome (Cox 1987). Bipartism emerged as a practical response to the conditions of the economy in which it was born. Corporate mass production had given rise to industrial unionism, for which state regulation was necessary in order to restore and maintain industrial peace. Management was brought to the bargaining table by the combination of militant industrial unionism and the loss of the political support of the state (Babson 1999: 100-101). The end result was the institutionalization of an antagonistic but contractual form of labor relations.

The militant organizing waves of the 1930s were primarily aimed at attaining contracts which would limit managerial caprice in the treatment of workers and thereby improve the job security and working conditions of industrial workers. After the passage of the Wagner Act (and the affirmation of its constitutionality by the Supreme Court) workers were safe to organize and demand such contracts from their employers, and to do so with the implicit endorsement of the federal government. This contract-oriented, "job control" form of unionism did not seek to fundamentally alter the system of management or the organization of production. It was therefore not a challenge to the Fordist paradigm, it was only an attempt to alter the balance of power in the workplace. Through the contract and job control unionism, "labor turned the rigidity of work standards, work rules, and lines of job demarcation to its own advantage—improving health and safety on the job and enhancing job security," (Bluestone and Bluestone 1992: 49). This system was especially attractive to the masses of less skilled workers who had previously been completely at the mercy of the dictates of managers. But the skilled workers who had dominated the craft unions of the AFL could benefit as well, without needing to abandon their fellow workers by forming their own exclusive bargaining units: "Maintaining narrowly defined job classifications for skilled workers also provided a form of job security. Functions of tradesmen such as the electrician, the millwright, and the carpenter were defined, and the union made certain that these jurisdictional lines were not crossed," (Bluestone and Bluestone 1992: 49).

The contract also channeled the simmering capital-labor conflict away from class-based solidarity and towards a more individualistic model of unionism. The contract identified workers as individuals with rights to be defined and protected rather than as

members of a subordinate class, and as such it did not challenge either capitalist property relations or the fundamental assumptions of liberalism (Rupert 1995: 87). This meant that the capitalist class could accept the growing power of organized labor without fearing the loss of their privileged position in the economy or the expropriation of their property.

As organized labor's gains were consolidated during the war years, the contract continued to be the central element of collective bargaining. Unions sought to establish stable, contractual relationships governing wages, work rules, and seniority, and established procedures for the redress of workers' grievances (Zieger and Gall 2002: 111). The purging of radicals (with their more militant and ambitious goals for organized labor) from the unions following the war was the final step in institutionalizing this contractual job control unionism in the U.S. labor movement.

The Second World War had a much more profound impact on unions than simply helping them to consolidate their previous gains. Union membership took off during the first three years of conflict (1939-1942) as the economy recovered and unemployment plummeted. Millions of workers joined the unions of the AFL and CIO, and contracts were won with some of the most stubbornly anti-union employers (Zieger and Gall 2002: 106-7). At the same time, however, the government assumed a much more active role in industrial relations, with the exigencies of war legitimizing state intervention to prevent interruption of the production of vital war supplies. Prices and wages were regulated, and the National War Labor Board (NWLB) was created to manage wartime production, consisting of representatives of business, labor and government. The national union organizations agreed to a "no-strike pledge" following the attack on Pearl Harbor to

prove their patriotism and support of the war effort. In exchange, the NWLB forced businesses to accept "union shop" provisions which required all newly hired workers to join the union, allowing unions to maintain their membership absent the possibility of recourse to the strike weapon (Babson 1999: 119). In practice, however, the no-strike pledge and union participation in the NWLB meant that unions would become increasingly centralized, with national leadership assuming the responsibility for disciplining union locals, enforcing their support for the wartime production effort, and ensuring their adherence to the pledge despite the wishes of the locals' represented workers. This resulted, by the end of the war, in a national union structure that was centralized, hierarchical, bureaucratic, and conservative (Rupert 1995: 99). In fact, the national union organizations came to mirror in form and function the Fordist corporations' own bureaucratic structures. In a larger sense, the experience of managing production during the war institutionalized the bipartite labor relations system. As Piore and Sabel write,

> The wartime experience taught a generation of business executives, labor leaders, and "neutral" arbiters to accept one another, as well as to reconcile equitable industrial relations with the demands of economic efficiency. Their collaboration exemplified a system of industrial relations that presupposed yet circumscribed conflict, by focusing on the development of a "rational" structure of wages, salaries, and job definitions, as against other kinds of worker demands (1984: 100).

In the years immediately following the war, a wave of strikes rocked the economy. When the dust settled, the arrangements which would establish the framework of the postwar capital-labor accord were in place. Key agreements reached in the auto industry between the United Auto Workers (UAW), GM and Ford established the rights of labor and the prerogatives of management as well as deciding the distributional issues of wages and benefits. The UAW-Ford agreement was symbolically significant as well –

before the war they had been the most militant union and most virulently anti-union company, respectively – in that it demonstrated the ability of labor and capital to forge an ideological common ground based on social peace and generalized prosperity (Rupert 1995: 162). In practical terms, these agreements would institutionalize the contractual job control form of unionism and constitute the basic model of labor-capital relations under the segmentation SSA.

The key features of the union-management relationship were wage rules, connective bargaining, and job control (Katz 1985). Wage rules were intended to increase the stability of the union-management relationship by providing performance measurements for contract negotiations, as well as ensuring steady wage growth for workers. Wages were determined by job classification, and Annual Improvement Factor (AIF) and Cost of Living Adjustment (COLA) formulas provided for yearly wage increases (Katz 1985: 28-9). Connective bargaining eliminated inter-plant or inter-company divergence in contract terms (particularly wages and benefits). Contract negotiations set wages based on job classifications on a national basis and could not be negotiated by local unions (Katz 1985: 30-1). Finally, job control protected workers rights with job security and a voice in working conditions, but simultaneously protected managerial decision-making prerogatives. In essence, job control "constrained management to deal with a legally constituted union over a range of work-site issues, but it stopped short of providing workers or their representatives with any meaningful input into the strategic decisions of the firm beyond the workplace," (Bluestone and Bluestone 1992: 43).

At a more qualitative level, the labor-management relationship established in the postwar accord can be understood as centralized, adversarial, and legalistic. The centralized organizational structure which originated in the no-strike pledge was institutionalized. Local unions had to get approval from national offices before strikes or other actions could be undertaken. Wage-setting and bargaining took place at the national level (Katz 1985: 46). The adversarial relationship between unions and management was also institutionalized. Robert Cox (1987: 65) argues that the institutionalization of labor-capital conflict is the product of the hegemony of the capitalist class, which could afford to make concessions without fear of losing its privileged position. Bluestone and Bluestone, however, aptly point out that adversarial management-labor relations produced benefits for workers as well as the owners of capital, by providing workers with rapidly rising wages and benefits, job security, and a seniority-based advancement system, while simultaneously protecting profits by the sheer growth in the size of markets and allowing management relatively unquestioned authority to run the enterprise (1992: 42). Finally, the legalistic character of contractual unionism – complete with a quasi-judicial grievance mechanism – attempted to foster a "workplace rule of law" which legitimated managerial control through the establishment of complex procedural rules. This reinforced the individualistic (rather than class-based) nature of labor-management relations, suppressing and channeling workers' militancy and reducing the collective bargaining process to an essentially economic negotiation over the size of labor's share of the spoils of mass production (Rupert 1995: 167).

THE GOLDEN AGE: ECONOMIC BENEFITS OF SEGMENTATION

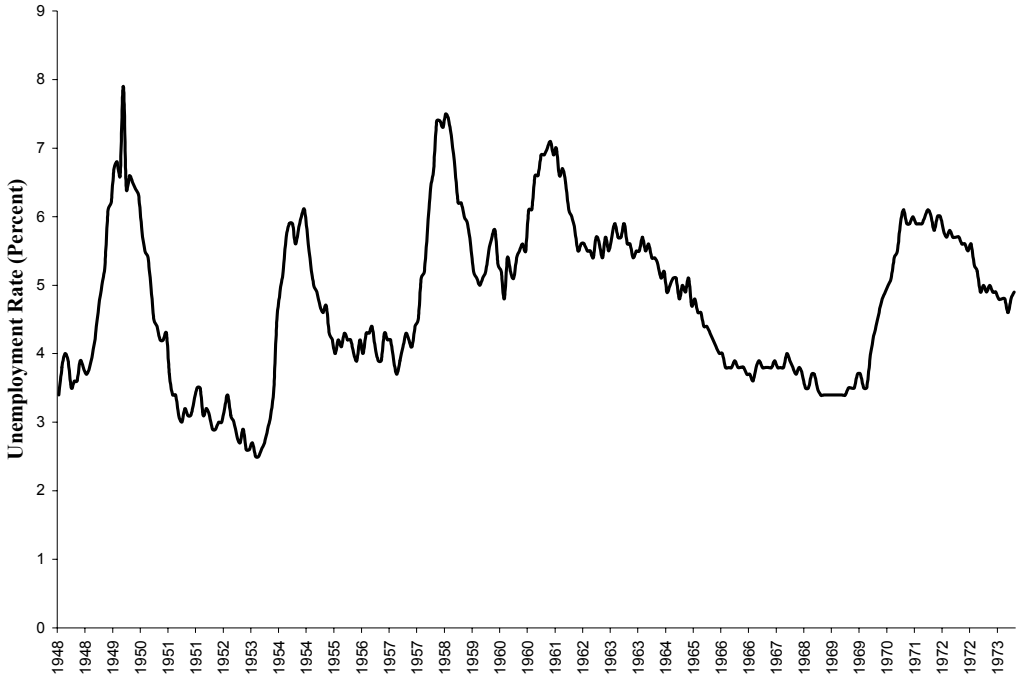
Whatever its shortcomings, the segmentation SSA and the postwar capital-labor accord produced a period of growth and expansion that has been justifiably labeled the "Golden Age" of American economic history. Unemployment was persistently low, average annual GDP growth exceeded four percent, and real wages experienced rapid and sustained growth. While the number of American workers covered by a union contract was always a minority of the labor force, unions were able to bring substantial benefits to all workers, and indeed to the economy as a whole. The labor relations system institutionalized under segmentation brought security, stability, and prosperity to the core of the American economy.

The system of Fordist mass production combined with institutionalized labor-management conflict proved to be a powerful formula for economic growth. Union membership reached its peak in the 1950s with more than one third of the workforce covered by collective bargaining agreements. The size and strength of the labor movement meant that workers were able to demand a large and growing share of revenue and reap the benefits of improvements in productivity. However, as the term segmentation denotes, the workforce itself was divided, both within firms and between the core and peripheral sectors of the economy. Firms used promotion within internal labor markets to command the loyalties of better-paid workers. More importantly, the economy was divided between an oligopolistic and competitive sector. Firms in the core experienced high profits and limited risk and competition and implemented advanced systems of labor control, bargaining with unions or treating their workforces generously to ward off the threat unionization. Firms in the peripheral, competitive sector were

smaller, faced intense competitive pressure and financial risk, and relied on more primitive labor control systems (and had a much lower rate of unionization). The core and periphery of the economy existed in a symbiotic relationship, with the periphery absorbing the risk and providing excess capacity for the core and producing products incompatible with the production, management, and labor relations systems of core firms (Gordon *et al* 1982: 189-92). There was a gender and racial component to segmentation as well; workers in the periphery were disproportionately women and minorities (McDonough 1994: 120). Within the oligopolistic core, however, there was secure employment, high rates of unionization, and steady wage growth. These key sectors of the economy were characterized by a union-mediated system of partial cooperation which James Crotty terms "corespective competiton," (2002: 6). Pattern bargaining, by which collective bargaining contracts with one core firm would set an industry standard which would be matched in agreements with other core firms, limited the extent of price and cost competition. This led to a stable and prosperous arrangement in key industries: "Firms in core oligopolies could engage in long-term planning, generously fund R&D, invest at a rapid pace, and offer lifetime employment to most of their workers. Profits were high enough to finance most investment internally and external finance was available at a modest cost, so indebtedness was kept within safe bounds," (Crotty 2002: 6).

Driven by the high profits and steady growth of firms in the core oligopolies, the economy experienced high and sustained GDP growth (above four percent annually) from the 1940s through the 1960s. While unions assumed the bulk of the responsibility for stimulating aggregate demand growth, the conservative Keynesian state maintained a

Figure 3: U.S Monthly Unemployment Rate, January 1948-December 1973



Source: Bureau of Labor Statistics

commitment to full employment codified in the Employment Act of 1946 (Gordon et al 1982: 169). As a result, unemployment remained persistently low (between three and seven percent) despite the entrance of large numbers of female workers into the labor market (see Figure 3). Low unemployment and steady wage growth generated growth in aggregate demand which supplied the high profits necessary to finance the high wages in the core industries. The so-called high road labor relations which characterized the capital-labor accord generated high productivity growth. The period was characterized by a "virtuous circle" where oligopolistic competition financed high wages and rising productivity, which in turn increased aggregate demand and generated secure profits for core firms, limiting the extent of destructive price and cost competition (Crotty 2002: 6).

From the late 1940s to the late 1960s, industrial output grew at an average rate of five percent annually, productivity (in terms of output per worker) doubled, and real personal income per capita increased by seventy percent (Gordon *et al* 1982: 167-8). Both workers and their employers reaped the benefits of the high growth generated under the segmentation SSA and the capital-labor accord.

THE DECAY OF SEGMENTATION: CRISIS AND STAGFLATION

Crisis befell the segmentation social structure of accumulation in the 1970s and continued through the 1980s. The causes and indicators of the crisis are well known, so I will offer only a brief and somewhat stylized summation.

Government spending, which had increased dramatically during the Second World War the Korean conflict, began to get out of control during the expensive and protracted Vietnam War. Defense spending, which had pulled the economy out of the Great Depression and helped generate the prosperity of the Golden Age, began to become a drag on the economy and, since it was increasingly financed by debt and a persistent trade deficit, erode confidence in the dollar internationally (Llewellyn and Presley 1995: 267-72). The OPEC oil embargoes in 1973 and 1978 caused recessions and inflation and ended the era of cheap energy inputs which had helped fuel the rapid postwar expansion. The reconstruction of the economies of Europe and Japan brought an end to the era of unchallenged American economic supremacy and led to increased competition and import penetration, ending the stability of oligopolistic competition in the American domestic market and reducing the foreign market share of American corporations. Finally, technological innovations permitting more flexible forms of production began to threaten the mass production paradigm itself, allowing smaller runs of less standardized goods (Wallace and Brady 2001: 111-112). American companies were much slower to adopt these new technologies than their German and Japanese counterparts, and their competitive position was correspondingly weakened (Kenney and Florida 1992). According to Gordon, Reich and Edwards, the capital-labor accord was actually a victim of its own success, since the prosperity generated by the Golden Age expansion

eventually gave workers and other groups a degree of economic and political power that began to *undermine* profitability and accumulation (1982: 29).

As a consequence of these and other factors, the stable growth, low unemployment, and generalized prosperity of the postwar Golden Age came to an end; in other words, the social structure of accumulation of segmentation entered a period of decay. The immediate consequences of the crisis were numerous. The Bretton Woods system which had underpinned the international economic order of the postwar era was abandoned in 1971-3 and replaced with a system of floating exchange rates (Llewellyn and Presley 1995). The economy entered a protracted period of high inflation and low economic growth, which would be referred to as *stagflation*. The inability of macro-economic policy to resolve stagflation weakened confidence in the Keynesian state. This economic crisis combined with the eventual abandonment of the commitment to full employment under the Reagan Administration led to persistently higher average rates of unemployment (between five and eleven percent) from the mid-seventies until the early nineties (see Figure 4). Finally, increased import penetration inaugurated a period of intense global competition which would come to be known as globalization.

As noted in Chapter III, the perceived causes of an economic crisis are a critical factor in determining the institutional solutions to the crisis. Thus, as the perceived cause of the Great Depression was *overproduction* – a deficiency of effective demand for the products of the mass production economy – the institutional solutions to that crisis were oriented towards boosting aggregate demand, specifically by redistributing wealth towards consumers by promoting wage growth and providing social insurance for the

Figure 4: U.S Monthly Unemployment Rate, January 1974-December 1994

Source: Bureau of Labor Statistics

by increasing the demand for goods and services. By contrast, the perceived cause of the crisis which began in the 1970s was, in a word, *inflexibility*. The inability of American corporations to remain competitive in the face of changing economic conditions was blamed on overly rigid institutional environment, created by excessive government regulations, union contracts which placed undue constraints on managerial decision-making, and high labor costs (especially the costs associated with hiring and firing workers in response to increases or decreases in demand). More broadly speaking, inflexibility implies distortion of the market, since the supposed virtue of flexibility is the ability to adjust to changes in market conditions. Insofar as labor unions and government regulations prevented firms from pursuing whatever course of action they felt was warranted by the conditions of the market, they were perceived as market distorting

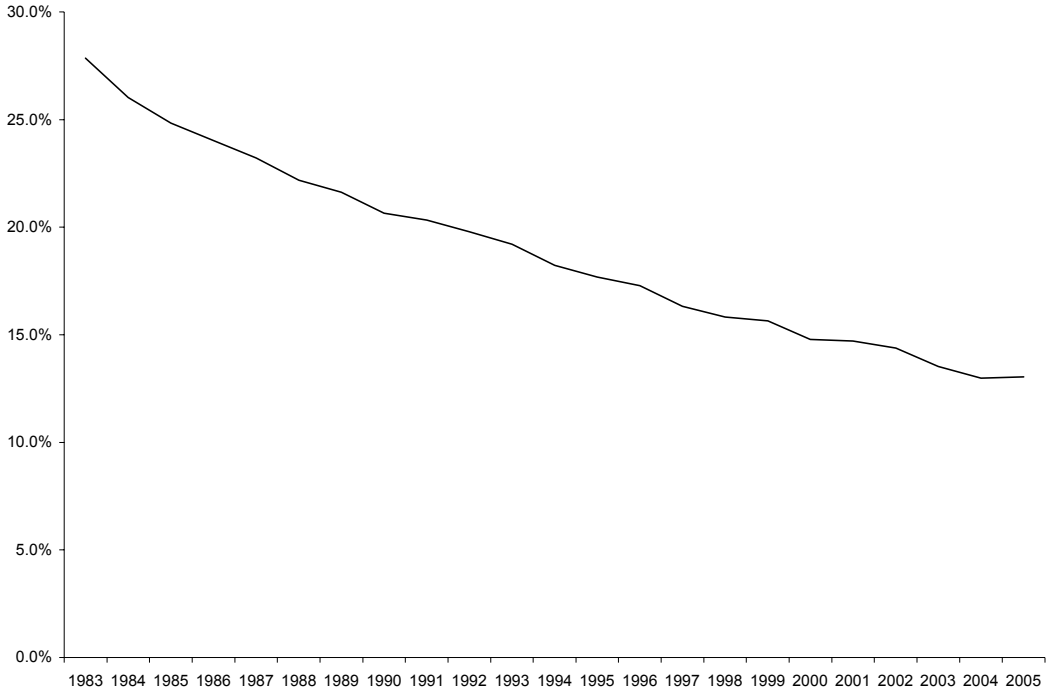
institutions which placed a drag on economic performance and retarded profitability. As a result, the very institutions which were responsible for launching the most spectacular period of economic growth in American history were now charged with preventing American companies from being able to compete with their foreign rivals.

Antonio Gramsci referred to "common sense" as the residue of the dominant philosophical ideas of an epoch permeating the popular consciousness and presenting itself as uncritically accepted assumptions. John Maynard Keynes expressed a similar sentiment when he wrote that "practical men, who believe themselves quite exempt from any intellectual influences, are usually the slaves of some defunct economist," and that in the end, "the power of vested interests is vastly exaggerated compared with the gradual encroachment of ideas," (Keynes 1964 [1936]: 383). Indeed, the changing conditions of the economy would be accompanied by the spread of new ideas about the economy and the state's role in it which would eventually sweep away the formerly sacrosanct economic institutions of the postwar economic order, despite all the resistance of its vested interests. The soon to be generally accepted notions that the institutions of the postwar Golden Age were market-distorting impediments to accumulation, and that flexibility and free markets were the keys to success and recovery, did not just pop out of thin air to become popular wisdom. It too had its origins in the scribblings of economic theorists who had previously been disregarded and consigned to obscurity. These theorists belonged to the neoclassical school of economics, and the doctrine they preached would come to be known as *neoliberalism* (in reference to the liberalism that had underpinned the laissez-faire economic policies of the nineteenth century). Neoclassical economics, as formulated by the likes of Ludwig von Mises and Friedrich

von Hayek of the Austrian School, had lost the fight with Keynesianism over the construction of the postwar economic order and been relegated to the sidelines of economic thought and policy-making. It reemerged in the 1960s, most notably in the work of Milton Friedman at the Chicago School of Economics. As Guy Standing describes the doctrine's rise to intellectual hegemony: "Its adherents claimed that much of what had passed for success in the previous era was actually failure, and was preventing success in the future. The [neo]liberals preached heresy in the 1970s, and were mocked as intellectual oddities. By the end of the decade they were strutting like peacocks. In most of the 1980s and 1990s they had the field almost entirely for themselves," (1999: 58).

The immediate consequences of the shift from Keynesian to neoliberal economic ideology were an attack on workers and labor unions, a reorientation of state macro-economic policy, and deregulation. As firms faced financial crisis and desperately looked to cut variable costs, the generous wage packages negotiated in union contracts were often the first target. Starting with Chrysler in 1979, American auto companies demanded and won wage concession packages with the UAW. This was not enough to rescue American corporations from the desperate situation they were facing. Soon, the entire capital-labor accord came under fire and was ultimately abandoned. Starting with the symbolic firing and permanent replacement of the striking air traffic controllers by President Reagan in 1981, the capital-labor accord erupted into all out war – and, with the implicit endorsement of the state behind it, capital won decisively. Figures 5 and 6 illustrate this trend, as union membership and the annual number of work stoppages both begin to fall steadily after 1981.

Figure 5: U.S. Manufacturing Workers, Percent Union Members, 1983-2005



Source: Unionstats.com

Figure 6: Annual Number of Work Stoppages Involving 1000 or More Workers, 1981-2005

Source: National Labor Relations Board

The conservative Keynesian state was remarkably rapidly swept away during the years of the Reagan administration, when the commitment to full employment was abandoned and the Federal Reserve adopted a new policy orientation emphasizing controlling inflation and interest rates. A new macroeconomic management doctrine – supply-side economics, or Reaganomics – absolved the federal government of its responsibility for stimulating demand and instead gave primacy to promoting favorable conditions to investment. This investment-promoting policy framework meant in practice policies that reduced the costs of doing business, such as by cutting taxes. Finally, the deregulation movement aimed to remove supposedly market-distorting and competition-reducing government oversight of the economy and thereby give primacy to the forces of the free market.

