PERSPECTIVES ON TECHNOLOGY, RACE, AND AFRICAN-AMERICAN EMPLOYMENT

by

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ABSTRACT

It is important to recognize that in a complex socio-economic struc-
ture that has developed with racism as part of its logic of existence,
there does not need to be a conspiracy in order for racism to occur. It
becomes an integral and pervasive aspect of the fabric of ongoing social
and economic processes. One of the strengths of capitalism has been its
innate ability to reproduce in increasingly more complex forms those in-
equities that were programmed into the system during the early stages of
its development.

Since its introduction as a blatantly oppressive social policy during
the early stages of capitalist development, racism has become interwoven
into the psycho-social fabric of American society and in turn galvanized as
an integral component of the capitalist development process. It is upon
this base that race develops the dual characteristics of a social and
economic class. Furthermore, it is this duality that has facilitated the
gradual transformation of racism from a conscious and deliberate policy of
oppression to the more elusive and seemingly autonomous institutional
forms that are still nonetheless oppressive. The point to be made is
quite clear. An effective attack on racism must also, necessarily,
attack the economic base upon which it is reproduced.

This thesis is an attempt to more clearly delineate particular his-
torical and contemporary dynamics, that through continued interaction have
reinforced the increasingly marginal status of the African-American work-
force. More specifically, the thesis maintains two objectives. The first
objective is to lay the foundation for a better understanding of those
factors that have given rise to the current state of affairs. The second
is to critically assess employment prospects for the African-American
workforce as determined by transformed labormarket conditions stemming
from the increased impacts of technological innovations. The goal is to
present, in realistic terms, a snapshot of the bottleneck confronting
laborforce advancement for the African-American population.
DEDICATION

This thesis is dedicated with love and respect to my parents for having raised me to be unafraid and free; to Willard and Eric for keeping me honest; and to Sandra for her continual love and support.
ACKNOWLEDGEMENTS

I extend my sincere gratitude to the Committee for their direction, support, and confidence throughout this process. Without Tunney's vigilance, Ranko's Marlboros and Gilbert's sense of humor, the thesis would have been a far more difficult task to complete. So, to my advisor, Professor Tunney Lee and readers, Professors Ranko Bon and Gilbert Moore, by way of your assistance, I can finally say to you, "Yes, it is finished." Many thanks.

On this note, a special thanks is due to Mrs. Mary Jo Cochrane for her thoughtful and insightful critiques of my work. You are much appreciated.

To Brothers George and Jimmy, Margaret, Dorothy, Steven and Brenda, Lonnie, Peter and Steven D.: It has and will continue to be real.

Mrs. Lula Brown: Thank you for a home away from home.

The final acknowledgement is extended to my typist, a marathoner and miracle worker, Ms. Nancy Jones: Thanks for hanging in there with me.
TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>2</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>3</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>6</td>
</tr>
<tr>
<td>CHAPTER I: Technology and Capitalist Development</td>
<td>15</td>
</tr>
<tr>
<td>CHAPTER II: An Agricultural History and the Impacts of Mechanization</td>
<td>31</td>
</tr>
<tr>
<td>CHAPTER III: The Transition Towards Industry and the Effects of Racism and Technological Change</td>
<td>59</td>
</tr>
<tr>
<td>CHAPTER IV: The Case of Federal Intervention</td>
<td>84</td>
</tr>
<tr>
<td>CHAPTER V: The Impending Crisis</td>
<td>123</td>
</tr>
</tbody>
</table>
INTRODUCTION

The current attack against the African-American population on economic, political, and social fronts is rooted in 400 years of racism and capitalist development in the United States. In spite of recent civil and economic rights reforms, the marginal socio-economic status of African-Americans is an American trademark that has remained virtually unchanged over the past 40 years. And unless the basic structure of this system along with its supportive institutions change, present conditions will worsen dramatically over the next 40 years.

In a capitalist system, development is fundamentally driven by the capital accumulation process, or in other words, the investment of increasing rates of profit in more profit producing and capital creating ventures. Consequently, the economic development, and more generally, the standard of life for a particular race, class, or ethnic group, is to a great extent determined by the level at which that group plugs into the accumulation process. This general definition regarding the parameters of political and economic development by way of access to the accumulation process, is determined by two basic conditions.