Although the decay of the segmentation SSA continued throughout the 1980s and 90s, the period of exploration of a new social structure of accumulation began simultaneously, based upon a newly evolving techno-economic paradigm and associated with a new form of production organization which began to displace the crisis-stricken system of Fordist mass production. I argue that this new SSA, which I refer to as *globalized production*, is now experiencing a period of consolidation. In the following chapter I will discuss the core institutions and organizing principle of the globalized production SSA, and how the organizational and techno-economic paradigms with which it is associated have impacted organized labor in the United States.

CHAPTER V. THE CONSOLIDATION OF THE GLOBALIZED PRODUCTION SOCIAL STRUCTURE OF ACCUMULATION: STRUCTURAL CHALLENGES FOR ORGANIZED LABOR

The exploration period of the globalized production social structure of accumulation began in the early 1980s, with the development and proliferation of a new organizational paradigm and the changes in macroeconomic policy initiated during the Reagan administration. It continued through the 1990s, with important new international economic regimes including the World Trade Organization and the consolidation of a new international financial system. The organizing principle of the new SSA was *flexibilization* – a generalized, profound, and sustained pursuit of flexibility driven by intense international competition and technological innovations facilitating new, more flexible forms of production. In my interpretation, the five core institutions of the globalized production SSA are: neoliberalism; the neoliberal state; a disembedded global financial market; flexible, disintegrated production; and international regimes ensuring the free movement of goods, services and capital. I will discuss the importance of each of these institutions before describing the organizational paradigm which has risen to predominance under this social structure of accumulation. First, I will briefly summarize the SSA literature regarding the existence of a new social structure of accumulation.

There is considerable disagreement in the literature over the question of whether a new SSA has been consolidated or even begun a period of exploration. David M.

Gordon, in one of his final essays on the subject, wrote that the transformations in the global economy since the 1970s all point to the decay of the segmentation SSA. He saw no convincing evidence of any signs of consolidation of a new SSA (Gordon 1994). Robert Went (2005) analyzed data on corporate profitability to assess the empirical evidence of a long-swing expansion. Although he describes a new stage of accumulation associated with neoliberal globalization, he finds no evidence that the new institutional structure was capable of producing sufficient growth or profitability to launch a long-swing expansion. Phillip Anthony O'Hara (2003) similarly looked for evidence of a new "transnational corporate social structure of accumulation" and, although identifying four "tendencies" of the new transnational corporate system, also found that the new system has failed to generate a long-swing expansion. His conclusion was that "overall, the global corporate system is at best in a transitional phase where the conditions for profit, accumulation, and growth are not optimistic for long waved upswing," (2003: 20).

On the other hand, Michael Reich writes that while it is unclear whether a new SSA has been consolidated, four "qualitative shifts" (changes in corporate governance, new forms of work organization, the new 'centrist' role of the federal government, and changes in international institutions promoting open regionalism) may indicate the existence of a new social structure of accumulation (1997: 7-8). Victor D. Lippit argues that the construction of a new SSA began around 1980, characterized by elements such as the strengthening of capital relative to labor, a change in financial institutions favorable to investment, corporate re-engineering, smaller government, and deregulation (1997: 12). Martin H. Wolfson argues that neoliberalism is a transitional phase which does not represent a new SSA because "it has not restored stability, profitability, or growth," and

that it is rather "a new institutional structure that represents the dominance of capital over labor," (2003: 260). Michael Wallace and David Brady (2001) are perhaps the most convinced that a new SSA, which they term *spatialization*, has been consolidated. Spatialization is characterized by "the spatial restructuring of work as the primary means of employers to reassert control over the labor process," (2001: 102). Wallace and Brady focus on the systems of labor control, which they argue are central to maintaining corporate profitability. Their analysis, however, offers no outline of the institutional core of the new SSA, and only cursory references to changes in the organization of production.

With these arguments duly noted, it is my contention that a new social structure of accumulation *is* being consolidated, and that its institutional core is identifiable, but that it is an SSA which has generated much lower levels of growth and profitability than segmentation or other previous SSAs. This has prevented the inauguration of a new long-swing expansion; but, as noted in Chapter 3, a long-swing expansion is not necessarily an essential component of a social structure of accumulation. I do not intend to argue that a global or transnational SSA is being consolidated. While certain international institutions have become important enough to now represent core institutions of national social structures of accumulation, and are in fact helping to accelerate a convergence among the various national social structures of accumulation, there remain sufficient distinctions among national macro-institutional arrangements to be able to distinguish and comparatively analyze national SSAs. I therefore continue to refer specifically to the social structure of accumulation of the United States when I

discuss the globalized production SSA. With these explanations and caveats in mind, I will now briefly discuss the core institutions of the globalized production SSA.

THE GLOBALIZED PRODUCTION SSA

The first core institution of globalized production is *neoliberalism*. Neoliberalism is the primary ideological foundation of the various institutional responses to the crisis of the 1970s, and can be considered an institution because of its importance in economic policymaking and its almost unchallenged intellectual hegemony in the economics discipline. The assumptions and recommendations of the neoliberal economic doctrine are indeed a nearly ubiquitous component of major national and international economic policies and institutions. The relationship between abstract economic doctrines and their real-world institutional manifestations can be observed in the assumptions on which policies or institutions are founded and in the visions they project about the ideal outcome of their implementation. The segmentation SSA idealized security, especially income and employment security. It sought to decommodify labor – that is, to make employment less of an economic transaction and more of a social relationship – and therefore to make labor deliberately less flexible and more stable (Standing 1999: 51-2). This had an ideological foundation in Keynesianism, which emphasized the importance of reducing uncertainty, mitigating the effect of business cycles, and promoting stable growth through the management of aggregate demand. The globalized production SSA, by contrast, idealizes flexibility and seeks to remove all rigidities and impediments to the optimal allocation of resources (including labor) by the market. This has its ideological foundation in neoliberalism, which holds that economic growth is most effectively achieved by encouraging investment, more specifically by allowing maximum discretion on the part of economic agents in the deployment of productive and financial resources in the most efficient and profitable manner possible. Put somewhat more succinctly,

neoliberalism promotes the "belief that individual security hinders economic growth, that public institutions impede market clearing, and that inequality acts as the motivational force for accumulation," (Standing 1999: 60). Moreover, neoliberalism has done away with the idea that profits are best maximized by increasing sales, i.e. promoting demand. Instead, neoliberalism is almost wholly obsessed with cutting costs in order to increase profits (Campbell 2005: 196).

The second core institution of globalized production is *the neoliberal state*. The role of the state in relation to the economy has changed considerably since the ascendance of neoliberalism. There has been a general trend (in rhetoric if not always in practice) towards a preference for smaller government, that is, the reduction of tax rates and government budgets at all levels. Rather than being a boost to economic activity, neoliberals view government spending as "crowding out" private investment and resulting in the misallocation of resources.

Deregulation was a major policy shift beginning in the early 1980s by which neoliberals sought to reduce the impact of government regulation in the economy. However, this does not imply that neoliberals do not advocate or exercise state intervention in the economy. The difference, as Kim Moody points out, is that they use state intervention "in ways that free up market forces, rather than restrain them," (1997: 120). Deregulation is, fundamentally, a misnomer. The deregulation which has been advocated (and largely attained) by neoliberals since the 1980s would more be properly referred to as *re*regulation. As Guy Standing correctly points out, no society can exist without modes of regulation, and those who advocate "deregulation" are actually

advocating a quite specific *type* of regulation, namely one which increases the role of market forces in the economy (1999: 39-40). Standing distinguishes between three types of regulation: statutory regulation, which are laws and rules which set parameters for acceptable behavior; market regulation, which seeks to maximize reliance on markets to govern behavior; and voice regulation, which manages behavior through bargaining and negotiation amongst parties with conflicting interests (1999: 40-42). Government regulations setting health and safety standards or wage and price restrictions are examples of statutory regulation, while the determination of prices on the market (and the corresponding behaviors these prices induce) are a form of market regulation. Advocates of deregulation have, it is true, sought to weaken or remove many forms of statutory regulations; at the same time, however, they have advocated "a mixture of *repressive* and *fiscal* regulations, with some *promotional* regulations, while vigorously opposing protective, pro-collective regulations and institutions," (Standing 1999: 42; emphasis in original). So the purpose of deregulation has actually been to protect certain economic agents (capital) at the expense of others (workers, consumers, communities, etc). Corporations need the state for the laws, protections, and regulations it provides, but seek to limit state autonomy in various ways in order to protect the profitability of capital and to secure it against the threat of seizure or expropriation (Moody 1997: 138). Thus the somewhat contradictory character of the neoliberal state.

Another change in the role of the state is in the realm of monetary policy. The conservative Keynesian state had sought to strike a balance between pursuing full employment and controlling inflation, two conflicting though not mutually exclusive goals. Beginning in 1980, the Federal Reserve has abdicated the responsibility for

pursuing full employment and instead given overwhelming priority to controlling inflation. Rather than pursuing full employment at the cost of modest inflation, unemployment would be allowed to settle at the "natural" level determined by the forces of supply and demand in the labor market (NAIRU, or the natural inflation-restricting rate of unemployment). This has had two consequences: "First, it has provided political cover for higher average rates of unemployment, which have undermined the bargaining position of workers. Second, it has provided cover for keeping real interests rates at a higher level, thereby benefiting the wealthy and the financial sector," (Palley 2005: 24).

The final important aspect of the neoliberal state has been a tendency to remake the world in its image. Besides the institutionalization of neoliberal policies in international agreements and regimes (discussed below), the neoliberal state itself has spread across much of the globe since 1980. The Reagan and Thatcher administrations brought the neoliberal state to the core of the advanced industrial world; the International Monetary Fund, through its structural adjustment programs and debt conditionality policies, brought the neoliberal state to much of Latin America and the developing world in the 1980s and 90s; and the "shock therapy" programs of the 1990s brought neoliberal state to much of the former Soviet bloc, including Russia itself (Standing 1999: 61-2).

The third core institution of globalized production is the *global financial market*. The liberalization of global capital flows began shortly after the collapse of the Bretton Woods system and the shift to floating exchange rates in 1971-3. Canada, Germany, and Switzerland abolished all restrictions on capital movements in 1973. The United States did likewise in 1974, and other major industrial powers eventually followed (Eatwell and

Taylor 2000: 3). Eatwell and Taylor argue that the liberalization of global capital markets began unofficially with the creation of the Eurodollar markets in the 1950s, and proceeded incrementally with liberalization of exchange rates (1971-3), bond markets (1980s), and equity markets (1990s), resulting in a liberalized and largely unregulated global financial market (2000: 36-7). Financial liberalization was a necessary result of the floating exchange rate regime, since this system, as opposed to the fixed-rate regime it replaced, "stimulated capital flows with a powerful cocktail of the carrot of speculative profit and the stick of financial risk, laced with the proceeds of extensive arbitrage," (2000: 3).

As noted above, deregulation constitutes a shift to market regulation, and the deregulation of global finance created a powerful transnational financial sector which began to regulate not only the behavior of finance but, in important ways, the behavior of non-financial corporations as well. Evidence suggests that "we have moved from a Golden Age system in which finance supported real-sector growth and capital accumulation, toward a neoliberal system in which finance in some sense 'dominates' the real sector, impeding economic growth and imposing more regressive distribution systems on most of the global economy," (Crotty 2002: 12). The growing power and importance of financial capital – and its mobile, disembedded nature, which makes it nearly immune to state regulation – has changed the competitive environment, planning horizons, and investment patterns of the productive sector of the economy. This has produced a condition which James Crotty refers to as "coercive competition," where destructive price and cost competition creates a vicious circle that impedes profitability and results in chronic excess capacity in key industries (2002: 7). Furthermore, Eatwell

and Taylor charge that the high and volatile interest rates resulting from financial market liberalization has hurt corporate performance by reducing cash flow and undermining investment plans (2000: 114). Despite a steady wave of technological innovations, productivity growth is kept low since deflationary macroeconomic policies and the low overall rate of growth result in new technologies changing merely the composition, rather than the total amount, of productive activity (Eatwell and Taylor 2000: 136-7). Finally, Crotty notes that changes in the incentives of corporate executives which links their compensation to short-term stock price fluctuations, combined with the transfer of stock ownership from households to institutional owners (such as mutual funds) and the associated emphasis on "shareholder value" above all else, has significantly shortened the planning horizons of non-financial corporations (2002: 17-23). Robert D. Atkinson notes that "the environment is such that firms that do not cut costs and improve financial performance face swift action in equity markets," (2004: 121). The pursuit of sustainable, long-term growth has been displaced in favor of maximizing key quarterly economic indicators. Fred Block (1996) explicitly attributes these changes in the international financial system to the higher unemployment and slower growth of the world economy since the 1970s.

The liberalization of global financial markets has resulted in capital which is increasingly "footloose" and therefore more difficult to regulate and tax. Governments at the national and local levels now somewhat notoriously "compete" to attract investment capital by offering generous tax incentives and subsidies to transnational corporations to persuade them to locate operations within their borders. This has put pressure on wages and labor protections, which represent higher costs of doing business, and has led to a

shift in the redistributive burden from capital to labor (Standing 1999: 71). The explicit or implicit threat that operations will be relocated abroad in response to union organization drives has also significantly hampered the ability of unions to win certification elections, especially in more mobile industries such as manufacturing (Bronfenbrenner 2000). All in all it seems that if the globalized production SSA continues to fail to generate higher levels of employment, profit and growth it will be the structure of the global financial market that is responsible.

The fourth core institution of globalized production is *flexible, disintegrated production*. Digital technologies (especially computers) have made possible more flexible systems of production. Innovations such as numerically-controlled machine tools, computer-aided design (CAD) and manufacturing (CAM), and electronic data interchange (EDI) have enhanced firms' ability to produce smaller runs of more specialized or customized products and to respond to small fluctuations in demand in more precisely targeted market segments. This has led to a demand for an equally flexible labor force, a demand which has been increasingly met with the assistance of the neoliberal state. A new system of "flexible accumulation" has risen to predominance in the global economy (Wallace and Brady 2001: 112). Atkinson goes so far as to state that market tools and flexibility have replaced command and control as the mode of regulation in the economy (2004: 96). Flexibility in the labor force has taken the form of wage flexibility, numerical flexibility, and functional flexibility (Wallace and Brady 2001: 112). Wage flexibility has been pursued through the individualization of wage determination, achieved in part thanks to the decline of unions, reduction of workers'

bargaining power, and the implementation of individualistic rather than collectivistic forms of regulation (Standing 1999: 97). Numerical flexibility has been achieved by the outsourcing of portions of the production process and the increasing use of contingent (temporary, part-time, informal, etc.) workers. Functional flexibility has been increased through multi-skilling and the proliferation of team-based forms of production.

Increased competition and uncertainty in the global economy have reversed the previous trend towards vertical integration which characterized Fordist mass production. This trend was epitomized by Ford's mammoth River Rouge plant, which was an attempt to integrate all stages of the automobile production process, including even the production of steel, under one roof. This has been replaced with a much more flexible and adaptive system dominated by networks linking the various firms in a commodity chain, an arrangement more stable than arms-length market relationships but less rigid than vertical integration. It also represents a deepening of the spatial and organizational division of labor, with the disintegration and dispersal of previously integrated production systems. As Wallace and Brady point out, the primary advantage of networks is that they "afford organizations some security in an uncertain economic environment by allowing them to pool and exchange information and other resources, but they are implicitly impermanent, allowing firms to uncouple quickly if circumstances change," (2001: 122). Duguay, Landry, and Pasin describe the network model of supply relationships as one of long-term partnerships, which complement an "organic" organizational structure which "appears as an open system in search of harmonious relations with its environment," (1997: 1191).

The demise of vertical integration has been accompanied by the demise of the strictly bureaucratic enterprise structure. This has been replaced with what Standing refers to as a "federal" structure, a more flexible form of organization in which "the organizational integration of the firm is loosened… so that there is either a core to which a set of satellite units are almost umbilically tied or a core that shrinks to little more than a co-ordinating unit," (1999: 122). This has been accompanied by a gradual shift to a "financial" conception of the corporation as an ephemeral arrangement of liquid subunits which can be restructured, dissolved, or spun-off at any point in time in order to maximize the stock price of the firm (Crotty 2002: 17). In other words, corporations are increasingly characterized by loose arrangements of semi-autonomous profit centers which command the loyalty of the corporate headquarters only to the extent that they generate revenue and improve the attractiveness of the firm in equity markets.

The fifth and final core institution of globalized production is *international regimes ensuring the free movement of goods, services and capital*. This is the most well-known institution of the global economy and the one most often associated with globalization. It is also one of the most important. Various global (e.g. the World Trade Organization) and regional (e.g. NAFTA) agreements and organizations have been created which are designed to reduce barriers to trade and facilitate cross-border exchange and investment. While trade liberalization was also a cornerstone of the postwar international economic order, it was generally focused on the gradual reduction of tariffs on tradable goods. Various institutions which have been created since the 1980s, however, seek to remove all explicit and implicit barriers to the free movement of

goods, services, and capital across borders. The result has been an institutionalization (and in fact intensification) of the heightened level of global competition characteristic of the neoliberal era, as well as the disembedding of capital from national economies. This has led to the *globalization of production*, a phenomenon which involves "not merely the geographical extension of economic activity but also – and more importantly – the *functional integration* of such internationally dispersed activities," (Dicken 2003: 12). Globalized production is characterized by the internationalization of accumulation, as the transnational character of the three "circuits of capital" – production, investment, and trade – have all been institutionalized and protected by international agreements and institutions (Went 2005: 378). Furthermore, accumulation is not just globalized, but neoliberal, as the multilateral economic agreements and institutions which have been established all limit the ability of states to regulate their own economies and the behavior of transnational corporations, and all seek to guarantee the sanctity of private business property (Moody 1997: 137).

These five core institutions - neoliberalism; the neoliberal state; a disembedded global financial market; flexible, disintegrated production; and international regimes ensuring the free movement of goods, services and capital – represent a functionally integrated social structure of accumulation which began its period of exploration in the United States around 1980. The organizing principle of this SSA is flexibilization, the singular obsession with increasing institutional and organizational flexibility that arose from the crisis of the 1970s and has dominated economic policymaking ever since. The obsession with flexibility has been both reflected in and reinforced by the evolution of a new form of production organization to displace Fordist mass production. In the

following section I will discuss this organizational paradigm and its implications for labor relations.

THE LEAN PRODUCTION PARADIGM

The organizational paradigm which has evolved to displace Fordism is referred to as *lean production*. Although there is substantial disagreement over the appropriateness of this term, there is enough agreement on the essential features of the production system it describes to be able to ignore this largely semantic debate.[*] Lean production involves, briefly, the replacement of the 'just-in-case' model of Fordist mass production, characterized by high-volume production, large inventory buffers, bureaucratic control and vertical integration, with the 'just-in-time' model, characterized by small, flexible production runs, low inventories facilitated by close relationships with suppliers, the functional integration of work tasks, and smaller firms with market strategies focused on narrow "core competencies" and differentiated products. I will discuss in more detail the essential characteristics of lean production, followed by a discussion of the implications of this organizational paradigm for labor relations.

While lean production has not completely displaced Fordist mass production (or indeed all other forms of production) in the American economy, it has become sufficiently diffused, developed, and consolidated to be considered the paradigmatic form of production. Paradigms represent ideal types and are therefore analytic devices which are meant to capture the important similarities across a diverse set of specific, contingent, and unique individual cases which are nonetheless fundamentally similar (Smith 2000: 1-3). As Emilio Bartezzaghi notes, "a production model is specific to an individual

[*] Some of the names which have been applied in either the business literature or by critical analysts of the new production paradigm, in addition to the generic designation of "post-Fordism," include "flexible specialization" (Piore and Sabel 1984); "innovation-mediated production" (Kenney and Florida 1993); "flexible/agile production" (Duguay *et al* 1997); "strategic flexible production" (Bartezzaghi 1999); and "mass customization" (Wallace and Brady 2001). The term "lean production" was coined by Womack *et al* (1990) in their study of transformations in the automobile industry.

company in a certain stage of its development, and, in almost all cases, it is a hybrid model with respect to the proposed ideal types," (1999: 237). By reference to paradigms, however, we can identify the points and degrees of divergence from the ideal type in each individual case without losing sight of the fundamental similarities which distinguish the members of one paradigm from another. Furthermore, in the specific context of organizational paradigms of which I am speaking, it is important to keep in mind that the ascendance of a paradigmatic form of production does not imply its universal superiority over all other alternatives, even within the narrow historical conditions in which it arises. The development of new forms of production organization involves a process of experimentation, demonstration, and diffusion which leads to the eventual predominance of one model over all others, which becomes consolidated and proliferates with the aid of researchers, proponents, trade associations, business schools, government agencies, and other interested parties who may or may not have a stake in the ascendance of one model rather than others (Piore and Sabel 1984: 44). The "victorious" paradigm is eventually strengthened further as the economy adapts to accommodate it and the institutions of the social structure of accumulation are tailored to maximize its potential.

One of the main distinctions between Fordism and lean production lies in the orientation to customer demand of each. Fordism represents a "push" orientation, where massive quantities of standardized products are manufactured and stockpiled before salespeople are deployed to sell them, or create a demand for them. Lean production represents a "pull" orientation, where (ideally) no product is produced until a customer expresses a demand for it (Womack and Jones 2003: 67). Under the just-in-time model, production takes place strictly on an as-needed basis at all points along the commodity

chain, with customer orders and products flowing in opposite directions (Smith 2000: 14). Advances in information technologies, inventory control systems, and telecommunications have allowed the creation of systems in which real-time data on customer purchases is used to order the production of only those goods which need to be replenished on a store's shelves (Abernathy *et al* 1999: 49). This has led to a shift in firms' emphasis from command and control to customer satisfaction (Duguay *et al* 1997: 1192).

Lean production has also changed the key source of firms' profitability. Under Fordist mass production, profits in the core industries generally took the form of *oligopolistic rents*, originating from the less then perfectly competitive structure of the market. Profits under lean production are more likely to take the form of *Schumpeterian rents*, deriving from the first-mover advantage of firms who are the fastest in their industry to develop and implement new innovations in products or processes. This has made innovation a key pursuit of firms, in terms of both routine, incremental innovations (or "continuous improvement" as it is popularly referred to) and more radical and fundamental innovations (Bartezzaghi 1999: 243). Atkinson exaggerates a bit in arguing that knowledge and innovation have replaced labor and capital as the key factors of production, but they are without a doubt central to maintaining healthy profitability (2004: 96). Kenney and Florida emphasize the role of innovation when they argue that lean production results in the "factory as laboratory," where "the intellectual capabilities of various types of workers are integrated and explicitly harnessed in the process of turning knowledge into commodities and new productive forces," (1993: 69). The speed

with which innovations and new technologies are commercialized is therefore increased tremendously under lean production.

In the pursuit of constant innovation and continuous improvement, lean production has also reversed the trend towards the deskilling of the average worker, and has to some extent reintegrated conception and execution. Workers are expected to be cross-trained in many different types of jobs and are given increased discretion in identifying and implementing improvements in the production process. In contradistinction to scientific management, which sought to reduce every job to a few simple, repetitive motions requiring as little brain activity as possible, lean production "involves the whole person and not just a pair of hands," (Duguay et al 1997: 1193). As such, lean production requires more cooperation from the workforce, since intelligence is not something which is susceptible to being squeezed out of a worker by force or coercion, as physical labor is. As Kim Moody points out, the key to the success of lean production systems is maintaining workers' goodwill and maximum (physical and mental) effort (1997: 107). Kenney and Florida argue that lean production requires a fundamental transformation in the organization of the firm, which "involves a shift in management focus from the simple or coercive management of workers and hardware to the cultivation and deployment of smart workers," (1993: 75). This is further accompanied by an elimination of the separation between the office, where creative and mental work takes place, and the plant, where physical work takes place, and the integration of as many of these processes as possible in a single facility (Womack and Jones 2004: 59).

Another change brought about by lean production is the increased importance of speed in the production process, which is related to its "pull" orientation and its obsession with innovation. Quick response to fluctuations in customer demand and the rapid introduction of new technologies have become essential to maintaining competitive advantage. Of course, there is such a thing as *too much* speed, since one of the cornerstones of lean production is only producing products for which there is already a demand. Therefore the ideal speed under lean production revolves around the concept of "*takt* time," a rate which "precisely synchronizes the rate of production to the rate of sales to customers," (Womack and Jones 2003:55). The use of the just-in-time production system is especially sensitive to the speed of different operations in the production process, since buffers of work-in-progress inventory are eliminated.

The traditional assembly line production layout of Fordism is being replaced with modular or cellular manufacturing, where production is organized in several discrete cells containing all the machines necessary to manufacture the product and allowing a "continuous flow" which significantly reduces the time necessary to produce a single item (Womack and Jones 2003: 60). Workers within modules are grouped into teams and trained in every step of the production process, allowing for the "functional integration of tasks" and overcoming the rigid separations between job categories characteristic of Fordism (Kenney and Florida 1993: 304). Modular manufacturing and this functional integration of tasks go hand in hand, since efficient modules require the integration of component processes into a true work team, conscious of quality and with an attitude towards continuous improvement (Castro *et al* 2004: 303).

This reorganization of production towards work teams and modular manufacturing has contributed to a tendency towards more horizontal firm structures, reducing the numbers of layers of management and hierarchies of job classifications. The network-based orientation of the lean production firm, essential to its flexibility, has required more responsibility be delegated to the worker. This has led to a tendency towards what Emilio Bartezzaghi terms "process ownership," the delegation of knowledge of the production process and problem solving to the point of production (1999: 244). The work team has been the primary means of transferring responsibility to the average worker, though teams have been used to discipline as much as to empower workers. Kenney and Florida aptly refer to the work team as a "simultaneous source of motivation, discipline, and social control for team members, driving them to work harder and more collectively," (1993: 39). Whether a source of empowerment or control, work teams have helped eliminate the need for constant close supervision of workers, thereby removing whole strata of nonproductive lower and middle managers. Bureaucratic control is giving way to what Wallace and Brady refer to as "technocratic control," which "centers on the use of computerized technologies in the workplace and the reliance on technical expertise in the creation, dissemination and interpretation of computerized information," (2001: 115-6).

Lean production has also led to a new orientation towards quality in the production process. Without stockpiles of inventory to replace defective products or components, the elimination of defects or their prompt identification by workers is essential. Lean production systems must be designed to make it impossible for a defective part to move from one step to the next, ideally eliminating substandard products

from reaching the consumer (Womack and Jones 2003: 60-1). Quality, as used in reference to lean production, essentially means exact conformance to specifications and therefore increased control by management (Moody 1997: 89).

Finally, lean production is distinguished by its structural incentives to innovate and reduce all kinds of costs of production. These incentives derive from many of the features outlined above. This has led Mike Parker and Jane Slaughter (1995) to refer to lean production as a system of "management by stress." The use of just-in-time, continuous flow, work teams, and a chronic, intentional undersupply of production inputs pushes workers to work harder and identify the weak points in the production process. As Parker and Slaughter put it, "the system itself is designed so that any deviation in the process—any failure by a worker or any other part of the system—is immediately exposed and magnified. This disciplines the whole system and allows management to focus its attention on the weak spots," (1995: 44). The system is constantly being driven to increase productivity by the very organization of the production process, which is why it requires neither direct coercion by management nor genuine commitment by workers to achieve the goal of continuous improvement. The organization of supply networks extends this pressure to innovate to all of the firms in the commodity chain (Kenney and Florida 1993: 306). Thus the central feature of the system is its constant ability to find ways to cut costs, and essentially "all of the well-known features of lean production are the means to reduce the resources, including labor, needed to produce a given product or service," (Moody 1997: 87).

The impact of lean production on organized labor has been substantial, though somewhat ambiguous. The reason for this ambiguity is the difficulty in distinguishing between the impacts of the organization of production itself and the impacts of other changes which have taken place concurrently with the development and diffusion of lean production. Unionization rates have plummeted in the private sector since the decline of the Fordist paradigm, but this could be the result of changes in the degree and nature of political support towards organized labor, the increase in foreign competition associated with globalization and free trade, the ideological antipathy towards unions by neoliberals, the anti-union attitude of foreign firms who are responsible for a growing share of investment and employment (especially in manufacturing), the ineptness of union leadership, or any number of exogenous factors. That being said, there are certain features of lean production which have directly observable effects on labor relations. Since I will discuss these changes in more detail and in more specific contexts in the next two chapters, I will limit the following discussion to a few brief and intentionally general remarks.

The system of labor relations institutionalized in the postwar capital-labor accord – with its contractual, adversarial relationship between unions and management and its reliance on complex systems of job classifications, seniority-based pay and job security structures, and its reification of the separation between conception and execution reflected in the exchange of job control for management's unchallenged control over strategic decision-making – is incompatible with lean production and fundamentally at odds with the quest for flexibility at the heart of the globalized production SSA. The reduction of hierarchies and drastic reduction in the number of job categories has

rendered job control unionism anachronistic, and the need for management to attain the commitment and cooperation of the workforce has made the adversarial approach of unions appear counterproductive and confrontational.

The benefits unions were able to secure for workers under the mass production paradigm were based on rigid systems of job classifications with explicit rules and sharp lines separating production tasks. Lean production has not only transformed the bureaucratic organizational structure of the firm, it has also in many cases led to the collapse of these complex systems of job classifications and replaced them with a handful of generic job categories (Kenney and Florida 1993: 104). Therefore unions can no longer use job classifications as the basis for job security and wage-setting, as was the cornerstone of job control unionism. Furthermore, most of the benefits unions achieved for workers under the capital-labor accord such as seniority-based employment security, long-term contracts with stable wage increases and fringe benefit packages, and especially perpetual income guarantees such as pensions, are all antithetical to the flexibility required by lean production and the social structure of accumulation. Firms need to remain as flexible as possible to stay in business, and even if unions did manage to negotiate the sort of contracts characteristic of the postwar era they would run the chance of losing everything by driving the firm to bankruptcy. This situation is likely to only get worse, as the more successful flexible firms inevitably desire even more flexible environments to operate in (where they can maximize their competitive advantage), and therefore put pressure on workers and governments for further flexibility-enhancing regulations (Standing 1999: 123). Flexible firms are in fact relatively stronger in more

competitive, unstable market environments since they shift the costs of instability and competition on to governments and workers (Crotty 2000: 8).

Unions, who following the Second World War adopted the centralized, bureaucratic structure of the Fordist corporation, have not undergone a similar transformation to a more flexible, adaptive, or decentralized structure. They are, so to speak, at a competitive disadvantage in the more flexible and unstable market environment characteristic of the globalized production SSA. As Bluestone and Bluestone note, "bureaucratic control may work reasonably well in reasonably well under stable conditions where change is slow and market competition is weak. But in an economy where competition is rampant and technological change is abrupt, bureaucracies tend to trip over their own feet," (1992: 131). Beyond this organizational disadvantage, unions are also weakened by the fact that the primary benefits they have sought to bring to workers – namely, security and a less intensive work environment – challenge and undermine one of the essential components of lean production, the stress in the system which extracts effort from workers and encourages them to innovate (Parker and Slaughter 1995: 51).

Although the bipartite arrangements institutionalized by the National Labor Relations Act continue to be the legal foundation of labor relations in the United States, they have been seriously undermined by the loss of strong state support for organized labor and the increasingly anti-union stances of employers. Bipartism requires a degree of "good faith" on the part of capital in order to produce stable labor-management relationships based on collective bargaining. Since the 1980s, employers have been opposed to unionization to such a degree that they are increasingly willing to break the

law (by firing employees engaged in organization activities or by using fear and intimidation to defeat union certification campaigns) in order to remain non-union, accepting the fines and injunctions handed out by the National Labor Relations Board rather than accepting union certification (Bronfenbrenner 2000).

Management's "substantive agenda" in labor relations since the 1970s has centered around achieving more (wage, numerical, and/or functional) flexibility in the organization of the workforce and attaining more sustained contributions from workers (Walton *et al* 1994: 18). Firms have generally chosen one of two general strategies for realizing this agenda. The first, a strategy of compliance and containment, does not require a fundamental transformation of labor-management relations. It is based on forcing wage concessions and rule changes on workers and implementing stricter or more sophisticated control systems (Walton *et al* 1994: 18). This is most easily undertaken in a non-union context or where unions are weak or on the defensive. The second strategy, based on commitment and cooperation, requires a substantial reorientation of the management-labor relationship, whether in a union or non-union environment. It is based on a conscious alignment of the interests of workers and management. It is achieved through mutually agreed-upon changes in wage systems, increased flexibility through informal practices and problem-solving (such as through work teams), and positive motivation or empowerment to extract more sustained contributions from workers (Walton *et al* 1994: 18). One of these two strategies can be identified in the bulk of corporate re-engineering initiatives associated with lean production. They can be classified more generically as strategies of *intensification* and *cooperation*, respectively (Walton *et al* 1994: 6). The latter represents a high-road approach to labor relations

characteristic of more technology- and capital-intensive industries where innovation and functional flexibility are more important, such as the auto industry (discussed below in Chapter VI); the former represents a low-road model of labor relations, likely to be found in more competitive and labor-intensive industries such as apparel (discussed below in Chapter VII).

The cooperative model of labor relations, though not yet necessarily dominant in the American economy, is more likely to become the model for collective bargaining in the globalized production SSA for the simple reason that intensification is likely to erode union strength in industries where it is pursued, and to be implemented in industries where the ability of unions to improve workers' compensation and working conditions is limited by the intensity of market competition. Cooperation entails a break with bipartism as well as industrial unionism. Bipartism, predicated on adversarial labor-management relations and the institutionalization of conflict, is incompatible with a cooperative management philosophy. Cooperation entails a system of social relations of production known as *enterprise corporatism*. Under enterprise corporatism, both workers and managers are encouraged to identify with the goals of the enterprise rather than with their position in the system of production. It is based on a harmony of interests, rather than a conflict of interests, between workers and management (Cox 1987: 74). In contrast to the bipartist capital-labor accord, "the union-management relationship in enterprise corporatism is symbiotic rather than adversarial. Symbiosis does not exclude conflict about some issues of concern to workers in the enterprise, but it is a conflict carried on within an overriding common interest in the well-being of the enterprise," (Cox 1987: 74).

Industrial unionism, where workers identify with the interests of all of their fellow workers in the same industry (or at least those within the same national territory), is incompatible with enterprise corporatism since workers are encouraged to identify with the success of the enterprise to which they belong, which pits them in direct competition with other enterprises in the industry and therefore with the workers they employ. Enterprise unionism is a better fit to the enterprise corporatist system of labor relations proliferating under lean production, since workers identify with their enterprise and tend more and more to acquire skills and knowledge specific to the production system of a particular enterprise (MacDuffie 1995: 64). This is another instance in which the centralized, bureaucratic organization of unions becomes an impediment and interferes with unions' ability to serve their membership. A more localized bargaining unit coterminous with the enterprise (the semi-autonomous profit center within the federal firm structure, discussed above) would be better equipped to protect and pursue its members' interests: "the fact that the boundaries of knowledge under lean production are so strongly associated with a single firm rather than a craft or industry provides an additional push in the direction of local variation and enterprise unionism," (MacDuffie 1995: 65).

So as unions struggle to adapt to the new system of production, they face the difficult situation of having to overcome the now anachronistic model of industrial, job control unionism which clings to an adversarial form of labor-management relations, while simultaneously avoiding being co-opted by the new corporatist management philosophy which threatens them with irrelevance (Yanarella 1996a: 48). The adversarial union model forces unions to emphasize the material benefits they can deliver to workers,

just as the structure of market competition is making it increasingly difficult for them to deliver these benefits (Jarley 2002: 207). It also requires unions to instigate conflict in the workplace, as management increases its efforts to cultivate a more cooperative ethos. Unions have begun to adapt to these realities, in some cases more successfully than others. There is evidence that unions are having more success in organization drives by focusing their campaigns less on distributional issues (wages and benefits) and more on non-traditional issues concerning the quality of work and worker empowerment (Bronfenbrenner 1997). Some observers note that unions are in a process of transition from a "service" model which focuses on solving members' problems for them to an "organizational" model which mobilizes and empowers workers (Jarley 2002: 224). Some unions have successfully adapted to the enterprise corporatist mode of labor relations, becoming strategic partners with management and participating in high-level decision making (discussed in greater depth in Chapter VI). Still, it remains to be seen whether a systematic, institutionalized paradigm of labor organization will emerge to successfully challenge lean production.

In the following two chapters I will examine more closely the changes taking place in the organization of production and labor-management relations in two very different sectors of the economy: the automobile industry and the clothing industry. These industries represent drastically different competitive conditions, organizational structures, and approaches to labor relations which will serve to emphasize both the commonalities and differences in the forms of production organization being pursued within the broader lean production paradigm. It will highlight how the globalized

production SSA can support very different – but equally flexible – models of production organization which each pose distinct challenges for organized labor. I will employ the concepts and historical analyses developed in the previous three chapters in order to continue to emphasize the connection between social structures of accumulation, organizational paradigms, and labor-management relations.

CHAPTER VI. THE AUTOMOBILE INDUSTRY: FUNCTIONAL FLEXIBILITY AND WORKER-MANAGEMENT COOPERATION

This chapter will explore the transformations which have taken place in the organization of automobile production and the implications of these transformations on labor-management relations. I will begin by briefly outlining the automobile industry and production process, in order to give a clear contextual framework for the discussion of the changes taking place in the organization of production. I will then discuss the changes taking place at the point of production, specifically relating to the application of lean production to automobile assembly. Next, I will detail the changes taking place in the organization of supply networks in the automobile industry, and the changing nature of the relationship between assemblers and parts suppliers. Finally, I will discuss the impact of these transformations on workers and unions in this industry.

The general managerial strategy being followed in the automobile industry is *cooperation* – the use of a cooperative managerial ethos to elicit increased physical and intellectual contributions from workers, through a combination of incentives, peer pressure, and some degree of structural (as opposed to direct, personal) coercion. It is based on designing both the systems of production organization and social organization of the enterprise to elicit maximum quality and productivity at the lowest possible cost.

This has, in practice, taken a number of forms and achieved varying degrees of success, as shall be discussed below.

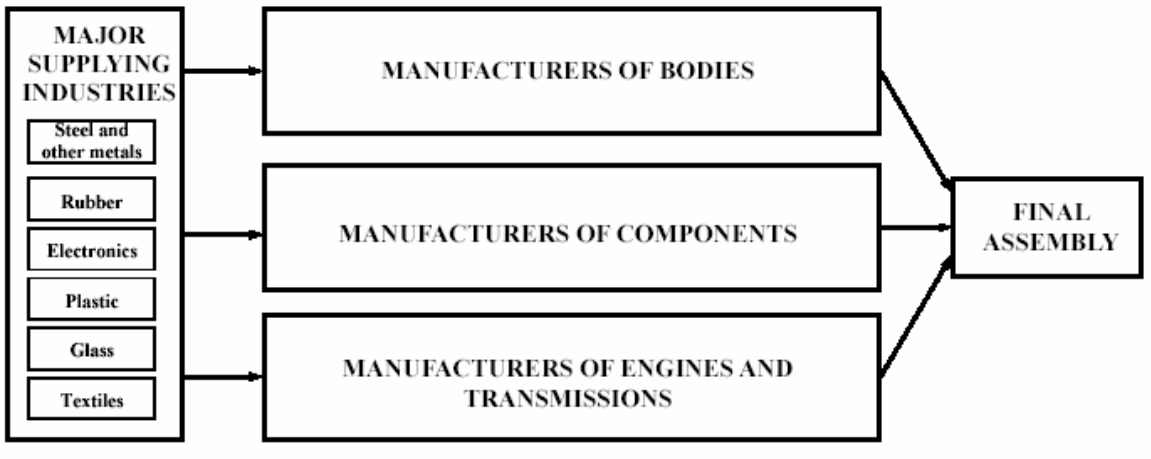
THE AMERICAN AUTOMOBILE INDUSTRY: BRIEF OVERVIEW

The automobile industry is a key source of employment and GDP in many advanced capitalist economies. It has played an especially important role in the American economy, considering its importance in the development of the mass production system (see Chapter IV) and due to the United States' historically large share of global automobile production. An automobile consists of thousands of intricate parts, each of which must be individually designed and produced before being combined and assembled into a finished product. It is an assembly industry, centered around the design, production and assembly of completed automobiles, supported by a myriad of component producers (Dicken 2003: 355). The number of workers directly employed in the automobile industry in the United States exceeds one million, approximately sixty-four percent of which consists of production workers (Bureau of Labor Statistics [BLS] 2005). The vast quantity, value, and diversity of inputs which are embodied in a completed automobile give the industry an importance which extends far beyond the simple production and sale of a single commodity.

The automobile industry represents a *producer-driven commodity chain*. As discussed in Chapter III, a commodity chain represents the flow of value in the production process. Each commodity chain consists of: (1) a specific input-output structure, (2) territoriality (its specific geographical organization); and (3) a governance structure which organizes and coordinates the flow of information and resources along the chain. Producer-driven commodity chains, common in capital- and technology-intensive industries, are characterized by a governance structure in which large core manufacturing firms coordinate the production and assembly process, either directly or

through subcontracting relationships, while maintaining a high degree of control (Gereffi 1994: 97). In the automobile industry, the large automobile assemblers such as Ford, GM, and Toyota coordinate the production process, with both the suppliers who produce the inputs and the dealers who sell the final products assuming subordinate roles. The automobile industry commodity chain is illustrated graphically in Figure 7.

Figure 7: The Automobile Industry Commodity Chain



Source: Adopted from Dicken 2003 (p. 356, Figure 11.1)

The automobile industry in the United States has seen a rapidly declining share of global output since the 1960s. U.S. automakers' share of global production has fallen from 51.4% in 1960 to a mere 14.2% in 2000 (Dicken 2003: 358). Imports of both automobiles and parts into the United States have simultaneously increased, resulting in a $104.83 billion trade deficit in automotive products (Dicken 2003: 360). General Motors and Ford have managed to remain the number one and two automobile producers in terms of sales value, respectively, owing in large part to their sizable overseas investments. Meanwhile, Japanese automobile producers have gained a growing share of the global

automobile market by refining lean production techniques which enabled the production of high quality, low cost cars and trucks. American manufacturers were slow to adopt these methods, and lost a substantial portion of their market share as a result (Kenney and Florida 1993). Political pressure and trade restrictions aimed at Japanese imports, which were seen as threatening to undermine American dominance in automobile production, led Japanese automakers in the 1980s to undertake a strategy of transplant manufacturing, opening 'greenfield' plants or undertaking joint ventures with American producers. As a result, "during the period of less than a decade an entirely new Japanese-controlled automobile industry was created in North America in fierce, direct competition with domestic manufacturers," (Dicken 2003: 391). A total of twelve Japanese transplants and joint ventures were established in the United States and Canada between 1982 and 1989, as listed in Table 2.

Table 2: Japanese Auto Transplants in the United States by Date Established

DATE ESTABLISHED	COMPANY	LOCATION
1982	Honda	Marysville, Ohio
1983	Nissan	Smyrna, Tennessee
1984	Toyota	Fremont, California (J.V. with GM)
1986	Nissan	Decherd, Tennessee
1987	Honda	Alliston, Ontario
1987	Mazda	Flat Rock, Michigan
1988	Mitsubishi	Normal, Illinois (J.V. with Chrysler)
1988	Toyota	Georgetown, Kentucky
1988	Toyota	Cambridge, Ontario
1989	Subaru/Isuzu	Lafayette, Indiana
1989	Suzuki	Ingersoll, Ontario (J.V. with GM)

Source: Dicken 2003 (p. 392, Table 11.6)

The Japanese transplants have impacted the North American automobile industry in two important ways. First, they have increased the level of domestic competition, especially in the small car market. With global automobile industry currently experiencing approximately thirty percent overcapacity (Dicken 2003: 362), this has served to exacerbate an already extremely difficult situation for American automakers. Second, the transplants have served to universalize Japanese production methods and demonstrate their transferability to a Western context (Clarke 2005: 95). The production methods developed by Japanese automakers turned out to be well-suited for the intensely competitive and slow-growth economy of the globalized production SSA. The constant pursuit of cost reduction and waste elimination allows for increasing profits even within an unfavorable economic environment (Clarke 2005: 101). The result has been intense pressure on American automakers to either emulate Japanese production techniques or develop their own productivity-increasing, quality-enhancing, cost-reducing strategies with which to compete with the Japanese producers.