Condition 1: This condition encompasses the degree to which different racial and ethnic groups were allowed to retain their cultures and to establish a continuum of self-reliant economic and social support mechanisms within their respective communities. These mechanisms provided a base upon which the returns from community based economic activities could be recycled towards the continued growth of the community; and a
base from which a protective political unity could be forged. It is through this process that certain groups were able to corner a piece of the accumulation and labor processes and assimilate into the mainstream.

Condition 2: The second condition is related to the stage of capitalist development framing the internal development of the group in question. More specifically, the degree of capital concentration and monopolist penetration of both economic and political institutions, will critically impact the rate at which the internal support mechanisms for the group evolve, and the degree to which they are capable of integrating with mainstream institutions. Very simply, the later a group plugs into the process, the more difficult it becomes to leverage the economic and political power necessary for development in a capitalist system.

A brief look at the historical development of the socio-economic hierarchy shows that the mainstream power structure has granted varying degrees of entitlement to different groups. This entitlement has an historical base that is rooted in the prevailing social and economic conditions surrounding a group's initial incorporation into the socio-economic hierarchy. Entitlement, or the denial of it, can be summed up by three broad categories: acceptance, alienation, or oppression. Here it is appropriate to more clearly define the difference between alienation and oppression. Alienation allows and practically dictates a level of self-reliant development. Oppression, violently denies a group the right of self-reliant development by sabotaging the development of necessary alternative economic and political support institutions. In this light, genocide and slavery force a radically altered analysis of early development for Native Americans and Africans, than the one required of
alienation and the earlier development/assimilation efforts of European ethnics.

In short, the institution of American slavery necessarily required that the components of African culture, the family, language, religion, and values, be destroyed. The negation of those elements essential to the building of a strong African based community insured the commodity status of Africans as slaves, and secured favorable conditions for the continued existence of slavery by eliminating a base for resistance. Africans were a vital source of surplus value and profit for early American capitalists. It was therefore necessary for these early capitalists to support the economic rationale behind slavery, with a social rationale capable of legitimizing the human degradation of the African man and women. It is upon this base that race develops the dual characteristics of a social and economic class which frames the complexity confronting liberation strategies for the African-American population today.

When viewed from a simplified economic perspective, slavery forced the first Africans to endure the brunt of approximately eight generations void of any significant levels of wealth accumulation that could have been passed on to future generations. The absence of intergenerational development cannot be isolated from the general flow of capitalist development during this period. While Africans and their descendants were being denied not only access to the accumulation process, but also legitimate access to the labor process, capitalism was continually accelerating through more advanced stages of development. And consistent with the course of capitalist development, wealth and power were excessively concentrating within the ranks of a privileged class.
The initial and most devastating result of this process was not the elimination of a base from which "negroes" or "blacks" could develop. The most devastating result was the programmatic destruction of a potential base from which Africans could have developed a viable community. Such a base, however, presupposes a world that could not have existed, especially when viewed from a global perspective that includes the European colonization of Africans on the continent. Consequently the economic legacy left to African-Americans has locked the population in an endless cycle of "catching up." The following statistics identify briefly the devastating impacts generations of economic isolation have had on the African-American population.

A recent assessment from the State of Black America 1981 estimated the total wealth owned by the African-American population at less than 3% of the national total. Shedding further light on the issue, Gary Becker in his book, The Economics of Discrimination, calculated that the total African-American ownership of productive capital approximated one half of 1% of white ownership. H.S. Terrell in his article, "Wealth Accumulation of Black and White Families: The Empirical Evidence," Journal of Finance (1971), lists the average net wealth of African-American families at $3779 and that of white families at $20,153, resulting in a ratio of 5.3 to 1. This figure, however, understates the magnitude of the disparity because a much higher proportion of African-American Assets are non-financial assets. An added base of comparison suggests that the preceeding figure for African-Americans equals the 1880 average for the white population. A glance at these statistics clearly outlines the extent of capital deprivation confronting the African-American population.
However, comparative statistics highlighting wealth distribution disparities between the races fail to expose the complete class structure of the accumulation process. For example, in 1962, 20% of the population owned 75% of the wealth, and of this figure, 2% owned a little over 40% of the wealth. Related figures for 1976 show that 16% of the population owned 83% of the wealth, with the top 2% in control of 50%. Looking at the same phenomenon from a different angle, in 1962, 80% of the population had to share 25% of the total wealth, whereas in 1976, 84% of the population was forced to share 17% of the total wealth. What becomes apparent from these wealth distribution statistics is the fact that capital and wealth in general are continually being concentrated into the hands of those who are already in control of the vast majority of wealth in this country.