CHANGES AT THE POINT OF PRODUCTION: THE TOYOTA PRODUCTION SYSTEM

Just as the Fordist mass production paradigm was developed within and typified by the automobile industry in the mid-twentieth century, automobile producers were among the first industries to develop and implement the lean production paradigm on a significant scale. In fact, the term lean production was coined by Womack, Roos, and Jones (1990) in a study of changes in the automobile industry resulting from the diffusion of Japanese-style production techniques. The essential elements of lean production were developed in Japan by Toyota's Ōno Taiichi, in an attempt to adapt American mass production techniques to the Japanese market, which demanded the production of a diverse assortment of products at low volumes (Cusumano 1985: 266-7). Since lean production, as applied to automobile production, essentially draws on the elements developed at Toyota, I will refer to it as the Toyota production system (TPS) in order to avoid conceptual ambiguity with the broader organizational paradigm discussed in the previous chapter (although they share the same basic features). This is done with the understanding that the Toyota production system is not the only form of flexible production being developed in the automobile industry, nor does it refer to every aspect of automobile manufacturing practiced by Toyota. Rather, it refers in a very specific sense to three fundamental features – functional flexibility, dynamic standardization, and the pull system – which have proven to be universally applicable and widely imitated. Although each enterprise has and will continue to adapt TPS to their specific circumstances, the following outline represents an ideal-typical model with which to conceptualize the impact of the lean production paradigm on labor relations in the American automobile industry.

The first essential element of the Toyota production system is *functional flexibility*. This involves a fundamental break with the rigid, hierarchical system of job classifications of mass production and a reorganization towards fewer, more multi-functional work categories which can be more flexibly deployed. Within Japanese transplants in the U.S. there are typically less than five job categories, in contrast to the hundreds which characterized the American plants under Fordism and formed the basis for job control unionism (Kenney and Florida 1993: 104).

This 'streamlining' of job hierarchies into a more horizontal firm structure has been accompanied by the proliferation of team-based work assignments. Teams are typically semi-autonomous work groups, coordinated by a team leader (either chosen by team members or appointed by management), whose members are assigned a general production function as a group and then allowed to allocate specific work tasks amongst themselves as they see fit (Kenney and Florida 1993: 36). Although Steve Babson notes that there are a spectrum of team forms, ranging from direct managerial control of individual workers to total worker control of the enterprise (1995b: 235), work teams under TPS generally play a limited but significant role. Teams enhance flexibility by allowing for the rapid reconfiguration of job assignments and by harnessing the "collaborative" as well as the "technical" skills of workers (Hamilton *et al*. 2003: 468-9). Teams also reduce the need for several classes of non-productive workers, by fulfilling various quality control, maintenance and housekeeping functions and eliminating the need for close supervision of individual workers.

Both the use of teams and the cross-training of workers to be able to fulfill a number of production tasks have led to an increase in the level of training invested in workers under TPS. According to MacDuffie *et al*, "having a workforce that is multiskilled, adaptable to rapidly changing circumstances, and with broad conceptual knowledge about the production system is critical to the operation of a flexible production system," (1995: 153). Training is an important way of supplying the technical skills required for the complex work tasks typical of jobs in the automobile industry, but it also serves a socialization function (Kenney and Florida 1993: 110). Training is used to impart in the workers the values and norms of the enterprise and production system and to propagate the corporatist philosophy. This has led critics to refer to training as a sophisticated means of exercising managerial hegemony over the workforce (Yanarella 1996).

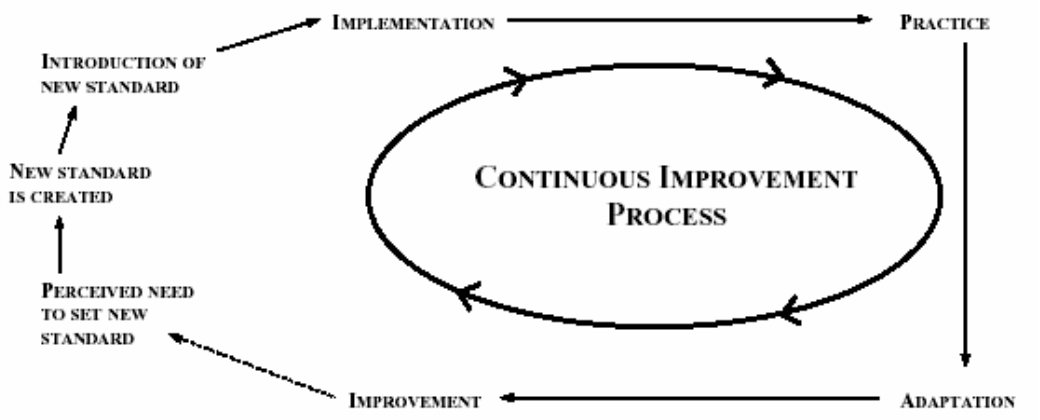
Functional flexibility has also been achieved through investments in more flexible forms of capital equipment. As discussed in Chapter III, technology evolves within the context of the social and power relations of the production system. This is reflected in the types of automation technology being implemented by automobile manufacturers as they transition from Fordist mass production to the Toyota production system. Ulrich *et al* note that while automation in a mass production context tends to lead to a reduction in both the size and skill content of the workforce and to increase the role of technicians and experts in the production system, lean production encourages more flexible automation systems which complement the highly trained and multi-skilled workforce (1997: 396-8). In fact this is evident in the development of the Toyota production system itself. As early as the 1950s, Ōno Taiichi and other managers at Toyota were designing and

implementing equipment with the intention of simplifying tasks and freeing up the hands of workers, enabling them to operate several machines at once (Cusumano 1985: 274). More recently, Toyota has developed a new design of assembly line which consists of several U-shaped mini-lines, each associated with a single aspect of vehicle production and separated by small buffer stocks, which can be stopped without halting production along the entire assembly line (Shimizu 1998: 84). The relationship between technology and production organization is not deterministic, so the development of flexible forms of automation and machine tools do not by themselves necessitate the proliferation of flexible forms of work organization. MacDuffie and Pil write that while "robots do not require teams to operate effectively, nor multiskilled workers," there is an increasingly evident relationship between changes in work organization and investments in flexible automation (1997: 250). In fact the authors cite statistical evidence of such a correlation, demonstrating that plants using flexible forms of work organization are more likely to implement flexible forms of automation, while plants using 'fixed' forms of automation are more likely to continue to use more traditional Fordist forms of work organization (MacDuffie and Pil 1997: 250-1).

The second essential element of the Toyota production system is *dynamic standardization*. Just as standardization, in the form of a static, rigid system of bureaucratic control and systematic job classifications, was key to the success of the Fordist mass production system, standardization is key to the success of the Toyota production system. Standardization in TPS, however, takes the form of a dynamic, decentralized, and constantly evolving system known as *kaizen* or "continuous

improvement" (Clarke 2005: 100-1). Continuous improvement operates by encouraging workers to identify inefficiencies in the production process, and allowing them to suggest or implement refinements. This, in essence, is designed to "harness the collective intelligence of workers as a source of continuous product and process improvement," (Kenney and Florida 1993: 106). Workers are thus transformed into centers of innovation which are the key to the refinement of the production process (Clarke 2005: 110). Constanze Clarke describes continuous improvement as a "learning spiral" between workers on the shop floor and experts with technical and engineering expertise which results in an internally generated process of dynamic standardization (2005: 110). "By contributing to the refinement of standards, the know-how of each individual worker is integrated into the standards of the TPS: the individual worker is thus able to set best standards and hence can influence existing standards," (Clarke 2005: 110). A graphical illustration of the continuous improvement process is provided in Figure 8.

Figure 8: Illustration of the Continuous Improvement Process



Source: Reproduced from Clarke 2005 (p. 110, Figure 3.3)

Continuous improvement is supported and facilitated by improvements in automation technology. With flexible and programmable robots and machine tools, changes in the production process no longer involve a time-consuming, expensive design and engineering process. Capital equipment which can be reprogrammed with little difficulty and adapt to incremental changes and minor adjustments makes continuous improvement and worker involvement in refining the production process much more feasible than systems utilizing fixed, special-purpose machinery (MacDuffie and Pil 1997: 250).

Continuous improvement, it should be noted, is not necessarily as empowering to workers as it may seem. It is at base centered around the elimination of waste, which includes the waste embodied in idle time, those minutes during the workday when labor or machines are not productively occupied. Thus, it encourages the reduction of the workforce to the bare minimum necessary to maintain full capacity utilization and the employment of workers in production with as few interruptions as possible. Thus, "each second of idle labour or equipment becomes part of the quest for the elimination of waste and the drive for continuous improvement," (Yates *et al* 2001: 528). In some plants the term *kaizen* even became synonymous with the elimination of jobs (Rinehart *et al* 1996: 111).

The third and final essential element of the Toyota production system *the pull system*. The pull system, as noted in the previous chapter, is based on the idea that upstream production should only occur to fill a downstream demand at all points in the production system. Within the enterprise, this is accomplished through a system known

as *kanban*. *Kanban*, which refers to small pieces of paper attached to containers and pallets to signal the need for the replenishment of each part as it is used in production, helps to eliminate the need for both large stockpiles of inventory and large numbers of quality inspectors. Workers move backwards along the production line and take only those parts that are needed, checking parts for defects and mistakes as they work (Cusumano 1985: 265). *Kanban* thus represents the information system which coordinates the pull system, while the pull system itself is responsible for eliminating the waste embodied in work-in-process inventories and production buffers (Clarke 2005: 104-5). The pull system simultaneously produces dramatic improvements in quality by preventing defective parts from moving along to subsequent stages production process.

At the level of the supply chain, the pull system is embodied in the just-in-time (JIT) delivery system. Just-in-time extends the pull system to the commodity chain level by requiring the prompt delivery of precise quantities of production inputs by suppliers. The use of JIT has caused the changes in the organization of production in automobile assemblers to produce substantial changes in automobile parts producers. It has led to the creation of tight, durable supply networks to replace the arms-length market relationships and vertical integration which were dominant under Fordist mass production. As Kenney and Florida argue, the effective functioning of a JIT supply network requires "close geographic proximity of producers, long-term relationships, and tight interorganizational linkages characterized by personnel sharing, joint participation in product development, and regular communication and interaction," (1993: 130). As a result, many Japanese parts producers followed their customers as they developed productive capacity in the United States and opened supplier transplants near the major Japanese assembler

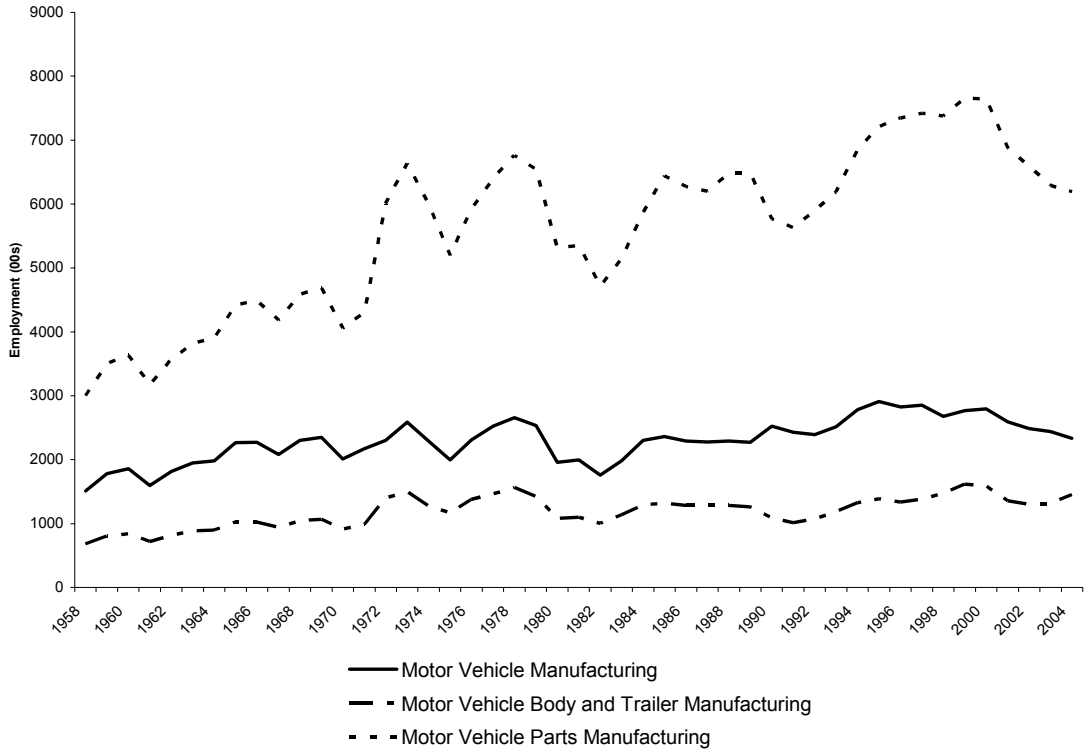
transplants and joint ventures (Dicken 2003: 392). Furthermore, changes in supplier selection practices by both Japanese transplants and American automobile assemblers has led American parts producers to change their practices along Japanese lines to one degree or another (Yang 1995: 56-7). The following section will discuss changes in the organization of supply networks resulting from the implementation of the JIT system in greater detail.

CHANGES IN THE SUPPLY CHAIN: JUST-IN-TIME AND INTER-FIRM NETWORKS

Just-in-time has diffused through the American auto industry more rapidly and more extensively than other components of the Toyota production system, and has produced substantial changes in both the organization of supply networks and in the internal organization of parts producers. Under the Fordist mass production system, American automakers had pursued a strategy of either owning their suppliers outright through vertical integration (maximizing control) or pursuing short-term, cost-minimizing relationships based on competitive bidding (minimizing risk). Components were purchased in large lots from distant, low-cost producers and stockpiled to reduce the risk of temporary disruption to the production process resulting from defective parts or an interruption in supply (Dicken 2003: 366). Just-in-time has led to the creation of a more network-oriented commodity chain structure to replace the bureaucratic control system of vertical integration. Sturgeon and Florida go so far as to argue that the source of competitive advantage in the automobile industry has "begun to shift from excellence at the point of production toward excellence in governing spatially dispersed networks of plants, affiliates, and suppliers," (2004: 78).

The proliferation of JIT has produced profound changes in both the geographical and organizational distribution of employment. The outsourcing of previously integrated parts manufacturing and module-assembly operations has caused growth in employment in suppliers to far outpace that in the assemblers, as shown in Figure 9. Furthermore, employment in automobile assembly is only expected to grow by two percent by 2014, compared to six percent in parts manufacturing and eight percent in body and trailer manufacturing (BLS 2005). JIT suppliers are characterized by spatial (geographical)

Figure 9: Automobile Industry Employment, 1958-2004



Source: Bureau of Labor Statistics

proximity to their customers, as well as relational proximity (close collaboration in research and design), and serve as buffers to defects for assemblers, with each 'tier' of suppliers screening out defects for the next (Kenney and Florida 1993: 140-3). Despite the increasing degree of capital mobility facilitated by globalization, the trend has been towards a recentralization of production in the automobile industry, as the benefits of JIT are best realized when suppliers and assemblers are located in close proximity to one another (Katz and MacDuffie 1994: 198).

Just-in-time is the primary mechanism through which the changes in work organization in the assemblers is being diffused to suppliers. Parts suppliers are often

subject to audits by their customers, who inspect various aspects of their operation, such as their quality control systems, work organization, union contracts, and employee involvement programs (Walton *et al* 1994: 119). Some assemblers have developed systems for 'rating' suppliers' performance, and organize teams of employees from several different departments to make quarterly visits to suppliers in order to ensure problems are detected and remedied promptly (Yang 1995: 46). These changes were initiated by Japanese transplants, but soon adopted by American automakers as well.

JIT has shifted a significant degree of risk from assemblers to suppliers. Suppliers have the option of either investing in just-in-time (lean) manufacturing systems to meet their customers' new demand schedules, or holding large stocks of finished goods to be delivered on a small-lot basis, increasing inventory costs (Yang 1995: 55). Japanese firms generally prefer to cultivate dependence on the part of their suppliers, accounting for such a large proportion of the suppliers' output and capital investment that they need the assemblers' business to survive (Kenney and Florida 1993: 146). Responsibility for quality, research and development, and design has also been shifting to suppliers. Japanese transplants require their suppliers to invest in improved capacity for R&D and quality control, and award contracts based on factors such as engineering and design capability (Yang 1995: 42-3). American assemblers have followed suit, seeking contracts with suppliers who exhibit "leadership in product and process technologies" as well as capacity for design and engineering (Yang 1995: 55). Assemblers are also increasingly demanding that suppliers provide complete subassemblies of components, or modules, which "arrive fully assembled on loading docks ready to be bolted onto vehicles as they move down the assembly line," (Sturgeon and Florida 2004: 55). This

"modularization" of automobile components (not to be confused with modular production as a form of work organization) has served to increase the labor-intensiveness of parts production and to decrease that of assembly, further contributing to the shift in employment.

Suppliers' relationships with assemblers have, at the same time, become more durable, long-term, and cooperative. In the interests of improving quality and maintaining long-term partnerships with key suppliers, automakers have by and large abandoned the practice of dropping suppliers if they fail to offer the most competitive price bid, and rather encourage current suppliers to upgrade their own capabilities. As Xiaohua Yang writes, assemblers now prefer "to improve the current suppliers to the extent that they either match the best in the market in both cost and quality, or they deliver better performance," (1995: 46). The supplier network has come to represent an organizational system which itself can act as a source of value by "mobilizing knowledge and intellectual labor on a collective, social basis," (Kenney and Florida 1993: 306). Collaboration between assemblers and parts suppliers has increased greatly, and this has led to increased investments in technology being required on the part of suppliers, but also to the commercialization of innovations at an increased speed and a greater degree of information-sharing and technological diffusion between assemblers and suppliers (Yang 1995: 56-7).

The organization of supply networks is made more efficient by their multi-tier but decentralized structure, with suppliers at each tier being responsible for organizing the next, eliminating the need for the assemblers to monitor the entire network (Kenney and Florida 1993: 131). The growing sophistication of production in parts suppliers (owing

to both greater demand for design and engineering capabilities, as well as the increasing demand for modules rather than individual components) has produced a tendency towards consolidation in the supply chain, with pressure on suppliers to acquire upstream and downstream capabilities and expand their reach internationally (Sturgeon and Florida 2004: 68).

IMPLICATIONS FOR WORKERS AND UNIONS

Application of the principles of the Toyota production system has varied across the many companies and plants operating in the United States. The different historical circumstances of each company and their prevailing system of labor-management relations have caused each to interpret and implement their own particular adaptation to the lean production paradigm (Yates *et al* 2001: 536). Toyota itself has attempted to refine its production system to make it more effective and humane (Shimizu 1998). Honda has developed its own mode of flexible production, based on a globalized production format using a modified "push" system, designing products to fit existing capital equipment while emphasizing functional flexibility (Mair 1998).

Among American automakers, GM has had the most difficulty adapting to lean production. GM has suffered from persistently hostile labor relations, resulting from poor managerial decision-making and strategies which placed a disproportionate share of the economic burden of reorganization on the blue collar workforce (Flynn 1998: 200). Despite success in isolated experiments with transforming work organization along Japanese management principles at specific plants (such as at NUMMI, Saturn, and CAMI), the lessons gained from these experiments failed to diffuse to other GM plants (Yates *et al* 2001: 534). Ford was able to adopt some key elements of lean production, especially concerning quality control and employee participation, but implemented them within a strategic context which was primarily neo-Fordist (Bordenave 1998: 235-6). Chrysler focused on a dual strategy consisting of improved product quality through reengineering and work reorganization. Chrysler implemented a team-based form of work organization and negotiated drastic changes to work rules and job classifications

with the UAW at a pilot plant in the early 1980s, which served as a model for more widespread reorganization in the 1990s (Belzowski 1998: 260). Chrysler also implemented a strategy of "design-for-manufacture" which included employee involvement in product development and closer collaboration with suppliers (Belzowski 1998: 263-4). This diversity of approaches to the implementation of the Toyota production system demonstrates that while certain generalizations can be made about the implications of TPS on labor-management relations, the specific circumstances at each plant are subject to significant variation.

In Japan, the Toyota production system is complemented by a system of labor relations based on enterprise corporatism, where workers are represented by company unions which are coterminous with the enterprise and cultivate a cooperative relationship between workers and management. The American tradition of labor relations institutionalized under segmentation, based on cross-company industrial unions and an antagonistic labor-management relationship, represents an obstacle to the Japanese system of production management. It impedes functional flexibility in the workforce, undermines the cooperative philosophy of management, and encourages workers to identify with their fellow workers throughout the industry rather than with the enterprise in which they are employed. As a result, Japanese automakers were wary of establishing transplants in North America, and when they did they did so cautious and in ways which would ensure labor relations could be adapted to an enterprise corporatist model. In situations where union representation was inevitable, most notably the Toyota-GM joint venture established in Fremont, California (New United Motor Manufacturing Incorporated, or NUMMI) in 1982, union-management cooperation was enshrined in the

union contract and unions were given access to participation in strategic decision-making (Clarke 2005: 94). In most cases, however, Japanese transplants were located in 'greenfield' sites in rural locations, where workers lacked union or automobile assembly experience (Kenney and Florida 1993: 101). Recruitment of the workforce was also very selective, aimed at hiring workers who displayed attitudes compatible with flexible work practices (Dicken 2003: 392).

Japanese transplants also used the hiring process to screen out workers with "undesirable" attitudes, in other words, those who were pro-union or were unwilling to adopt the corporatist philosophy of a harmony of interests between workers and management (Graham 1996: 70). This corporatist philosophy and the cultivation of loyalty to the enterprise has been a cornerstone of the socialization of workers in the transplants (Kenney and Florida 1993: 110). Company "rituals" which promote egalitarianism and a corporate community attempt to construct a common identity and foster unity (Graham 1996: 73). In some settings, such as the Toyota transplant in Georgetown, Kentucky, this practice is extended into the community itself. Workers are encouraged to participate in community organization and the company sponsors various causes to promote a positive image (Yanarella 1996: 139). As MacDuffie (1995) notes, the "social entity" of the work organization is of central importance under lean production. The word "team" itself becomes increasingly ambiguous, since "it refers not only to the work team, the formal structural unit, but also to a notion of 'team work' that embodies the goal of a cooperative relationship among work teams, among departments, among functional specialties, and among organizational levels," (MacDuffie 1995: 57).