Without question, these statistics point to a fundamental contradiction governing capitalism: "The rich get richer and the poor get poorer." Entrance into the ranks of the "capitalist elite" for the masses of working class people, and particularly for people of color, has been systematically closed off. Of greater significance is the fact that the pivotal institutions of this system, including the legal, political, economic, and military institutions, are coordinated to reinforce the dominance and control of the monopolist class over the accumulation process.

It is for this reason that efforts to close the economic gap between the African-American and white populations avoid the question of wealth redistribution, and concentrate instead on the redistribution of access
to employment opportunities. In an article by Firdhaus Jhabvala an interesting hypothesis is presented. Jhabvala ventures to show that if the current distribution of wealth remained constant, and if barring racism, African-Americans were to receive a proportionate share of wages, salaries, and profits, the per capita income of African-Americans would still only approximate 78% of white per capita income. Thus under racially utopian but economically capitalist conditions, the maximum that African-Americans could earn would be less than 4/5ths of the average white income.

Without a redistribution of wealth, a different light is shed upon affirmative action programs. Generally looked upon as development programs capable of redressing past inequities, affirmative action programs actually function as stabilization programs capable of at best, marginal improvements. Unless anti-discriminatory policies and programs are carried out in conjunction with a fundamental transformation of the class structure, current inequities will be consistently reproduced over time. This fact is further evidenced by the following table.
RACIAL INEQUALITY OVER TIME: 1950-1974

<table>
<thead>
<tr>
<th>Year</th>
<th>Black Income/White Income (median)</th>
<th>Black Unempl/White Unempl</th>
<th>Black Poverty/White Poverty</th>
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<tbody>
<tr>
<td>1950</td>
<td>.54</td>
<td>1.8</td>
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<tr>
<td>1951</td>
<td>.53</td>
<td>1.7</td>
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<td>1952</td>
<td>.57</td>
<td>1.9</td>
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<td>1955</td>
<td>.55</td>
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<td>2.3</td>
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<tr>
<td>1957</td>
<td>.54</td>
<td>2.1</td>
<td></td>
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<tr>
<td>1958</td>
<td>.51</td>
<td>2.1</td>
<td></td>
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<tr>
<td>1959</td>
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<td>.53</td>
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<td>.55</td>
<td>2.0</td>
<td>3.5</td>
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<tr>
<td>1966</td>
<td>.60</td>
<td>2.2</td>
<td>3.5</td>
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<tr>
<td>1967</td>
<td>.62</td>
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<td>3.4</td>
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<td>1968</td>
<td>.63</td>
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<tr>
<td>1974</td>
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<td>2.0</td>
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From the table it would seem to follow that the task of primary importance for social managers and policy-makers would be an analysis of why and how the problem is consistently reproduced in progressively more complex forms. However, dominant socio-economic theory, which regulates the political and economic arenas, and consists of a range of perspectives cluttering the spectrum between liberal and conservative poles, has yet to critically engage the "why's and how's" of the African-American dilemma.
Even though the liberal and conservative perspectives within dominant socio-economic theory give rise to competing political positions, they nonetheless share a common analytical base. Both in presuming the sanctity of capitalism's "free market system" advocate that the factors responsible for the continued existence of race and class oppression are not the direct and inevitable consequence of the system itself. With moderating variations, liberals and conservatives support the standard neo-classical position that in the event of regulatory intervention, the anti-discriminatory policies and measures should not compromise the principles and mechanisms of the market system, nor the class structure upon which it is based.

There does exist a fundamental departure between the liberal solution to the problem and the conservative solution. Liberal analysis identifies "a cycle of poverty and entrapment" without, however, attacking its source. Consequently, liberals believe that different forms of government intervention directed at particular symptoms of race and economic discrimination can in the long run eradicate the disparities between the African-American and white populations. In other words modify the system. Conservatives contend quite simply that the system for the most part is acceptable, it is the "disadvantaged victims" who need to be modified so that they will be better equipped to play the game.

The liberal solution at best, attempts to stabilize worsening conditions, while the conservative solution generally accepts the status quo as the way things should be. Thus we witness the collective impact of liberal and conservative policies as not only having been ineffective in improving the relative socio-economic conditions confronted by the
African-American population, but as having secured the marginal status of African-Americans in this society. The point to be made is clear. Solutions based upon an implicit acceptance of the structural biases of the system are incapable of redressing the inequities that the system reproduces, and ultimately aid in maintaining the process of reproduction.

In any social system, the prevailing ideological base of the intellectual process and related policy directives will be derived from the process which creates and preserves the fundamental distribution of power upon which the system is founded. It is to be expected then, that dominant socio-economic theory as a product of the system can only function to rationalize and legitimate the system from which it is derived. For this reason, the capitalist political and planning processes are incapable of providing a legitimate base from which to fight the causes of racial and economic oppression.
CHAPTER I

Technology and Capitalist Development
No matter how completely technics relies upon the objective procedures of the sciences, it does not form an independent system, like the universe; it exists as an element in human culture and it promises well or ill as the social groups that exploit it promise well or ill.

Lewis Mumford,
Technics and Civilization

Technology is not an autonomously determined element that neutrally decides its own course of development in society. It is a product of the class system in which it is applied. However, its overwhelming presence and seemingly uncontrollable momentum has conditioned most to accept its societal impacts as a preordained status quo. This influence exerted over the social process prompted Marcuse to write, "It is no longer capitalism which determines the state and nature of technology, but technology that determines the state and nature of capitalism."2 Quoting Marx in response to Marcuse's deterministic position, he states very plainly:

It must be kept in mind that new forces of production do not develop out of nothing nor drop from the sky. For it is neither science nor technology that dominates the system of production, but it is the domination of capital over labor which with everything else turns technology into an instrument of exploitation and class rule. 3

In a capitalist system development is fundamentally driven by the capital accumulation process, or in other words, the reinvestment of standard or increasing rates of profit in more profit yielding and capital creating ventures. Within the sphere of production, neither the creation of profit nor consequently the accumulation process, can exist in the absence of labor. Stated in a different manner, "Whatever the extent of automation and computerization, means of production neither operate nor reproduce themselves."4 It is upon this base that the twin objectives
of technology as a function of capital become apparent.

First, technology as employed by the owners of capital, serves to more efficiently extract increasing rates of profit during the process of production. This can be accomplished in one of two ways. The incorporation of a technological innovation can increase the output for a given number of workers; or, a labor-displacing technology can be introduced, capable of maintaining a given level of production using a reduced number of workers. In either situation, the objective of capital is to reduce labor's share of the production costs. Labor-displacing technology can be introduced, capable of maintaining a given level of production using a reduced number of workers. Labor-displacing technology generates a higher profit margin for capital not necessarily by increasing levels of output, but by decreasing the total cost of labor for a given level of output. It is this latter option that is setting the stage for the intensified struggle over the control of technology between the owners and managers of capital, versus members of organized labor.

Herein lies the second objective of technology as employed by capital. Labor at any given moment can hold the accumulation process hostage. Consequently, the growth and development of industrial technology has been directed towards minimizing the dependence of capital on labor by:

1) undercutting labor's control over the production process through automation; and 2) through technological applications, reducing the number of workers required, and dividing the ranks of those remaining.