In a union setting, where the selection process is likely to be more constrained and managerial hegemony does not go unchallenged, the philosophies of corporatism and a cooperative labor-management relationship are still equally carefully cultivated. At NUMMI, the union gave up the right to strike over work conditions and management consented to an obligation to consult with the union in strategic decision-making (Clarke 2005: 94). Management attempted to create a "culture of cooperation" by offering employment security in the form of a "no lay-off" pledge as well as by eliminating executive and manager privileges such as reserved parking and a separate cafeteria (Wilms 1996: 226-7). Union leaders were even allowed to participate in the hiring of managers (Wilms 1996: 221). At Saturn (the GM experiment in TPS established in Spring Hill, Tennessee), a "Partnership Agreement" negotiated in 1985 codified the cooperative union-management relationship. The Partnership Agreement contained four key provisions: the organization of the workforce into self-directed work teams; a decision-making process based on consensus; recognition of the union as a full partner in all business decisions; and governance of the organization by joint labor-management committees at all levels (Rubinstein 2001: 169). Despite these empowering provisions institutionalizing union involvement in the running of the enterprise, other observers note that the unions' role in training programs transforms it into a tool for transmitting the company's values. Ernest Yanarella argues that the union is complicit in a process of securing company hegemony through "a cooptation strategy geared to assimilating the unionized workforce into the company's world view, institutional structures, values, interest, and goals," (1996: 143).

Proponents of lean production and the Toyota production system argue that it provides a superior work environment in addition to increasing efficiency and productivity. It is proposed that the new model of work organization offers "more challenging and fulfilling work" (Womack *et al* 1990), or that it "harnesses the worker more totally and completely than did previous institutional and organizational arrangements," (Kenney and Florida 1993: 9). Paul Adler (1995) describes it as a system of "democratic Taylorism" which requires a change in the attitudes of both workers and management (to be more responsive, adaptive, and group-oriented), as well as changes in the organizational structure which actually empower workers. Advocates of lean production further insist that it 'structurally' empowers workers, in that its successful operation as a system depends upon the maximum commitment and effort of workers, thus requiring management to treat the workers fairly (Babson 1995a: 16). Empowerment and positive reinforcement are, it is true, one way to extract effort and commitment from workers, but they are not the only way. As Steve Babson points out, "fear of unemployment or the peer pressure of company-dominated teams might actually push people beyond the effort norms that individual workers would actually choose," (1995a: 16). Which of these two strategies – empowerment or coercion – will be pursued by the management of individual enterprises will depend on both their relative abilities to produce the desired effort and commitment from workers as well as the context of labor-management relations (especially regarding whether or not the plant is unionized). There is not, however, any *a priori* reason to assume that the implementation of lean production will automatically result in a more empowered workforce or more fulfilling work.

A key aspect of lean production in general and the Toyota production system specifically is that it encourages the constant elimination of waste and the constant increase in the output and productivity of the workforce. Individual performance is maximized through the interaction of teamwork, continuous improvement, and various incentive structures, which motivate workers to achieve constant increases in productivity (Clarke 2005: 107). Workers are encouraged, both implicitly and explicitly, to increase their own pace of work (Kenney and Florida 1993: 270-1). One method by which this takes place is simply by chronic understaffing, forcing workers to increase their individual effort just to keep up with the pace of production (Rinehart *et al* 1996). Another is the accumulation and elimination of waste. This is the practice of keeping each member of a work team working at maximum pace and effort and allocating all of the remaining idle time to one or a few workers, rather than distributing work tasks evenly. This allows for the eventual (and constant) reduction of the size of the work group (Parker and Slaughter 1995: 47). The practice of staffing work teams with the bare minimum number of workers possible, and the absence of extra or "floating" workers to fill in for absentee workers or help out when the team falls behind, helps teams to serve as a powerful source of peer pressure to reduce absenteeism and maintain a high level of work intensity: "When the team is made the responsible unit for getting the assigned work done, a powerful peer pressure is set up: if one person is absent, the system forces the other team members to take up the slack with the likely consequence that their frustration will focus on the absent team member," (Parker and Slaughter 1995: 48).

There is evidence that work teams often function as a system of social control rather than productive organization. Teams are in many instances simply superimposed

on a traditional assembly line system (Rinehart *et al* 1995: 224). Team leaders, the lowest level of management which are supposed to represent the team's interests, often become subordinate to higher levels of management and begin to behave as "junior foremen," especially when they are appointed or their performance is evaluated by management (Babson 1996: 91). Team leaders play a key role in the Toyota production system, especially regarding the organization, design, and allocation of work tasks (Kenney and Florida 1993: 104-5). How team leaders are selected and how they exercise their responsibilities is an important determinant of the nature of the organization of production and the general level of autonomy and empowerment of individual workers.

The issue of how team leaders are selected and function has been a source of labor-management conflict in several automobile assembly plants which have adopted a team-based form of work organization. At CAMI (a GM-Suzuki joint venture in Ontario), the problem derived from the ambiguous position of team leaders, who behaved as neither genuinely management nor as workers' representatives (Rinehart *et al* 1995: 230). At a Mazda transplant in Flatrock, Michigan, widespread dissatisfaction with the role of team leaders led the union to include a demand for the direct election (and recall) of team leaders in the negotiations for the 1994 union contract (Babson 1995b: 243). At Saturn, by contrast, team leaders are not only elected by their respective work teams but also sworn in as union officials (Rubinstein 2001: 172). The advocacy of a system of selecting team leaders (and defining their roles) which gives individual workers more power and control seems to be an area where unions can serve an especially important, empowering, and transparent function in a lean production system, especially considering the extensive diffusion and implementation of team-based forms of work organization.

At the parts suppliers, the pressure on workers to increase their effort and improve quality has been much greater than in the assemblers. The parts suppliers operate in a much more competitive environment and exist in a subordinate (though collaborative) relationship with their customers. As assemblers have sought to constantly reduce cost, they have used the competitive nature of the supply sector (owing in part to overcapacity) to demand constant prices or annual price reductions from their suppliers (Walton *et al* 1994: 118-9). Unionization rates in the supply sector have fallen greatly as internal suppliers have been sold off and more operations outsourced from the major auto manufacturers, and the formally clear lines of union jurisdiction within the automobile industry have become blurred (Katz and MacDuffie 1994: 192). However, suppliers have been eager to avoid labor conflict since the JIT delivery system has reduced parts inventories and made networks vulnerable to interruption, which has given unions some leverage (Katz and MacDuffie 1994: 192). Overall, first-tier suppliers have experienced contradictory pressure from assemblers to both reduce costs and adopt a more cooperative labor-management model which elicits worker commitment and improves quality (Walton *et al* 1994: 120).

Successful cases of cooperative union-management relationships at plants implementing the Toyota production systems have been presented by advocates as evidence that antagonistic labor relations are becoming obsolete. Lean production and cooperative labor relations can, it is argued, produce higher quality products while simultaneously providing a superior work environment. Koichi Shimizu writes that NUMMI's collective bargaining agreement "stipulated that the parties would make every effort to create the most innovative industrial relations in the USA, on the one hand to

deliver to customers vehicles of the highest quality in the world at the lowest possible cost, and on the other hand to assure equitable wages to employees," (1998: 78). Also examining the case of NUMMI, Wellford W. Wilms writes: "Far from diminishing the union's role, this emerging compact between labor and management casts the union in a whole new light. The union continues to function in its traditional role of representing its employees and balancing management's power, but now it also becomes an instrument of productive change," (1996: 265). Further, Wilms asserts that the new union-management compact "shifts labor's interest from antagonizing management with grievances brought by a minority of workers to representing the majority of the workforce. The need for cooperation is an incentive for the union to resolve conflict quickly and fairly, and the symbolic value of confrontation all but disappears," (1996: 265). Paul Adler cites survey results that demonstrate a level of "overall work satisfaction" at ninety percent of NUMMI employees, suggesting that workers have a favorable view of the production system (1995: 214).

On the other hand, Saul A. Rubinstein's research on the Saturn "Partnership" suggests that its success in achieving high levels of quality and job satisfaction were due to the union's careful balancing of strategic involvement in managerial decision-making, collective representation of the workforce as a whole, and individual advocacy on the part of disgruntled or dissatisfied workers (2001: 194-99). The union adopted a flexible, participatory internal organizational structure which allowed it to adapt to the conditions of the production system over time and to be responsive to workers' demands (Rubinstein 2001). Despite the assertions of some critics that the union has been coopted to serve as a tool for the transmission of management's values (Yanarella 1996), the union has been

able to establish for itself and its members a role consistent with meaningful participation at every level of decision-making at Saturn, and maintained this role by wielding the power of a mobilized membership (Rubinstein 2001).

NUMMI and Saturn are two of the most successful examples of cooperative labor-management relations, and results elsewhere have been less spectacular. At Subaru-Isuzu Automotive, a nonunion transplant located in Indiana, management propagated a cooperative, team-oriented philosophy that promised to involve employees in decision-making and treat them like family (Graham 1996: 69). The reality was much different, and worker dissatisfaction and disillusionment translated into militantly antagonistic relations by the early 1990s, with worker resistance ranging from individual acts of charade, sabotage, and open protest to collective acts of direct confrontation and organized agitation (Graham 1996: 76). At CAMI, a unionized GM-Suzuki joint venture in Ontario, management failed to convince workers of its commitment to a cooperative relationship (Rinehart *et al* 1996). Although initially experiencing somewhat harmonious labor-management relations, relentless work speed-ups, chronic understaffing, and a *kaizen* program which focused on cost-cutting and work intensification led to a return of antagonistic relations and culminated in a strike in 1992 (Rinehart *et al* 1996: 115-7).

What these cases suggest is that while the Toyota production system, combined with a cooperative style of labor-management relations, *may* be able to bring benefits to workers in terms of increased job security and satisfaction while delivering the benefits of improved quality, flexibility and productivity to management, these outcomes are by no means guaranteed. Indeed, they more or less require an ability on the part of the workforce (union or nonunion) to *enforce* management's commitments to cooperation

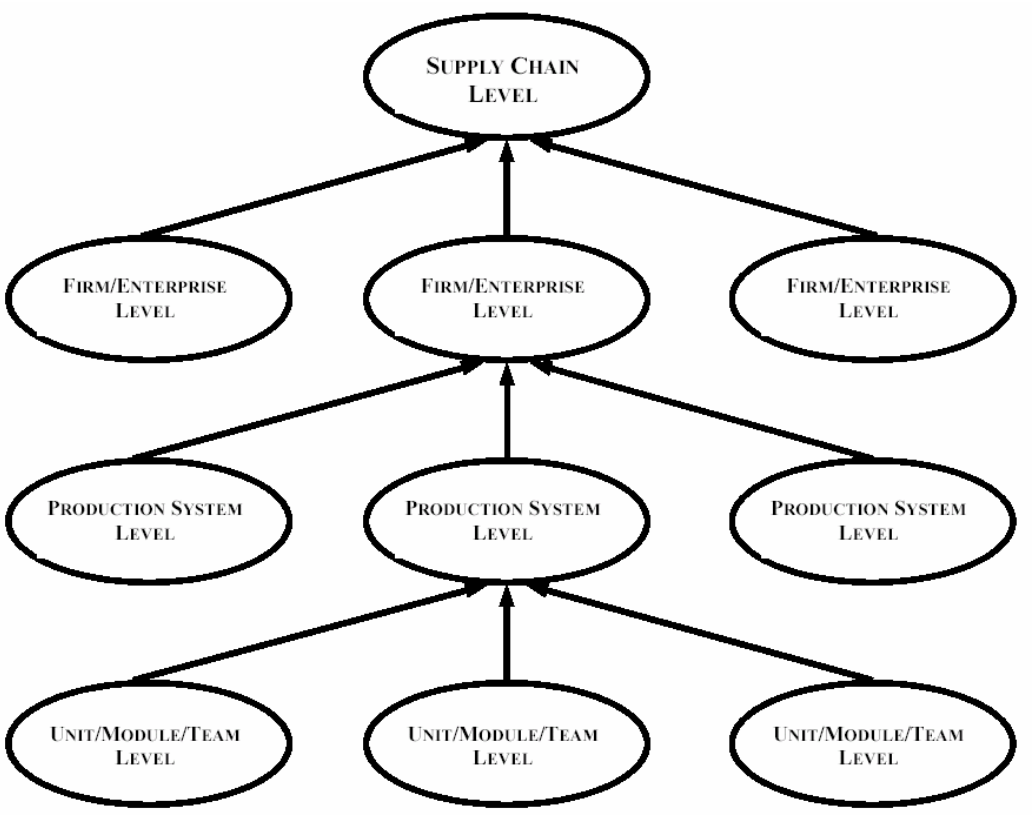
and empowerment. Without an independent source of power immune to managerial discretion, workers will likely be unable to secure more than the bare minimum of concessions from management necessary to elicit their commitment. Cooperation, mutual gain, and trust are most likely to be achieved and sustained when parties meet on equal terms, and so if workers remain in a subordinate relationship without an independent source of power to collectively wield against management they will be unable to deal with management as equal partners in any meaningful way.

The importance of innovation, process-ownership, and continuous improvement in the Toyota production system means that workers' knowledge and information about the production process can become an important source of control. The profitability of commercializing the information gathered at the point of production by individual workers and autonomous work teams is a key source of competitive advantage, and workers' ability to withhold such information thus gives them power in dealing with management. Job control unionism should perhaps be replaced with "process control" unionism in the automobile industry and other industries like it. Process control unionism would involve protecting the autonomy of different units in the production system by establishing their proprietary rights over knowledge acquired and information generated within their job functions. This would give workers at different levels of the enterprise a source of power in dealing with management as well as establishing control over the use of the information they gather, in terms of how it is implemented and commercialized and its distributional consequences.

This sort of union strategy would replace the centralized, bureaucratic structure of union organization with a decentralized, confederate model, where power is dispersed

across the many small work units and delegated upwards to various larger collective bargaining units at the system, enterprise and commodity chain level. This model is illustrated graphically in Figure 10. This represents simply one proposal based on my own understanding of the form of production organization becoming dominant in the American automobile industry. As the situation and circumstances in each individual plant and enterprise vary significantly, the method of organization which is most effective in each context will be the one which is most cognizant of and adapted to the production system in place, and most able to evolve as those circumstances change.

Figure 10: An Organizational Model of Process Control Unionism



CHAPTER VII. THE CLOTHING INDUSTRY: NUMERICAL FLEXIBILITY, INTENSIFICATION AND LEAN RETAILING IN THE TEXTILE-APPAREL-RETAIL COMMODITY CHAIN

In this chapter I will outline the transformations taking place in the clothing industry[*] and their implications for workers and unions. I will begin by providing a brief overview of the clothing industry, that is, the textile-apparel-retail commodity chain. I will then describe the changes taking place in supply networks since the advent of lean retailing. I will examine the impact of these changing supply relations on textile and apparel production. Finally, I will discuss the overall impact of these transformations on workers in the clothing industry and the implications for organized labor.

The clothing industry is, in general, pursuing a labor relations strategy of *intensification*. The requirements of increased flexibility and quick, accurate response to fluctuations in consumer demand characteristic of the globalized production SSA are being met by pushing pressure, risk, and uncertainty down the supply chain to lower-tier producers and then to the workers themselves. Changes in the organization of production and supply networks have not been oriented towards eliciting increased intellectual contributions by production workers, but towards integrating information systems and

[*] I use the phrase "clothing industry" interchangeably with "textile-apparel-retail commodity chain" to refer to the production system linking textile production, apparel assembly, and the distribution and retail sale of apparel products. Although textile producers and retailers do not exclusively serve the clothing industry, when I refer to the textile and retail industries I am making specific reference to their participation in the textile-apparel-retail commodity chain.

streamlining distribution channels within the commodity chain in order to increase the speed with which products can go from the textile mill and the sewing room floor to the retail store shelf. Workers have been required to work harder, longer, or on more contingent terms, for the same or lower wages, without any serious and widespread attempts to transform the organization of work or to profit by commercializing employee involvement or innovations in the production process. This is a result of both the nature and structure of the industry itself as well as specific organizational strategies pursued by lead firms in the commodity chain. This chapter will emphasize how the different competitive conditions characteristic of labor-intensive industries with a low degree of capital sophistication respond to the market environment of the globalized production SSA.

OVERVIEW OF THE CLOTHING INDUSTRY

The clothing industry is represented by the textile-apparel-retail commodity chain. It is a *buyer-driven* commodity chain, where production is organized by large merchandisers, distributors, or retailers who retain control over such functions as design, branding and distribution but contract out the actual manufacturing of the product (Gereffi 1994: 97). This means that the locus of power in the networks of production, distribution, and sale of apparel lies in the large retailers and brand-name merchandisers who order the production of apparel products and their textile inputs rather than in those who undertake the production of these products. The main role of the lead firms in buyer-driven commodity chains is the management of the production and trade networks, enabling them to profit primarily from their position as "strategic brokers" between manufacturers and consumers (Gereffi 1994: 99). Production is contracted out to large manufacturers, who in turn contract out some or all of their orders to smaller manufacturers, creating a decentralized web of producers all linked to retailers and brand-name merchandisers through intermediate relationships. A graphical illustration of the textile-apparel-retail commodity chain is provided in Figure 11.

The retail industry is a service industry which continues to experience steady employment growth in the American economy (see Figure 12). Textile and apparel production, on the other hand, are extremely competitive industries due to their labor-intensive nature and the generally low cost and sophistication of capital equipment. Textile manufacturing was the engine of the first industrial revolution in Great Britain, and, although synthetic fibers and technological advancements have increased the capital intensity of (especially high-end) textile production in developed economies such as the

Figure 11: A Model of the Textile-Apparel-Retail Commodity Chain

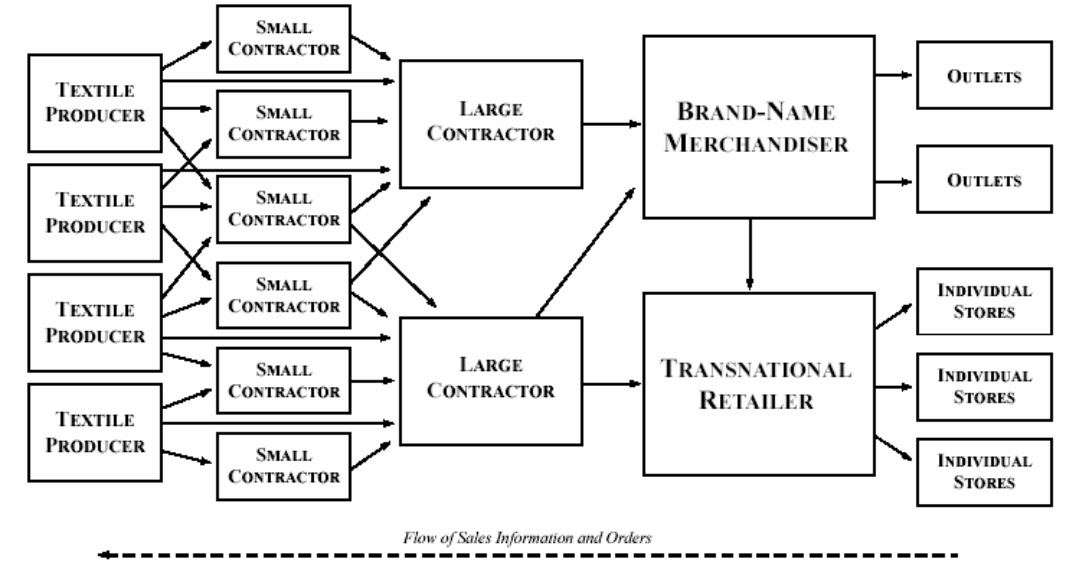
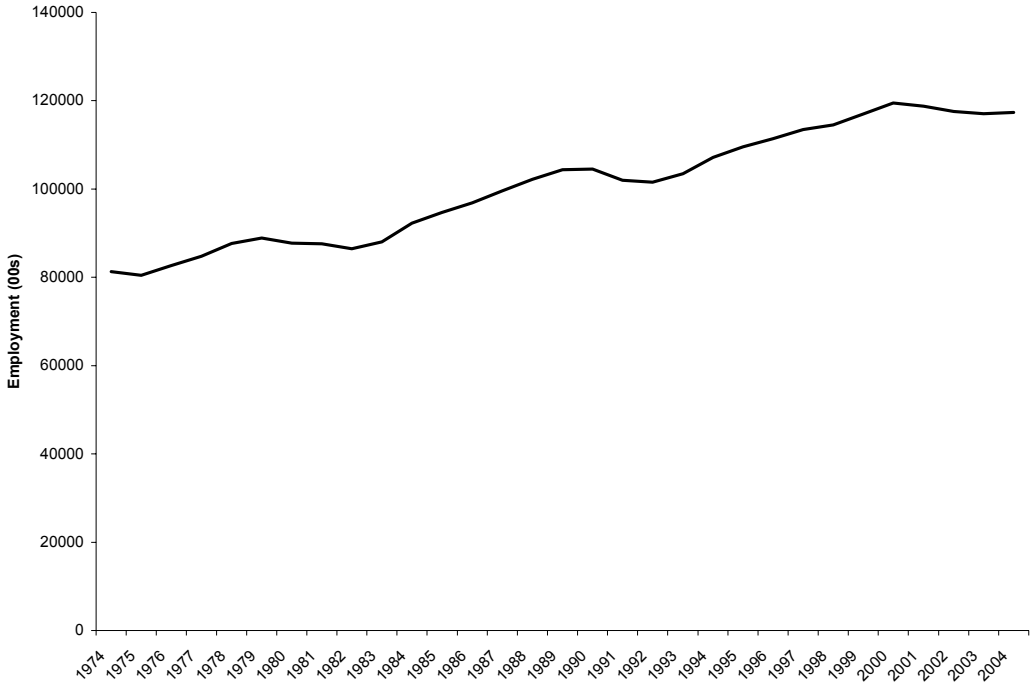


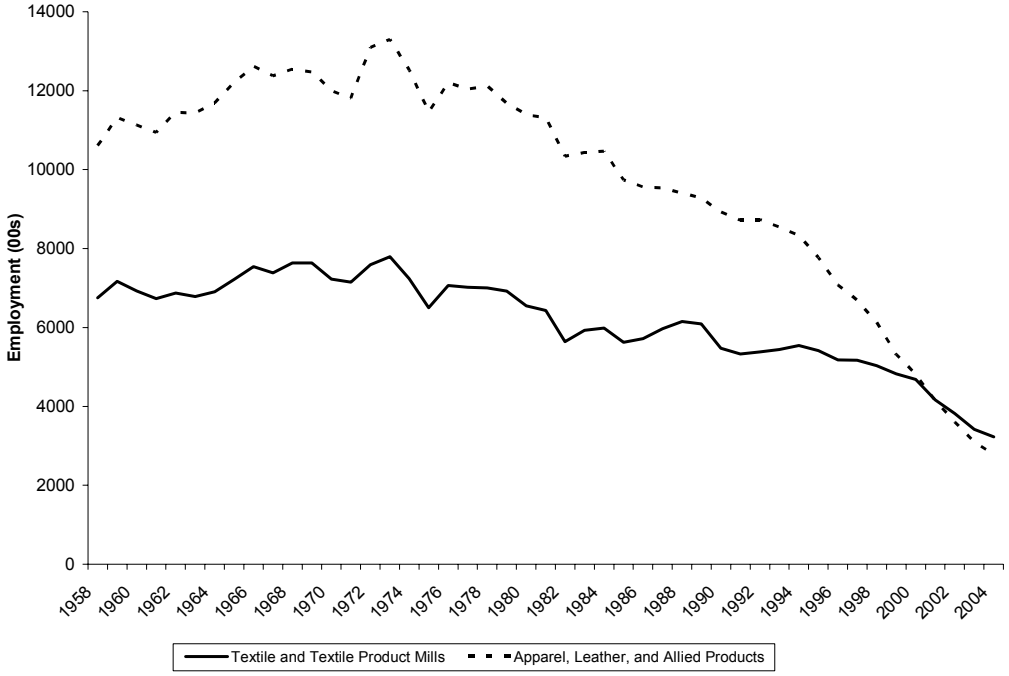
Figure 12: U.S. Retail Employment, 1974-2004



Source: Bureau of Labor Statistics

United States, it remains an industry which can be developed with relatively little investment by third world nations seeking to industrialize. Apparel manufacturing has eluded any significant degree of mechanization and therefore remains very labor-intensive, and has also diffused rapidly to developing countries, especially in East Asia (Dicken 2003: 320). The threat of foreign competition to domestic production and employment was felt especially early in the apparel industry, beginning in 1955 to put pressure on wages and weaken unions (Tyler 1995: 265). Employment in both textile and apparel production has fallen in the United States since the early 1970s, with the decline being particularly steep in the apparel industry (see Figure 13).

Figure 13: U.S. Textile and Apparel Production Employment, 1958-2004



Source: Bureau of Labor Statistics

As competitive pressures have increased in the textile and apparel industries, the retail industry has undergone significant restructuring and reorganization. The 'retail revolution' which began in the 1970s led to an explosive growth in the industry, leading to overcapacity and fierce price competition in a slowly growing consumer market. It had two major consequences. First, it led to the growth of department stores into powerful national chains. Second, it led to a wave of mergers, acquisitions, and bankruptcies which resulted in the consolidation of the market into a handful of powerful firms (Bonacich and Appelbaum 2000: 79-80). Another development has been the emergence of discount mass merchandisers, such as warehouse clubs (Costco, Sam's Club), "category killers" (Home Depot, Staples), and discount general merchandisers (Wal-Mart, K-Mart), to compete with the national department stores (Stone 1995: 12-13). Discount mass merchandisers generally follow a strategy of selling high volumes of merchandise at low cost, in contrast to the department stores' higher-end market strategy. Department stores also face increased competition from specialty clothing stores (such as Gap) targeting niche markets (Bonacich and Appelbaum 2000: 84-5). The competitive environment was exacerbated by product proliferation, which increased the uncertainty, costs, and risks associated with holding inventory. Product proliferation has caused the demand uncertainty that had been previously been associated only with high-fashion items with short selling lives to be extended to the most basic clothing products (Abernathy *et al* 1995: 190). This trend is in part the result of retailers' attempts to increase their own market shares by increasing market variety (Abernathy *et al* 1995: 193). Retailers have also developed their own "private label" brands so that they can

bypass the brand-name merchandisers and reduce their power in the commodity chain (Bonacich and Appelbaum 2000: 99).

The increasingly competitive nature of the retail market, the increasing market power of retail firms, and the increased demand uncertainty resulting from product proliferation and weak consumer markets have all contributed to the pressure to improve the speed, flexibility, and efficiency of the textile-apparel-retail commodity chain. Since this is a buyer-driven commodity chain, the impetus for change has largely been driven by retailers attempting to more effectively target consumer demand, and therefore has developed into a quite different form of competitive response than that developed in the automobile industry, as discussed in the previous chapter. The model of flexible production which was developed and proliferated in the clothing industry has been termed "lean retailing" (Abernathy *et al* 1999). In the following section I will discuss the basic features of lean retailing and how the diffusion of this model has impacted apparel and textile producers in the clothing industry.

FLEXIBLE PRODUCTION IN THE CLOTHING INDUSTRY: LEAN RETAILING

The application of the lean production paradigm to the clothing industry has produced a somewhat different organizational structure than that of other, more capital-intensive sectors, such as the automobile industry. The market conditions facing the industry, however are not unique: overcapacity, intense international competition, market saturation and weak consumer demand provide most of the impetus for reorganization and rationalization. The key to profitability has proven to be flexibility and quick response to changes in consumer demand, rapid commercialization of information, and the reduction of costs resulting from waste of all types, particularly that embodied in unsold inventory and unnecessary fixed capital investments. The buyer-driven nature of the clothing industry means that the information which can be most profitably harnessed is information on consumer purchasing patterns, and so the improvement of information systems linking the point-of-sale where consumers purchase products to the factories where these products are manufactured and assembled has been more important than transformations in the organization of production itself. Work reorganization has, in fact, been undertaken mainly in response to changes in the information and distribution systems. The general point is that while in producer-driven commodity chains, improvements in quality and efficiency in the production process are the key to profitability (and therefore harnessing information generated at the point of *production* can provide a key source of competitive advantage), in buyer-driven chains the key to profitability is improvements in the ability to communicate information on consumer demand (generated at the point of *sale*) to producers and then to act on this information to move products rapidly and efficiently to the store shelf.

The traditional retail model was a "push" system, in which retail buyers purchased large quantities of each product line several months ahead of the selling season, using their judgment and expertise to predict consumer demand. Retailers then did their best to unload inventory stockpiles on customers before the end of each selling season (Abernathy *et al* 1999: 42). The costs associated with this traditional model became more clear and more of a burden as competition increased and product proliferation continued unabated. Unsold goods had to be continuously marked down to be sold at the end of the season; stock-outs resulting from faulty predictions of a products popularity led to lost sales revenue; and large inventories in stores and warehouses carried substantial costs in both overhead and risk (Abernathy *et al* 1999: 48). On the other hand, retail buyers could shop around for the lowest-cost producers and speed of delivery was generally not important. There was pressure on apparel firms to cut costs, but the typically large runs purchased by retailers lowered uncertainty and the long lead times (several months) between order and delivery complemented the form of production organization dominant in the apparel industry, which was designed to minimize direct labor costs at the cost of long throughput times (the time it takes for a complete garment to move through the entire assembly process).

Lean retailing marks a dramatic break with the traditional model, from a "push" system to a "pull" system where information on actual customer purchases replace buyers' forecasts as the basis for production orders (Abernathy *et al* 1999: 49). Retailers responded to the changing market conditions of the globalized production SSA not by undertaking work reorganization or by transforming labor-management relations, but by investing in information technology and inventory management systems which would

reduce waste and inventory risk and increase the flexibility of the supply network (Bailey and Bernhardt 1997: 190). Lean retailing allows retailers to offer a greater product variety at a lower cost than the traditional model, and is means of "reducing exposure to market demand by constantly adjusting the supply of consumer products available at retail outlets to match actual levels of market demand," (Abernathy *et al* 1995: 184-5). Lean retailers no longer place orders for large runs of each product line months in advance of the selling season. Instead, they order minimal runs and require their suppliers to replenish products as they are sold to customers. This is facilitated by advances in information technology, especially bar codes, which allow for the tracking of individual products from the time of procurement to the time of sale as well as identifying the contents of shipping containers, and electronic data interchange (EDI), which allows suppliers to receive orders and payments electronically and in some cases to track customer purchases in real time (Abernathy *et al* 1995: 199). This new orientation requires apparel producers to respond much more rapidly and to be much more flexible in order to be able to provide the exact quantity and mix of products demanded by retailers in a prompt manner. As a result, retailers no longer evaluate their suppliers based solely on considerations of cost. The ability to adopt and utilize the information technology systems and to respond rapidly, accurately, and flexibly to retailers' orders have become equally important considerations (Abernathy *et al* 1995: 186).

The system of manufacturing dominant in the apparel industry is one which, like lean retailing, emphasizes flexibility at the network level rather than at the point of production. The system of contract manufacturing reduces the overhead and risk of the

large manufacturers and merchandisers by providing them with excess capacity or allowing them to avoid engaging in any manufacturing whatsoever. Fluctuations in demand are responded to by hiring or dropping contractors, providing a great degree of numerical flexibility (Bonacich and Appelbaum 2000: 12). This numerical flexibility is eventually passed on by the small contractors to workers themselves, who are paid only for the work they perform, offered no job security, and are simply laid off or rehired with each fluctuation in demand (Bonacich and Appelbaum 2000: 137). The contract system also renders large portions of the production chain invisible. The large merchandisers and manufacturers are highly visible, and generally treat their employees relatively well and attempt to maintain a positive public image. Underneath these visible upper tiers of production rest a myriad of small producers who are largely unseen by the public and often subject their workers to deplorable working conditions (Hurley 2005: 99). Indeed, the contract system has revived the sweatshop and given it an integral role in global manufacturing networks. The contract system externalizes risk and lowers labor risk while allowing retailers, merchandisers and large manufacturers to evade moral and legal responsibility for poor working conditions in their contractors (Bonacich and Appelbaum 2000: 136). It also helps thwart unionization since "not only do workers in the same production system not know one another, but also their membership in that production system may keep changing," (Bonacich and Appelbaum 2000: 140).

Large manufacturers develop the production networks which characterize the contract system by developing long-term relationships with a few key "core" contractors in an area and then developing links to smaller "peripheral" contractors through the core contractors (Palpacuer 2002: 59-60). The relationships between large manufacturers and

core contractors form the "backbone" of the production system, and allow manufacturers "to meet the simultaneous needs for production quality, flexibility, and cost control," (Palpacuer 2002: 59). Core contractors may be relatively well-off and treat their employees better than the smaller producers, offering high wages and decent working conditions and investing in training. Around this relatively well-paid workforce, however, is assembled a system of temporary workers and subcontractors to absorb demand fluctuations (Palpacuer 2002: 64).

Within apparel manufacturers, changes in the organization of production has not been widespread. The progressive bundle system (PBS), which has been the standard form of production organization in the industry since the early 1900s, is still dominant. PBS breaks down the assembly of garments into a large number of small, simple sewing operations. Each worker receives a bundle of materials and performs the same operation on each piece before re-bundling them and passing them along to the next work station. PBS minimizes the direct labor cost of producing a garment by breaking the production process into a series of simple, repetitive tasks which can be easily mastered by relatively unskilled workers. However, since inventory buffers between operations are substantial, the time it takes for a complete garment to move through the system is rather long. Although a typical garment only contains a few minutes of direct labor content, it can take several weeks for the assembly of a single garment to be completed (Dunlop and Weil 1996: 337). Add to this the time required to transport products from the factory to the retailers' sales floor, and it often becomes impossible for apparel manufacturers to produce garments to order by retailers in the short time required to replenish depleted inventories, advanced information systems notwithstanding. Apparel manufactures are

left with two options: adopt a new system of production with shorter lead times, or hold large stocks of inventory and assume the costs and risks associated with it (Abernathy *et al* 2004: 27). While holding large inventory stocks requires contractors to engage in the same demand forecasting which was abandoned by retailers and to absorb the costs of unsold items and stock-outs that result from faulty predictions, it allows them to continue to pursue a cost-minimizing production strategy, seeking to minimize direct labor costs and locating production in the lowest-cost location possible.

The development and diffusion of lean retailing has affected both the geography of production and the organization of the production process to varying degrees. Lean retailing has contributed to a relocation of apparel producers to locations closer to their suppliers and customers (Hurley and Miller 2005: 30). Since different products require different degrees of replenishment (standard items such as t-shirts require a much lower degree of replenishment then fashion items), lean retailing has had the most impact on producers of high-replenishment items. Time and distance are increasingly important, so producers of high-replenishment items tend to be located closer to their customers. This can be demonstrated in the composition of trade; in 1999, eight out of the top ten apparel items imported from Mexico were high-replenishment items, compared to only two out of the top ten items imported from China (Abernathy *et al* 2004: 39). This also provides a niche for domestic manufacturers, since the higher labor costs they must pay can be compensated by being able to increase the speed they are able to respond to and fill retailers' replenishment requests (Abernathy *et al* 1999: 127).

There is also a correlation between the degree of replenishment pressure and the adoption of new, more flexible systems of production organization. Modular production

and the unit production system (UPS) both offer flexible alternatives to PBS, shortening throughput times from two weeks or more to just a few days (Abernathy *et al* 1995: 217). Module production is a form of team-based production which involves the grouping of similar or related operations into tasks which are assigned to teams of workers operating clusters of machinery to produce all or part of a garment (Dunlop and Weil 1996: 338). Castro *et al* define a module as "a team of workers assigned to the production of a specific product, organized so that the product flows in a quick and synchronized way according to the order of its operations," (2004: 303). In addition to reducing lead and throughput times, modules can reduce costs by requiring fewer supervisors and quality inspectors and reducing work-in-process inventories (Berg *et al* 1996: 366-7). When properly implemented, modular production can result in improved efficiency, with higher levels of human resource and machinery utilization versus PBS (Castro *et al* 2004: 306).

There is a strong correlation between high replenishment pressure and the adoption of modular production, although modular production remains utilized by only a small percentage of apparel producers (Dunlop and Weil 1996: 351). Managers who have implemented modular production systems cite pressure from retailers as the primary reason for adoption (Dunlop and Weil 1996: 342; Abernathy *et* al 1999: 173; Hamilton *et al* 2003: 476-7). Modular production is also more likely to be adopted by producers who have implemented the information systems required by lean retailers (Dunlop and Weil 1996: 335). The implementation of these information systems, furthermore, is statistically correlated with the degree of replenishment pressure (Abernathy *et al* 1995: 214). Ian M. Taplin (1995) argues that apparel producers have pursued three general strategies to reduce costs and improve efficiency in response to market conditions

demanding increased speed and flexibility. These strategies have been oriented towards the introduction of microprocessor technologies into the garment preparation functions (design, grading, marking and cutting), the implementation of computerized monitoring systems to track the flow of materials and monitor workers' output, and technological and organizational changes to improve assembly productivity (Taplin 1995: 421). In this context, managers sought flexibility through the systems by which they coordinated the various functionally distinct assembly tasks, rather than by more fundamental changes to work organization (Taplin 1995: 421). Decisions regarding investments in work reorganization and technology by apparel producers have been constrained by the intense cost competition in the industry, which requires capital investments to pay off fast and makes investments in training difficult for most firms to afford (Sels and Huys 1999: 126).

Textile producers have also felt pressure to increase their flexibility and to respond more rapidly to changes in demand, but apparel producers have acted as somewhat of a buffer by absorbing most of the pressure from lean retailers. Textile producers have had more time and money to invest in and experiment with new technologies, and have been able to increase productivity significantly in recent decades (Chaykowski *et al* 1994: 382). Investments in "quick response" technology and EDI have increased flexibility and speed, and provided American textile producers with a source of competitive advantage lean retail supply chains (Chaykowski *et al* 1994: 383). Of course, domestic textile producers have also enjoyed advantages deriving from American tariff codes, which allow the re-importation of garments assembled abroad from American-made textiles at a lower rate than those assembled from foreign-made

textiles. The increasing technological sophistication of textile capital appears to be biased towards larger firms, leading towards concentration in the industry (Truchil 1988: 12). Although international competition remains fierce, the global market is segmented in such a way as to allow producers in the United States and other developed countries to specialize in product niches producing higher-end textile products which require high levels of capital investment (Chaykowski *et al* 1994: 380-1). Therefore, American textile producers do not face the same degree of cut-throat competition as apparel producers and have pursued a somewhat different strategy to meet the demands of lean retailing and international competition.

IMPLICATIONS FOR RETAIL, APPAREL AND TEXTILE WORKERS

Workers in each sector of the textile-apparel-retail commodity chain have fared relatively poorly under the globalized production SSA, as managers have generally pursued a labor relations policy of intensification. Price competition among retailers and intense international cost competition in the apparel and textile industries have resulted in firms pursuing flexibility in networks, information systems and supply chains rather than in training, human resource development, or work reorganization. The communication and distribution channels have been streamlined, while workers have simply been required to work harder, longer, or under closer supervision. With information at the point of sale being the most important source of value and profit in the commodity chain, workers in apparel and textile operations have few sources of bargaining power in their relationships with their employers. The low skill content of work in these industries and the ease with which new producers can enter and exit the market makes individual workers (and indeed entire plants) highly expendable.

Although retail firms are the most powerful and profitable firms in the clothing industry, retail workers do not see much of the benefits of their employers' position in the system of production. Job quality and wages in the retail sector are poor. Retail employs the highest percentage of part-time employees in the American economy (approximately 48 percent as of 1996) (Duggan 2001: 101). Union density has historically been far below the national average, and has declined steeply since the 1970s (see Figure 14). Although management gurus tout the economic benefits of retail firms that employ an empowered, well-trained workforce (see Stone 1995: 177-9), retail jobs continue to experience a "trend towards the deskilling of work to create jobs that can be filled with

Figure 14: U.S. Department and Discount Stores: Percent Union Members, 1983-2005

Source: Unionstats.com

cheaper workers," (Duggan 2001: 102). Retailers have sought to achieve greater efficiency and flexibility by investing in information technology and refining their distribution systems, rather than by changing their human resource practices (Bailey and Bernhardt 1997: 190). Intense price competition, especially among discount mass merchandisers, causes productivity gains and cost savings to tend to result in lower sale prices rather than higher wages (Bailey and Bernhardt 1997: 195). Turnover in the retail industry is high and rising, keeping employee productivity low and providing a disincentive for employers to invest in training for their employees (Duggan 1997: 103). This "churning" of employees also keeps wages low and stifles unionization (Dicker 2002: 16). Wal-Mart, the largest retailer (and in fact the largest private sector employer) in the United States, has engaged in an active, constant and fierce anti-union campaign

which includes the termination of pro-union employees for minor transgressions, a 24-hour "Union Hotline" for store managers to call if they suspect union activity, and the banning union organizers from Wal-Mart property (Dicker 2002). Lean retailing is essentially increasing the efficiency of the industry without increasing the productivity of the workforce, by reducing waste or outsourcing it down the commodity chain. Bailey and Bernhardt write that "we may be witnessing the emergence of a service business sector that is at once highly rationalized and productive and yet also labor-intensive and low-wage," (1997: 195).

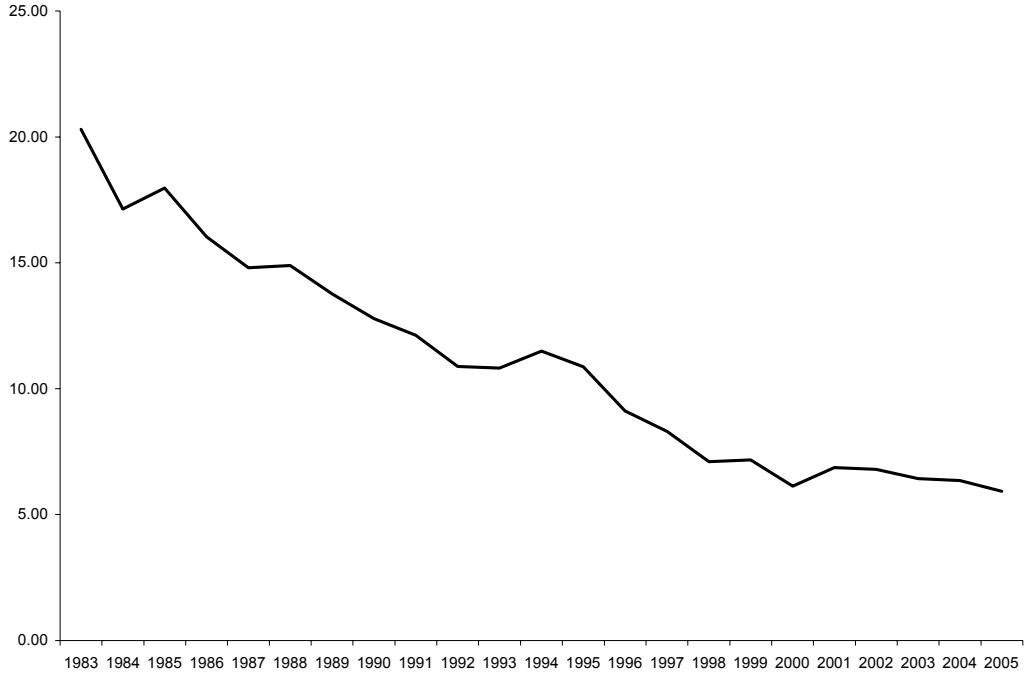
In the apparel industry, work conditions have either remained poor or worsened with the development and diffusion of lean retailing. Lean retailing and the contract system have helped to bring about the return of the apparel sweatshop, both in the United States and abroad. The sweatshop system in the American apparel industry had been largely eliminated in the early decades of the twentieth century by the efforts of apparel unions such as the International Ladies' Garment Workers Union (ILGWU) and the Amalgamated Clothing Workers' Union (ACWU). The apparel industry at the turn of the twentieth century was much the same as it is today. Production was dominated by small contract shops that filled orders for large manufacturers (or "jobbers"), who relied on cutthroat competition among the contractors to keep costs down (Tyler 1995: 22-3). Workers were segmented between relatively secure and well-paid jobs in large manufacturers and contingent, hazardous, and difficult work in contract shops. Contractors and their workers were at the mercy of the manufacturers, since "there were always too few manufacturers and jobbers offering work and too many contractors and workers competing for the bundle," (Tyler 1995: 23). The unions, which adopted a

quasi-industrial organizing strategy much earlier than their counterparts in other industries, eventually were able to serve as a regulating force in the industry. Unions forced manufacturers to only do business with unionized contractors, thereby halting the "race to the bottom" of cutthroat cost competition among the contractors. But as production became increasingly international following World War II, the unions were unable to maintain their monopoly on apparel labor and their power to act as regulating agents began to wane (Tyler 1995: 262-70). Without strong unions to regulate employment in the myriad of small contract shops that dominate apparel production, competition for the business of merchandisers and retailers has produced cutthroat cost competition that has led to the degradation of wages and working conditions and brought about the return of the sweatshop in the garment districts of cities like New York and Los Angeles. The dramatic decline of union density in the apparel industry over the past two decades is illustrated in Figures 15 and 16.