David Noble pointedly states:
Behind the technology that affects social relations lie those very same social relations.... Technology of production is therefore twice determined by social relations of production. It is designed and deployed according to the ideology and social power of those who make the decisions; and its actual use in production is determined by the level of class antagonisms on the shopfloor in the workplace. 5

It is worth noting that a number of social scientists have identified the growing tendency for the forces of production to challenge the social relations of production with increasing intensity. Much of this tendency is rooted in capital's increased dependency on technological innovations as a source of surplus profits, which ultimately speeds up the pace of technological development in the production sphere. The profitability of such innovations, as stated earlier, depends upon the relative strengths that capital and labor bring into the workplace. The advancement of Taylorism is a clear example of earlier attempts to understand and regulate the antagonisms between man and machine at the point of production. The objective was to more efficiently tap the profit maximizing potential of a new technology by molding a new and transformed bond between the worker and the new machine.

It is for this reason that Bill Lazonick in his article, "Technological Change and the Control of Work," suggests the importance of further analyzing technology outside of the production sphere and within the context of the development of particular institutional structures. Such an approach would be consistent with the increased emphasis upon behavioral traits and attitudes, as opposed to the development of cognitive skills. Quite expectedly, a key institution within the socialization process designed to supply industry with a more adaptable worker is the public education system. Lazonick concludes:
The institutional transformation of the larger society was required to stabilize capital-labor relations in the mass production industries. 6

Technology, simply defined, is another tool, then, when pressed into the service of capital, functions to reinforce the fundamental distribution of power throughout class society. It should now be clear, that in order to be fully understood, technology must be viewed as a social process. The next task is to take a more theoretical look at technology within the context of the capital accumulation process.

The accumulation process necessarily begins with labor, because it is only from labor that the substance of profits, surplus value, can be extracted. Surplus value is simply the wage paid to the worker subtracted from the value of the commodity produced by the worker.

For example, if the commodity equivalent of a worker's wage is two pairs of Jordache jeans, and the worker produces eight pairs through the course of the work day, the amount of surplus value extracted from the worker is worth six pairs of jeans (eight pairs produced in total minus two pairs for the worker's equivalent in wages equals six pairs of jeans to the owner as surplus value). The owner of the capital (machines and equipment), upon which the worker produces the jeans, gets the surplus value for no other reason than the fact that capitalist society protects the right of the owner (monopoly capital or individuals) to expropriate the mass of surplus value created by the worker through his labor. So ultimately, surplus value represents the mass of value created by labor for which labor has not been compensated, and for which the capitalist has not had to pay.

The rate of surplus value, $(\frac{s}{v})$, sometimes referred to as the rate
of exploitation, represents the amount of surplus value measured against the wage paid to the worker, which in our example is \( s/v = 6/2 \) or \( 3/1 \). In other words, for every dollar the capitalist pays out in wages, he will receive in return a sum of surplus value worth three dollars in labor power for which he has not paid. For the worker, it means that for every dollar of commodity value created by the worker during the process of production, the worker will receive only 25 cents, while the owners of capital receive the remaining 75 cents, (three parts out of every dollar to the owners of capital, one part to the workers).

The preceding relationship warrants further clarification. Within the context of the social relations of production, an individual capitalist is not necessarily cheating the worker in a traditional sense of the word. However, the system of capitalists, by controlling dynamics on both social and economic fronts, tend to heighten the impact of the exploitative relationship between individual capitalists and workers.

On the nature of wages in general, Marx writes:

By comparing the standard wages or values of labor in different countries in different historical periods, of the same country, you will find that the value of labor itself is not fixed but of variable magnitude, even supposing the value of all other commodities to remain constant. 7

In a theoretical context, wages have generally been defined as the income required for workers to sustain and reproduce their labor power. Clearly in a more modern application, we can see that wages are in part the function of a socially determined standard of living. This is the reason why wages have historically been such a critical battleground between management and organized labor. Unions tend to set standards that drive
up the socially determined portion of wages. This conflicts directly with capital's interests. Without an increase in productivity (output per worker), an increase in wages corresponds with a decrease in surplus value and therefore profits that accrue to the capitalist. It is from surplus value that profit is derived. If surplus value decreases, then profit must go the way of surplus value.