Flexible production systems, such as modular production, are considered by many experts to be the key to apparel producers' future competitive success in the market environment created by lean retailing (Abernathy *et al* 1999: 108). Yet, as noted above, their diffusion so far has been limited. Modular production is considered by proponents to be both more efficient and flexible as well as creating more empowering and fulfilling work for employees. According to Berg *et al*, modules allow the integration of learning and problem solving into the production process (1996: 370). Furthermore, the authors write,

> Module workers have more influence over how the garment is assembled, are more likely to know how to adjust their machines, have greater opportunity to learn new things and be creative, and are more likely to find their work challenging. Workers in modules also have more influence than those in bundles over specific tasks or work

Figure 15: U.S. Apparel, Textile, and Footwear Production Industries: Percent Union Members, 1983-2005



Source: Unionstats.com

Figure 16: Textile Cutting and Sewing Machine Operators, Percent Union Members 1983-2005

Source: Unionstats.com

> assignments and over product quality improvement. In addition, module workers have the ability to regulate and coordinate their own work processes. Workers in modules are more likely than those in the bundle system to have responsibility for setting production goals, selecting work methods, and stopping production to deal with quality problems. They are also more likely to get adequate time to meet and solve problems (Berg *et al* 1996: 362).

The evidence, however, belies this description. Berg *et al* note that module workers are neither more satisfied by nor more committed to their jobs, and actually report increased levels of stress (1996: 369). Ian Taplin writes that changes in the organization of work in the apparel industry are largely cosmetic (i.e., teams as a glorified system of job rotation) and oriented more towards the intensification through peer pressure or monitoring via microelectronic technology (1995: 428-30). Both team-based production and computer monitoring systems have been implemented in ways which allow producers to keep the benefits of a low-wage, unskilled workforce while gaining the benefits of flexibility and more intensive, fast-paced work (Taplin 1995).

Most apparel producers continue to rely on some form of the progressive bundle system and numerical, rather than functional, flexibility in their workforce. In both large and small producers, "the sewers primarily have to work quickly and without mistakes and do not have to worry about matters above and beyond the work station," (Sels and Huys 1999: 125). Seasonal fluctuations in demand, high employee turnover, the ease of entry and exit which creates a continuous churning of apparel producers, the low skill- and capital-intensity of production, intense international competition, and the traditionally "low-road" approach to labor relations in the industry have all predisposed apparel producers to pursue intensification rather than work reorganization in order to achieve the flexibility demanded by lean retailing and the globalized production SSA. Apparel workers are contingent workers, typically employed only when their work is

needed and paid for the exact amount of work performed (Bonacich and Appelbaum 2000: 188). Workers in the industry experience health and safety risks, and are paid piece wages (payment based on number of operations performed or units completed) that frequently put them below minimum wage (Bonacich and Appelbaum 2000: 177-8). Workers typically have no benefits or job security (including frequent layoffs with seasonal fluctuations in demand), in many cases must purchase their own tools and equipment, and industrial homework (workers taking work home with them or simply working from their homes) is common (Bonacich and Appelbaum 2000: 183-5). Workers in the small contract shops also report frequent bullying, abuse, and mistreatment by their employers (Bonacich and Appelbaum 2000: 189).

There is significant divergence between the larger manufacturers, which are more visible and generally treat their workers better, and small contract shops which operate below the radar and frequent break labor, employment and workplace safety laws. The managerial strategy and labor relations model being implemented in both large and small apparel producers, nonetheless, is similar, and the work conditions in the small contractors provides downward pressure on wages and other costs in larger manufacturers. Further, the 'tiered' organization of the industry and the dispersed organization of employment embodied in the contract system makes union organization extremely difficult. As Jennifer Hurley writes, "subcontracting allows businesses to break up their production locations, and the result is that many workers do not know who their co-workers are, so they cannot unite with them; nor do they know who their employers are, so they cannot unite against them," (2005: 129). The organization of the contract system makes organization efforts not only difficult, but somewhat futile. While

the direct labor cost embodied in a garment is an extremely low proportion of the total sales price (for example, six dollars of a one hundred dollar dress), the profit margins of the contractors who employ the workers to sew the garment is extremely small (Bonacich and Appelbaum 2000: 2). There is no room for small contractors to raise wages without raising prices, and in the fiercely competitive environment of the apparel industry this would most likely put them out of business. As Bonacich and Appelbaum note, "contractors can truthfully tell their workers that, if they unionize, their shop will be boycotted by almost all manufacturers and will not receive the work it needs to remain in business. The contracting system enables manufacturers to distance themselves from any contracting shops that show any signs of labor trouble," (2000: 139).

The organization of the commodity chain suppresses unionization efforts at nearly all points in the production system, with the exception of some large manufacturers whose market power enables them to afford higher wages and better working conditions for their employees. Although it would be theoretically possible to raise wages for production workers by as much as one hundred percent without substantially increasing the retail sale prices of the garments they produce (Pollin *et al* 2001), in practice this would require a coordinated effort by retailers, merchandisers, large manufacturers and contract shops which would be an enormously difficult undertaking. Reviving the successful strategy of the ILGWU, the Union of Needletrades, Industrial, and Textile Employees (UNITE) began experimenting in the 1990s with organizing campaigns designed to force large manufacturers to agree to only contract with union shops. The strategy had limited success (Bonacich and Appelbaum 2000: 267). This strategy has promise because it allows for the unionization of the small, dispersed subcontractors

without fear of them losing contracts. On the other hand, it fails to solve the problems posed by competition among large manufacturers as well as the pressure on manufacturing networks from retailers. Other organizing strategies have included exploiting merchandisers' and retailers' sensitivity to maintaining a positive public image by publicizing abuses and poor treatment of workers in their subcontractors. This strategy led to some notable successes, such as union recognition in *maquiladoras* in El Salvador's previously union-free export processing zone, but these successes have been modest and ephemeral (Anner 2003).

Workers in the textile industry are considerably better off than their counterparts in apparel production. Although historically a very anti-union industry, recent trends in the textile industry are actually indicate a more favorable environment for unionization efforts. Geographically concentrated in the American southeast, the textile industry has relied on a combination of paternalism, violent suppression, and state and local government support to resist unionization (Truchil 1988: 61-3; 102). Constant relocation of production further south and dramatic failures to organize textile workers in the twenties and thirties led to low rates of unionization and a low propensity to strike, as well as low average wages in the industry (Truchil 1988: 145). More recently, however, increasing productivity and an increasing skill content of labor have reduced the importance of wages as a source of competitive advantage in the American textile industry (Chaykowski *et al* 1994: 382-5). This is, in part, due to incentives provided to textile firms to invest in technology and mechanization by the federal government in the 1960s in order to address the threat of foreign competition (Truchil 1988: 111-2). The increasing technological sophistication of textile capital and growing economies of scale

have raised entry barriers and reduced competition, while the increasing productivity and skill content of labor have reduced the downward pressure on wages, providing a somewhat favorable environment for organized labor, in stark contrast with conditions in the retail and apparel industries.

Workers in each of the industries comprising the textile-apparel-retail commodity chain face disparate conditions and represent divergent interests, yet their fates are intertwined. Outside of textile producers and some large apparel manufacturers, the prospects for workers in any one plant to unionize are limited. Attempting to coordinate and simultaneously organize workers across the different nodes and tiers of the commodity chain (especially those which transcend national borders), however, would be a task of Herculean magnitude. The clothing industry is an excellent example of how the very structure of a production system can severely restrict the ability of workers to individually or collectively improve their conditions of employment. It also demonstrates very explicitly that a flexible production system consistent with the lean production paradigm can be less empowering and more exploitative and intensive towards workers while still meeting the requirements of quality, flexibility, adaptability, and waste reduction. It also illustrates that the enterprise corporatist model being advocated by many proponents of lean production is not applicable to all cases and industries, as organizing at the level of the individual plant or firm would be futile in the context of the apparel or retail industries, where competition is intense and profit margins are slim.

VIII. CONCLUSION

In this thesis, I have attempted to demonstrate that the globalization of production has weakened the power and efficacy of labor unions in the United States. I have done this by describing the globalization of production as a set of transformations in the institutional structure of the economy and in the organization of production, and describing how these transformations have impacted workers and unions in the American economy. Through case studies on the automobile and clothing industries, I have shown how the way in which these transformations have materialized in the specific contexts of two industries with different competitive conditions, organizational structures, and levels of capital-intensity, and have produced very disparate and dissimilar outcomes for the workers in these industries.

In what follows, I will offer a summary of my argument and key findings. I will then proceed to offer a few remarks on the implications of these findings on public policy, union strategies, and the larger debate about the importance and implications of the globalization of production.

SUMMARY OF ARGUMENT AND KEY FINDINGS

I have argued that the globalization of production represents a set of interrelated transformations in the macro-institutional structure of the economy and in the organization of production. These transformations are responsible for the changes in the competitive conditions, the employment relationship, and the role of the state in relation to the economy which are characteristic of and associated with the globalization of production. The changing circumstances and economic conditions which these transformations have produced, and the failure of labor unions to understand, appreciate, and effectively respond to them, have been responsible for the rapid and sustained decline in the membership, power, and efficacy of organized labor in the United States.

The theoretical framework I have used to present my argument is the social structure of accumulation approach. This approach emphasizes the importance of the institutional structures of capitalist economies and the way in which their interaction with forms of production organization and systems of labor control helps to determine levels of aggregate economic growth, the profit rates of individual firms, and the distribution of power, resources, and wealth among different classes, groups, and individuals in the economy. A social structure of accumulation consists of those institutions which effect, regulate, or impinge upon the process of *accumulation* (investment, production, and exchange), and is necessary for the healthy functioning of a capitalist economy. The consolidation of a social structure of accumulation is associated with a period of economic growth and expansion, while the breakdown and decay of the social structure of accumulation is associated with a period of protracted crisis and stagnation. From this period of crisis and the instability and turmoil it produces arise the ideas, organizational

innovations, and institutional responses which will eventually be consolidated into the next social structure of accumulation.

These social structures of accumulation, therefore, represent and demarcate successive, qualitatively distinct stages of capitalist development. Each social structure of accumulation is associated with a specific techno-economic paradigm and a specific form of production organization. The SSA creates the enabling conditions for rapid capital accumulation by providing an institutional milieu in which the maximum potential of these techno-economic and organizational paradigms can be realized. I have attempted to substantiate this argument by examining in detail the transition from the segmentation SSA (1945-1970s) to the globalized production SSA (1970s-present).

The segmentation social structure of accumulation was born of the crisis of the Great Depression and consolidated during the mass mobilization of the Second World War. These two dramatic experiences resulted in an institutional structure which was predicated on the achievement of stability and security through rational planning and bureaucratic management. The Fordist mass production paradigm, with achieved predominance under segmentation, was based on similar principles. Fordism depended on the realization of economies of scale through the production of large quantities of standardized products, and therefore benefited from healthy and stable levels of aggregate demand capable of absorbing large numbers of consumer goods. Corporations relied on rational planning, complex bureaucratic hierarchies, and rigidly defined systems of job classifications to manage their enterprises.

The globalized production social structure of accumulation, in contrast, was born of the stagflation crisis of the 1970s. During this period, the stability and security of

segmentation and Fordism began to be perceived as rigidity and inflexibility, and the institutional structure which produced the globalized production SSA would place a premium on flexibility, creative destruction, and network-based forms of organization. The lean production paradigm, which evolved with and became dominant under the globalized production SSA, is based on the pursuit of constant innovation and cost-reduction, and the use of high levels of pressure and stress to find and eliminate sources of slack or waste in networks and systems of production. Lean production emphasizes flexibility and the quick response by firms to changes in technology or fluctuations in consumer demand.

I have shown how, in the automobile industry, lean production has taken the form of a cooperative labor relations strategy consistent with enterprise corporatism. Automobile producers have sought to harness workers' knowledge generated at the point of production, emphasizing continuous improvement (the continuous refinement of products and processes and the rapid commercialization of innovations). Since the automobile industry is a capital- and technology-intensive industry in which innovations at the point of production are an important source of competitive advantage, management has sought (by consent or coercion) to elicit greater contributions from workers in the production process. There has been an emphasis on functional flexibility, the implementation of team-based forms of work organization and the investments in the training and multi-skilling of workers so that they can be deployed at different points in the production system where needed.

I have also shown that, in the clothing industry, the lean production paradigm has been applied in a manner which has resulted in a labor relations strategy of

intensification. The clothing industry is a low-technology, labor-intensive industry where information generated at the point of sale (information on consumer demand) is the most important source of competitive advantage. Therefore, quick response and flexibility have been achieved by integrating information systems and streamlining distribution channels, while increasing the pace, intensity, and insecurity of work at the point of production. Flexibility has been primarily numerical rather than functional, with production networks and individual producers constantly adjusting the size of the workforce in response to fluctuations in demand.

The institutional structures and organizational strategies of labor unions, which were consolidated under the segmentation SSA, were well adapted to the Fordist mass production paradigm. Industrial unionism was based on the "one shop, one union" principle in which bargaining units were coterminous with the workplace and workers were organized according to industry rather than occupation or craft. Job control unionism was based on a contractual, adversarial relationship between unions and management. It relied on complex systems of job classifications, seniority-based pay and job security structures, and exchanged union control over the content and conditions of individual jobs for management's unchallenged prerogative over strategic decision-making. Unions became centralized and adopted a bureaucratic organizational structure which mirrored that of the Fordist corporation.

These institutional structures and organizational strategies, however, are not well adapted to the lean production paradigm. The failure of labor unions in the United States to transform and adapt to the realities of lean production and the globalized production SSA have drastically reduced their ability to maintain or expand their membership, bring

benefits and protections to workers, or effectively exercise power in the workplace. At a deeper level, it has weakened unions' legitimacy and public image in American society.

IMPLICATIONS OF FINDINGS FOR PUBLIC POLICY, UNIONS, AND RESEARCHERS

I will now offer a few remarks on what I believe is the relevance of my findings to public policy, organized labor, and researchers studying the globalization of production. I will refrain from making specific recommendations regarding policies or organizational strategies, since this is beyond the scope of my research, and limit the following to recommendations at the broader conceptual level.

With regard to public policy, my findings suggest that several changes are overdue in the legal frameworks dealing with collective bargaining and unions. The most important pieces of legislation, which established the bipartite model of labor relations and encouraged industrial and job control forms of unionism, were written and passed to confront the realities of the mass production paradigm and the segmentation SSA. The National Labor Relations Act, which established the National Labor Relations Board that conducts union certification elections and deals with unfair labor practice complaints, is biased towards an adversarial, "one shop, one union" model of unionism. It specifies the bargaining unit as the workplace (rather than, for example, the work team, occupation or enterprise) and stipulates that union certification requires the union to receive a majority of the vote in elections among the entire bargaining unit, to represent and bargain on behalf of the entire unit. This makes successful certification difficult in all except very specific conditions, for example, in an organization of production where interests among workers are tied to their geographical location of employment.

Legislation to restore the balance of power between labor and capital and to reverse the decline in the membership, power, and efficacy of organized labor needs to be

adapted to the conditions of the lean production paradigm and the globalized production social structure of accumulation. If not, they will empower workers and unions only at the expense of economic growth and innovation and will, in the long run, do even more damage to the labor movement as it comes to be seen as a selfish, conservative or reactionary force. For example, laws which promote job or employment security need to be reconciled with the demand for flexibility which is a ubiquitous characteristic of the globalized production SSA.

Laws granting workers greater protection from intimidation, fear of unemployment, or the relocation of their jobs could increase workers' bargaining power while not necessarily restricting firms' flexibility, other than the "low road" flexibility represented by depressing wages, "churning" employees and chasing low-wage labor around the country and globe. In industries such as apparel, where the ability of firms to distance themselves from immoral or illegal labor practices has allowed core firms to benefit from the poor wages and working conditions in their suppliers, legislation which makes them legally responsible for the labor practices of their suppliers could eliminate some of the downward pressure on wages and profits in contractors. Similarly, laws requiring the registration of the firms that make up fragmented production networks would allow for the monitoring of such networks and the working conditions in each firm, enabling the legal protection of workers or at the least certification of products as sweatshop-free. These are a few examples of how public policy can be designed to protect or empower workers without being self-defeating and inhibiting profitability or economic growth.

With regard to labor unions, there are several ways in which they may be able to increase their effectiveness in spite of their current, disadvantaged position. Fundamentally, I believe that the problem is organized labor's singular emphasis on increasing membership as a solution to its declining power and efficacy. On the contrary, it is my opinion that unions must increase their power and efficacy if they want to expand their membership. Organized labor achieved dramatic and sustained success when it was able to effectively position itself as a tool for workers to increase their power in relation to management. The union contract has been the key instrument used to empower workers since the 1930s, by legally obligating management to bargain with labor unions representing a majority of the workplace. The contract, however, was only effective because it was combined with independent sources of power developed by workers – their ability to withhold their labor (strike), occupy the factory, or engage in other forms of collective action to disrupt production. Workers have lost their independent sources of power as the ability to perform labor has been progressively devalued by redundancy, automation and an increasingly information-based economy. As I mentioned in Chapter VI, workers in industries such as automobile production, which exploit information generated at the point of production as a source of competitive advantage, may be able to develop an independent source of power through their ability to withhold information. In more labor-intensive and competitive industries such as apparel, however, this would not be an effective strategy. The only source of power workers may have in these industries may be their ability to bankrupt a firm by striking or shutting down production, which would involve a particularly high-stakes, reckless model of union organization which may nonetheless hold promise.

A similar criticism can be leveled at attempts by unions, as well as advocates and researchers, to foster an internationalist organizational strategy to combat the increasingly transnational character of production under globalization. With the proliferation of transnational production systems and the increasing power and importance of multinational corporations in the global economy, it may well be the case that internationalism as a union organizational strategy is necessary. However, a strong international labor movement requires strong domestic labor movements. Internationalism should not be seen as a solution to the declining power and membership of national unions, but rather as a strategy which would follow or coincide with the strengthening of organized labor domestically. Furthermore, internationalism must be based not on ideological or strategic desirability of uniting workers across borders, but on the principle of uniting workers with shared interests wherever they reside geographically. Not all workers in one country, let alone in the global economy, have the same set of immediate material interests. While they may share some general, abstract class interests, these have not proven to be a particularly effective foundation for constructing a labor movement. It is much more prudent and realistic to identify those workers in those production networks who share common material interests from which they can realize immediate, tangible benefits if they successfully organize. The primary purpose of labor unions, and the key to their past successes, has always been their ability to empower and produce benefits for their memberships. Solidarity and the advancement of class-based interests may be worthy goals but they are necessarily secondary in importance.

Unions are also increasingly unable to deliver the same types of benefits they brought workers under segmentation and mass production. The steadily rising wages and benefits of the capital-labor accord are more difficult to secure in an economy characterized by much slower and more uncertain demand growth, greater instability, and lower rates of profit. Unions would have a much greater chance of success if they focused on achieving long-term, strategic control of enterprises rather than contractually-negotiated material benefits. Strategic control would allow unions to introduce employee ownership and profit sharing programs which empowered workers and linked their compensation to the firm's performance. It would also prevent the whipsawing, intimidation, and capital flight which help keep wages depressed in mobile industries such as manufacturing. Management's cooperative philosophy and agenda also enhances this strategy's chance of success, as it brings workers into a position of self-management which would actually give them a material incentive in cooperation and make more realistic the claim that their interests actually were the same as those of the enterprise.

Finally, with regard to the relevance of my findings for researchers studying the globalization of production, I hope to have emphasized that changes in the organization of production and the economy should always be understood within a broader historical context and within the context of capitalism as a system. Rather than being consumed by the uniqueness of economic transformations, we should analyze these transformations in the context of the larger trajectory of economic, political, and technological development which have ultimately led to each transformation. As I have argued that these transformations are ultimately historically contingent, neither consciously planned nor

purely accidental, this deeper historical understanding can make much more discernible both the similarities and contrasts between an ongoing transformation and those which have preceded it.

Similarly, analyzing transformations in the organization of production and the institutional structure of the economy within the context of capitalism as a system makes possible a much greater understanding of the relationship between the transformations in the economy and the changes they produce in society, in terms of both the trajectory of political, economic, and technological development as well as the more immediate distribution of power, resources, and wealth among individuals, classes, and groups. I believe that this sort of approach to studying phenomenon such as the globalization of production will help contribute to a much richer, more meaningful body of research in the field of political economy.

REFERENCES

Abernathy, Frederick H., John T. Dunlop, Janice H. Hammond, David Weil, Timothy F. Bresnahan, and B. Peter Pashigan. 1995. "The Information-Integrated Channel: A Study of the U.S. Apparel Industry in Transition." *Brookings Papers on Economic Activity: Microeconomics* 1995: 175-246.

Abernathy, Frederick H., John T. Dunlop, Janice H. Hammond, and David Weil. 1999. *A Stitch in Time: Lean Retailing and the Transformation of Manufacturing—Lessons from the Apparel and Textile Industries.* Oxford University Press: New York.

Abernathy, Frederick H., John T. Dunlop, Janice H. Hammond, and David Weil. 2004. "Globalization in the Apparel and Textile Industries: What is New and What is Not?" In *Locating Global Advantage: Industry Dynamics in the International Economy,* edited by Martin Kenney and Richard Florida. Stanford University Press: Stanford.

Adler, Paul. 1995. "'Democratic Taylorism': The Toyota Production System at NUMMI. In *Lean Work: Empowerment and Exploitation in the Global Auto Industry*, edited by Steve Babson. Wayne State University: Detroit.

Anderson, Cynthia D., Michael D. Schulman, and Phillip J. Wood. 2001. "Globalization and Uncertainty: The Restructuring of Southern Textiles." *Social Problems* 48.4: 478-498.

Anner, Mark. 2003. "Segmented Production, Networked Solidarity: Labor's Response to Economic Globalization in the Americas." Unpublished. http://www.boeckler.de

Atkinson, Robert D. 2004. *The Past and Future of America's Economy: Long Waves of Innovation that Power Cycles of Growth*. Edward Elgar: Cheltenham, UK.

Babson, Steve. 1995a. "Lean Production and Labor: Empowerment and Exploitation." In *Lean Work: Empowerment and Exploitation in the Global Auto Industry*, edited by Steve Babson. Wayne State University: Detroit.

Babson, Steve. 1995b. "Whose Team? Lean Production at Mazda U.S.A." In *Lean Work: Empowerment and Exploitation in the Global Auto Industry*, edited by Steve Babson. Wayne State University: Detroit.

Babson, Steve. 1996. "UAW, Lean Production, and Labor-Management Relations at AutoAlliance." In *North American Auto Unions in Crisis: Lean Production as Contested Terrain*, edited by William C. Green and Ernest J. Yanarella. SUNY: Albany.

Babson, Steve. 1999. *The Unfinished Struggle: Turning Points in American Labor, 1877-Present*. Rowman & Littlefield: Lanham.

Bailey, Thomas R. and Annete D. Bernhardt. 1997. "In Search of the High Road in a Low-Wage Industry." *Politics & Society* 25.2: 179-201.

Baldwin, Robert E. 2003. *The Decline of US Labor Unions and the Role of Trade*. Institute for International Economics: Washington.

Bartezzaghi, Emilio. 1999. "The evolution of production models: is a new paradigm emerging?" *International Journal of Operations & Production Management* 19.2: 229-250.

Begin, James P. and Edwin F. Beal. 1989. *The Practice of Collective Bargaining.* 8th Edition. Irwin: Homewood, IL.

Belzowskiu, Bruce M. 1998. "Reinventing Chrysler." In *One Best Way? Trajectories and Industrial Models of the World's Automobile Producers*. Edited by Michel Freyessenet, Andrew Mair, Koichi Shimizu, and Giuseppe Volpato. Oxford University Press: New York.

Benería, Lourdes. 2001. "Shifting the Risk: New Employment Patterns, Informalization, and Women's Work." *International Journal of Politics, Culture, and Society* 15.1: 27-53.

Berg, Peter, Eileen Appelbaum, Thomas Bailey, and Arne L. Kalleberg. 1996. "The Performance Effects of Modular Production in the Apparel Industry." *Industrial Relations* 35.3: 356-373.

Bluestone, Barry and Irving Bluestone. 1992. *Negotiating the Future: A Labor Perspective on American Business*. Basic Books: New York.

Bonacich, Edna and Richard P. Appelbaum. 2000. *Behind the Label: Inequality in the Los Angeles Apparel Industry*. University of California: Berkeley.

Bordenave, Gerard. 1998. "Globalization at the Heart of Organizational Change: Crisis and Recovery at the Ford Motor Company." In *One Best Way? Trajectories and Industrial Models of the World's Automobile Producers*. Edited by Michel Freyessenet, Andrew Mair, Koichi Shimizu, and Giuseppe Volpato. Oxford University Press: New York.

Bronfenbrenner, Kate. 1997. "The Role of Union Strategies in NLRB Certification Elections." *Industrial and Labor Relations Review* 50.2: 195-212.

Bronfenbrenner, Kate. 2000. "Uneasy Terrain: The Impact of Capital Mobility on Workers, Wages, and Union Organizing." Report submitted to the U.S. Trade Deficit Review Commission, 6 September 2000.

Bureau of Labor Statistics. 2006. "The 2006-07 Career Guide to Industries: Motor Vehicle and Parts Manufacturing." http://www.bls.gov/oco/cg/print/cgs012.htm (Accessed 13 April 2006).

Campbell, Al. 2005. "The Birth of Neoliberalism in the United States: A Reorganisation of Capitalism." In *Neoliberalism: A Critical Reader*, edited by Alfredo Saad-Filho and Deborah Johnston. Pluto Press: London.

Castells, Manuel. 1996. *The Rise of the Network Society*. Blackwell: Padstow.

Castro, William Ariel, Roberto Cespón Castro, Santiago Ibarra Mirón and Pedro U. Alonso Martínez. 2004. "Modular manufacturing: an alternative to improve the competitiveness in the clothing industry." *International Journal of Clothing Science and Technology* 16.3: 301-309.

Chaykowski, Richard P., Terry Thomason, and Harris L. Zwerling. 1994. "Labor Relations in American Textiles." In *Contemporary Collective Bargaining in the Private Sector*. Edited by Paula B. Voos. Industrial Relations Research Association: Madison.

Chen, Martha Alter. 2001. "Women in the Informal Sector: A Global Picture, the Global Movement." *SAIS Review* 21.1: 71-82.

Clarke, Constanze. 2005. *Automotive Production Systems and Standardisation: From Ford to the Case of Mercedes-Benz*. Physica-Verlag: Heidelberg.

Cox, Robert W. 1987. *Production, Power, and World Order: Social Forces in the Making of History*. Columbia: New York.

Crotty, James. 2000. "Structural Contradictions of the Global Neoliberal Regime." *PERI* Published Study. http://www.umass.edu/peri/

Crotty, James. 2002. "The Effects of Increased Product Market Competition and Changes in Financial Markets on the Performance of Nonfinancial Corporations in the Neoliberal Era." *PERI* Working Paper. http://www.umass.edu/peri/

Cusamano, Michael. 1985. *The Japanese Automobile Industry: Technology and Management at Nissan and Toyota*. Harvard University Press: Cambridge.

Cutcher-Gershenfeld, Joel and Patrick P. McHugh. 1994. "Competition and Divergence: Collective Bargaining in the North American Auto Supply Industry." In *Contemporary Collective Bargaining in the Public Sector*, Ed. Paula B. Voos. Industrial Relations Research Association: Madison.

Davidson, Carl and Steven J. Matusz. 2004. *International Trade and Labor Markets: Theory, Evidence, and Policy Implications*. W.E. Upjohn Institute: Kalamazoo.

Dicken, Peter. 2003. *Global Shift: Reshaping the Global Economic Map in the 21st Century*. Guilford: New York.

Dicker, John. 2002. "Union Blues at Wal-Mart." *The Nation* 275.2 (8 July 2002): 14-19.

Duggan, Lynne. 2001. "Retail on the 'Dole': Parasitic Employers and Women Workers." *NWSA Journal* 13.3: 95-115.

Duguay, Claude R., Sylvain Landry, and Federico Pasin. 1997. "From mass production to flexible/agile production." *International Journal of Operations & Production Management* 17.12: 1183-1195.

Dunlop, John T. and David Weil. 1996. "Diffusion and Performance of Modular Production in the U.S. Apparel Industry." *Industrial Relations* 35.3: 334-355.

Eatwell, John and Lance Taylor. 2000. *Global Finance at Risk: The Case for International Regulation*. New York: New Press.

Eichengreen, Barry and Peter B. Kenen. 1994. "Managing the World Economy under the Bretton Woods System: An Overview." In *Managing the World Economy: Fifty Years After Bretton Woods*. Washington: Institute for International Economics.

Flynn, Michael S. 1998. "The General Motors Trajectory: Strategic Shift or Tactical Drift?" In *One Best Way? Trajectories and Industrial Models of the World's Automobile Producers*. Edited by Michel Freyessenet, Andrew Mair, Koichi Shimizu, and Giuseppe Volpato. Oxford University Press: New York.

Gapasin, Fernando and Edna Bonacich. 2002. "The Strategic Challenge of Organizing Manufacturing Workers in Global/Flexible Capitalism." In *Unions in a Globalizing Environment*, edited by Bruce Nissen. M.E. Sharpe: Armonk.

Gereffi, Gary. 1994. "The Organization of Buyer-Driven Global Commodity Chains: How U.S. Retailers Shape Overseas Production Networks." In *Commodity Chains and Global Capitalism*, edited by Gary Gereffi and Miguel Korzeniewicz. Greenwood: Westport.

Ghose, Ajit K. 2003. *Jobs and Incomes in a Globalizing World*. International Labour Office: Geneva.

Gordon, David M., Richard Edwards, and Michael Reich. 1982. *Segmented work, divided workers: The historical transformation of labor in the United States.* Cambridge University Press: Cambridge.

Gordon, David M. 1994. "The global economy: new edifice or crumbling foundations?" In *Social Structures of Accumulation: The Political Economy of Growth and Crisis*, edited by David M. Kotz, Terrence McDonough, and Michael Reich.

Gordon, David M., Richard Edwards, and Michael Reich. 1994. "Long swings and stages of capitalism." In *Social Structures of Accumulation: The Political Economy of Growth and Crisis*, edited by David M. Kotz, Terrence McDonough, and Michael Reich.

Gills, Dong-Sook S. 2002. "Globalization of Production and Women in Asia." *Annals of the American Academy of Political and Social Science* 581: 106-120.

Graham, Laurie. 1996. "The Myth of Egalitarianism: Worker Response to Post-Fordism at Subaru-Isuzu." In *North American Auto Unions in Crisis: Lean Production as Contested Terrain*, edited by William C. Green and Ernest J. Yanarella. SUNY: Albany.

Hamilton, Barton H., Jack A. Nickerson, and Hideo Owan. 2003. "Team Incentives and Worker Heterogeneity: An Empirical Analysis of the Impact of Teams on Productivity and Participation." *Journal of Political Economy* 111.31: 465-497.

Heintz, James. 2003. "The New Face of Unequal Exchange: Low-Wage Manufacturing, Commodity Chains, and Global Inequality." Working Paper, Political Economy Research Institute, University of Massachusetts Amherst.

Held, David, Anthony McGrew, David Goldblatt and Jonathan Perraton. 1999. *Global Transformations: Politics, Economics, and Culture*. Stanford University Press: Stanford.

Herod, Andrew. 2003. "Geographies of Labor Internationalism." *Social Science History* 27.4: 501-23.

Hurley, Jennifer. 2005. "Unravelling the Web: Supply Chains and Workers' Lives in the Garment Industry." In *Threads of Labor: Garment Industry Supply Chains from the Workers' Perspective*, edited by Angela Hale and Jane Wills. Blackwell: Malden.

Hurley, Jennifer and Doug Miller. 2005. "The Changing Face of the Global Garment Industry." In *Threads of Labor: Garment Industry Supply Chains from the Workers' Perspective*, edited by Angela Hale and Jane Wills. Blackwell: Malden.

Jarley, Paul. 2002. “American Unions at the Start of the Twenty-first Century: Going Back to the Future?” In *Changing Prospects for Trade Unionism: Comparisons between Six Countries*, edited by Peter Fairbrother and Gerard Griffin. Continuum: New York.

Johnston, Paul. 2002. “Citizenship Movement Unionism: For the Defense of Local Communities in the Global Age.” In *Unions in a Globalizing Environment*, edited by Bruce Nissen. M.E. Sharpe: Armonk.

Jürgens, Ulrich, Takahiro Fujimoto, and Koichi Shimokawa. 1997. “Conclusions and Outlook.” In *Transforming Automobile Assembly: Experience in Automation and Work Organization*. Springer: Berlin.

Kalleberg, Arne L. 2003. “Flexible Firms and Labor Market Segmentation: Effects of Workplace Restructuring on Jobs and Workers.” *Work and Occupations* 30.2: 154-175.

Karoly, Lynn A. and Constantijn W. A. Panis. 2004. *The 21st Century at Work*. RAND: Santa Monica.

Katz, Harry C. 1985. *Shifting Gears: Changing Labor Relations in the U.S. Automobile Industry*. MIT: Cambridge, Massachusetts.

Katz, Harry C. and John Paul MacDuffie. 1994. “Collective Bargaining in the U.S. Auto Assembly Sector.” In *Contemporary Collective Bargaining in the Public Sector*, Ed. Paula B. Voos. Industrial Relations Research Association: Madison.

Keynes, John Maynard. 1964 [1936]. *The General Theory of Employment, Interest, and Money*. Harcourt: San Diego.

Kenney, Martin and Richard Florida. 1993. *Beyond Mass Production: The Japanese System and Its Transfer to the U.S.* Oxford: New York.

Kondratieff, Nikolai D. 1935. “The Long Waves in Economic Life.” *Review Of Economic Statistics* 17.6: 105-115.

Kotz, David M. 1994. “Interpreting the social structure of accumulation theory.” In *Social Structures of Accumulation: The Political Economy of Growth and Crisis*, edited by David M. Kotz, Terrence McDonough, and Michael Reich.

Kotz, David M., Terrence McDonough, and Michael Reich. 1994. “Introduction.” In *Social Structures of Accumulation: The Political Economy of Growth and Crisis*, edited by David M. Kotz, Terrence McDonough, and Michael Reich.

Lippit, Victor D. 1997. “The Reconstruction of a Social Structure of Accumulation in the United States.” *Review of Radical Political Economy* 29.3: 11-21.

MacDuffie, John Paul. 1995. "Workers' Roles in Lean Production: The Implications for Worker Representation." In *Lean Work: Empowerment and Exploitation in the Global Auto Industry*, edited by Steve Babson. Wayne State University: Detroit.

MacDuffie, John Paul and Thomas A. Kochan. 1995. "Do U.S. Firms Invest Less in Human Resources? Training in the World Auto Industry." *Industrial Relations* 34.2.

MacDuffie, John Paul and Frits K. Pil. 1997. "From Fixed to Flexible: Automation and Work Organization Trends from the International Assembly Plant Study." In *Transforming Automobile Assembly: Experience in Automation and Work Organization*. Springer: Berlin.

Mair, Andrew. 1998. "The Globalization of Honda's Product-Led Flexible Mass Production System." In *One Best Way? Trajectories and Industrial Models of the World's Automobile Producers*. Edited by Michel Freyessenet, Andrew Mair, Koichi Shimizu, and Giuseppe Volpato. Oxford University Press: New York.

Martin, Ronald L. 2000. "Local Labour Markets: Their Nature, Performance, and Regulation." In *The Oxford Handbook of Economic Geography*, edited by Gordon L. Clark, Maryann P. Feldman, and Meric S. Gertler. Oxford University Press: Oxford.

McDonough, Terrence. 1994. "The construction of social structures of accumulation in US history." In *Social Structures of Accumulation: The Political Economy of Growth and Crisis*, edited by David M. Kotz, Terrence McDonough, and Michael Reich.

Mittelman, James H. 2000. *The Globalization Syndrome: Transformation and Resistance*. Princeton University Press: Princeton.

Moody, Kim. 1997. *Workers in a Lean World: Unions in the International Economy*. Verso: New York.

Munck, Ronaldo. 2005. "Neoliberalism and Politics, and the Politics of Neoliberalism." In *Neoliberalism: A Critical Reader*, edited by Alfredo Saad-Filho and Deborah Johnston. Pluto Press: London.

O'Hara, Phillip Anthony. 2003. "A New Transnational Corporate Social Structure of Accumulation for Long Wave Upswing in the Global Economy?" Working Paper (Version 16 December 2003).
http://www.cbs.curtin.edu.au/files/cbsstaffpublications/ohara0404.pdf

Palley, Thomas I. 1998. *Plenty of Nothing: The Downsizing of the American Dream and the Case for Structural Keynesianism*. Princeton University Press: Princeton.

Palley, Thomas I. 2005. “From Keynesianism to Neoliberalism: Shifting Paradigms in Economics.” In *Neoliberalism: A Critical Reader*, edited by Alfredo Saad-Filho and Deborah Johnston. Pluto Press: London.

Palpacuer, Florence. 2002. “Subcontracting Networks in the New York City Garment Industry: Changing Characteristics in a Global Era.” In *Free Trade and Uneven Development: The North American Apparel Industry after NAFTA*, edited by Gary Gereffi, David Spener, and Jennifer Bair. Temple University Press: Philadelphia.

Parker, Mike and Jane Slaughter. 1995. “Unions and Management by Stress.” In *Lean Work: Empowerment and Exploitation in the Global Auto Industry*, edited by Steve Babson. Wayne State University: Detroit.

Parker, Robert E. 2002. “The Global Economy and Changes in the Nature of Contingent Work.” In *Labor and Capital in the Age of Globalization*, edited by Berch Berberoglu. Rowman & Littlefield: Lanham.

Piore, Michael J. and Charles F. Sabel. 1984. *The Second Industrial Divide: Possibilities for Prosperity*. Basic Books: New York.

Piven, Frances Fox and Richard A. Cloward. 2000. “Power Repertoires and Globalization.” *Politics & Society* 28.3: 413-430.

Pollin, Robert, Justine Burns, and James Heintz. 2001. “Global Apparel Production and Sweatshop Labor: Can Raising Retail Prices Finance Living Wages?” *PERI* Working Paper (Revised 2002). http://www.umass.edu/peri

Porter, Michael E. 1990. “The Competitive Advantage of Nations.” *Harvard Business Review* March-April: 73-91.

Reich, Michael. 1997. “Social Structure of Accumulation Theory: Retrospect and Prospects.” *Review of Radical Political Economy* 29.3: 1-10.

Reich, Robert B.1992. *The Work of Nations: Preparing Ourselves for 21st Century Capitalism*. Vintage Books: New York.

Rifkin, Jeremy. 1995. *The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era*. G.P. Putnam’s Sons: New York.

Rinehart, James, Chris Huxley, and David Robertson. 1995. “Team Concept at CAMI.” In *Lean Work: Empowerment and Exploitation in the Global Auto Industry*, edited by Steve Babson. Wayne State University: Detroit.

Rinehart, James, David Robertson, Christopher Huxley, and the CAW Research Team on CAMI. 1996. “CAW, Worker Commitment, and Labor Management Relations Under

Lean Production at CAMI." In *North American Auto Unions in Crisis: Lean Production as Contested Terrain*, edited by William C. Green and Ernest J. Yanarella. SUNY: Albany.

Robinson, William I. 2001. "Transnational processes, development studies and changing social hierarchies in the world system: a Central American case study." *Third World Quarterly* 22.4: 529-563.

Rubinstein, Saul A. 2001. "A Different Kind of Union: Balancing Co-Management and Representation." *Industrial Relations* 40.2: 163-203.

Rupert, Mark. 1995. *Producing hegemony: The politics of mass production and American global power*. Cambridge University Press: Cambridge.

Sayeed, Asad and Radhika Balakrishnan. 2004. "Why Do Firms Disintegrate? Towards an understanding of the firm-Level Decision to Subcontract and its Implications for Labor." In *Labor and the Globalization of Production*, edited by William Millberg. Palgrave: Houndsmill.

Schumpeter, Joseph. 1939. *Business Cycles: A Theoretical, Historical, and Statistical Analysis of the Capitalist Process.* McGraw Hill: New York.

Sels, Luc and Rik Huys. 1999. "Towards a flexible future? The nature of organisational response in the clothing industry." *New Technology, Work and Employment* 14.2: 113-128.

Shaikh, Anwar. 2005. "The Economic Mythology of Neoliberalism." In *Neoliberalism: A Critical Reader*, edited by Alfredo Saad-Filho and Deborah Johnston. Pluto Press: London.

Shimizu, Koichi. 1998. "A New Toyotaism?" In *One Best Way? Trajectories and Industrial Models of the World's Automobile Producers*. Edited by Michel Freyessenet, Andrew Mair, Koichi Shimizu, and Giuseppe Volpato. Oxford University Press: New York.

Smith, Tony. 2000. *Technology and Capital in the Age of Lean Production: A Marxian Critique of the "New Economy."* SUNY: Albany.

Standing, Guy. 1999. *Global Labour Flexibility: Seeking Distributive Justice*. St. Martin's Press: New York.

Stone, Kenneth E. 1995. *Competing With the Retail Giants: How to Survive in the New Retail Landscape.* Wiley: New York.

Sturgeon, Timothy and Richard Florida. 1997. "Research Note: The Globalization of Automobile Production." Paper prepared for the International Motor Vehicle Program Policy Forum, 23-26 September 1997.

Sturgeon, Timothy and Richard Florida. 2004. "Globalization, Deverticalization, and Employment in the Motor Vehicle Industry." In *Locating Global Advantage: Industry Dynamics in the International Economy,* edited by Martin Kenney and Richard Florida. Stanford University Press: Stanford.

Taplin, Ian M. 1995. "Flexible Production, Rigid Jobs: Lessons From the Clothing Industry." *Work and Occupations* 22.4: 412-438.

Truchil, Barry E. 1988. *Capital-Labor Relations in the U.S. Textile Industry*. Praeger: New York.

Tyler, Gus. 1995. *Look For the Union Label: A History of the International Ladies' Garment Workers' Union*. M.E. Sharpe: Armonk.

Unionstats.com: Union Membership and Coverage Database from the CPS. Barry T. Hirsch and David A. Macpherson. Accessed 31 March 2006. <http://www.unionstats.com>

Wallace, Michael and David Brady. 2001. "The Next Long Swing: Spatialization, Technocratic Control, and the Restructuring of Work at the Turn of the Century." In *Sourcebook of Labor Markets: Evolving Structures and Processes*, edited by Ivar Berg and Arne L. Kalleberg. Kluwer: New York.

Walton, Richard E., Joel E. Cutcher-Gershenfeld, and Robert B. McKersie. 1994. *Strategic Negotiations: A Theory of Change in Labor-Management Relations*. Harvard Business School Press: Boston.

Went, Robert. 2005. "Globalization: Waiting – In Vain – for the New Long Boom." *Science & Society* 69.3: 367-395.

Wilms, Wellford W. 1996. *Restoring Prosperity: How Workers and Managers are Forging a New Culture of Cooperation*. Times Books: New York.

Womack, James P., Daniel T. Jones, and Daniel Roos. 1990. *The Machine that Changed the World*. Rawson Associates: New York.

Womack, James P. and Daniel T. Jones. 2003. *Lean Thinking: Banish Waste and Create Wealth in Your Corporation*. Free Press: New York.

Yanarella, Ernest J. 1996a. “The UAW and CAW Under the Shadow of Post-Fordism: A Tale of Two Unions.” In *North American Auto Unions in Crisis: Lean Production as Contested Terrain*, edited by William C. Green and Ernest J. Yanarella. SUNY: Albany.

Yanarella, Ernest J. 1996b. “Worker Training at Toyota and Saturn: Hegemony Begins in the Training Center Classroom.” In *North American Auto Unions in Crisis: Lean Production as Contested Terrain*, edited by William C. Green and Ernest J. Yanarella. SUNY: Albany.

Yang, Xiaohua. 1995. *Globalization of the Automobile Industry: The United States, Japan, and the People’s Republic of China*. Praeger: Westport.

Yates, Charlotte, Wayne Lewchuk, and Paul Stewart. 2001. “Empowerment as a Trojan Horse: New Systems of Work Organization in the North American Automobile Industry.” *Economic and Industrial Democracy* 22.4.

Zieger, Robet H. and Gilbert J. Gall. 2002. *American Workers, American Unions: The Twentieth Century*. Johns Hopkins: Baltimore.