It is important to understand that surplus value in commodity form is useless to the capitalist until it is realized as profit through the sale of the commodity produced. In our example, the surplus value of six pairs of Jordache jeans has little meaning to the owner of capital until the jeans are sold, releasing the potential profit captured by the surplus value. It is only after surplus value has been realized in the form of profit that the capitalization of surplus value can occur. The capitalization of surplus value ultimately seals the capital accumulation process, through investments in plant and equipment for the purposes of expanding production capacity. In short, the accumulation process represents the capitalization of unpaid labor, and capitalism's survival depends upon the continuity of this cycle of expanded reproduction.

The profit rate serves as the barometer owners of capital employ to monitor the level of their participation within the capital accumulation process. Mattick frames the issue nicely:

During an economic crisis, it is not the physical inability to produce that depresses industrial output and capital expansion, but the inability to produce profitably. Therefore it reasons to follow that in so much as capital functions without regard to profitability, it does not function as capital. 8

The profit rate represents the growth of surplus value against the total
costs of production for a specified period of time. It is derived from a very straightforward equation: 

\[(s/c+v)\]

where \((s)\) represents the amount of surplus value created by labor, \((c)\) represents the total cost of machinery and equipment used in production, and \((v)\) represents the total costs for labor in the form of wages and salaries.

The relentless quest for increasing rates of profit in an intensely competitive environment leads to an increase in capital's share of total production costs. Looking at the equation for the rate of profit, \((s/c+v)\), simple mathematics dictates that as labor's share of production costs increases in the denominator, unless there is a proportionate increase in the productivity of labor, or in other words, a proportionate increase in the amount of surplus value created by labor, the rate of profit must fall. At this juncture, the role of technology receives far more definition, and an explanation for the increasing dominance of capital over labor during the production cycle develops.

In an economic environment shaped by declining opportunities for capitalists to expropriate increasing rates of surplus value from expanded markets, the drive is to decrease the amount of labor time required to produce the commodity equivalent of the worker's wage. It follows then, that an increase in output per worker (productivity), matched by decreasing labor costs, compensates as an alternative means by which capital can effect a relative increase in the rate of surplus value, and therefore realize greater profits.

The role of technology then, is to provide capital with a competitive edge which allows the same or smaller amounts of labor to produce more
commodities than before. Mandel writes in *Late Capitalism*:

There thus develops a permanent pressure to accelerate technological innovation. For the dwindling of other sources of surplus-profits inevitably leads to a constant hunt for "Technological Rents" which can only be obtained through permanent technological renewal. Technological rents are surplus profits derived from a monopolization of technical progress which has the overall effect of lowering the cost of production and price of the commodity. 9

The acceleration of technological innovations applied to the process of production for the purposes of increasing productivity and holding down wages is generally translated as an increase in capital's share of total production costs. This shift towards an increase in the weight of capital with respect to labor is identified as the rising organic composition of capital, and is a tendency that is associated with the "advanced" stages of industrial production processes.

The organic composition of capital can be stated as capital's share of production costs and shown by \( \frac{c}{c+v} \), where \( c+v \) represents the combined cost of capital and labor \( v \). As the organic composition of capital rises its economic indicator is generally expressed as an increase in productivity that outpaces increases in total production. The corollary to this tendency is an increase in the use of labor-displacing technology and a decrease in labor's share of total costs. Anne P. Carter, in *Structural Changes in the American Economy, 1939-61*, concludes:

Most labor coefficients fell more than the corresponding capital coefficients and thus the capital to labor ratio increased in most sectors.... Of all the structural changes reviewed thus far, the declines in direct labor coefficients are most pronounced.... The economy behaves as if labor saving (displacement of labor) were the goal of technical progress, and most changes in intermediate and capital structure can be justified by reduced direct and to a lesser extent indirect labor requirements. 10
Some examples from specific industries tend to reinforce Carter's study and further support the premise that the organic composition of capital tends to rise. In steel production, changes in the processing method lowered the share of labor costs in total costs of production from 25 percent to 17 percent, while the share of fixed capital costs rose from 16 percent to 25 percent. In oil refineries, between 1913 and 1955, the number of labor hours needed for producing 10,000 tons of gasoline dropped from 56 in 1913 to 0.4 in 1955. The replacement of universal production machines by fully automated transfer machines in the French Renault auto plants similarly altered the relation between labor costs and equipment costs per vehicle from 4.8:1 to 0.26:1. In the cotton spinning industry of the Federal Republic of Germany, the value of equipment per employee rose by 1100 percent over a 20 year period from 1950 to 1970, in a model plant incorporating the latest machinery. During this same period, the number of employees working in three shifts declined from 274 to 62. The list is extensive. Given the nature of capital it is a safe assumption to suggest that if labor-intensive technology was more profitable than labor-displacing technology, the examples presented above would have registered a counter tendency. The trend, however, clearly suggests the opposite. Consequently the development of labor-displacing technology can be expected to intensify.

Referring back to the rate of profit (s/c+v), and remembering that labor is the only source from which surplus value can be created, it stands to reason that as capital's share of production costs rises, unless accompanied by a proportionate increase in surplus value, the
rate of profit will fall. The objective of labor displacing technology is to counter its potentially depressing effect on the rate of surplus value by increasing the productivity of labor. However, the profit-reducing effect of a declining number of workers cannot be perpetually neutralized or compensated for by the technologically induced increase of labor productivity. Herein lies the Achilles heel of the whole capital accumulation and, therefore, capitalist development process. The following quote is an appropriate summary of the issue:

This abstract dynamic does not affect capitalistic behavior. Thus while the reduction of labor relative to capital becomes a detriment to capitalist production, the reduction of labor costs remains a necessary requirement for each single enterprise or corporation. Their profitability increases as their labor costs decrease. It is for this reason that the displacement of labor by capital cannot be halted within the competitive capital formation process, even though it undermines the structure of capitalist society. 15

(What is good for the individual capitalist is bad for the class as a whole.)

When the capital accumulation process is placed within a social framework that incorporates the impacts of monopoly capital, the generally supportive role of government, and the class/social structure of society, the "undermining of capitalist society" which was earlier referred to in a broad sense is made manifest in its particular but nonetheless related forms. A number of the social and economic conditions, and related policy issues are deeply rooted in the distorted cycles of the accumulation process. In fact the increased regulatory presence of government can be viewed as an effort by the institutions in the political arena to save capital from the increasing randomness of its self-destructive tendencies. Some of these tendencies along with their socio-economic
impacts for the African-American workforce will be identified and assessed at greater length in subsequent chapters. Here it suffices to state that the contradictions of capitalist society have a general impact on all who are forced to depend on the system. However, the consequences of these contradictions take on an added destructive intensity when social and institutional doctrines such as racism are applied.

Earlier we observed that the driving force of and for capital is the expropriation of increasing rates of surplus value and profits necessary to expand the accumulation process. Furthermore the measures employed by capital to effect this condition tended towards labor displacing-technology in an effort to cut costs. The resulting unemployment may only be a temporary condition for certain individual workers, but within the overall context of capitalism's accumulation process, the crisis of unemployment is a permanent phenomenon. The permanence of this phenomenon in capitalism is clearly reflected by the standards of unemployment established by government to define the limits of social welfare policy. For example, during the early sixties, the accepted rate of unemployment for the active laborforce stood at a little over three percent. The current rate stands closer to seven percent, with the accepted rate for the African-American workforce set at double the normal rate. 16

In a classical Marxist analysis, this permanent pool of unemployed or surplus labor is referred to as the In-Reserve Army. Manipulation of the size of the industrial reserve is commonly identified as one of capital's wage regulating tactics. It is not dissimilar to a typical neo-classical supply and demand analysis. When an acceleration in the
accumulation process triggers an increase in production, expanded production capacity forces industry to hire workers from the surplus labor pool thereby depleting the ranks of the industrial reserve. The diminishing supply of readily available labor, coupled with increased demand, generates an upward pressure on wages. When employment reaches the point where rising labor costs decrease capital's ability to expropriate increasing amounts of surplus value, the accumulation process decelerates. Workers are laid off, supply increases, demand decreases, and wage inflation is stabilized. The Phillip's Curve which formerly served as a tool for policymakers to monitor the tradeoff between inflation (rising wages) and levels of unemployment identifies a similar pattern.

On the composition of the industrial reserve, Rosa Luxembourg summed up the components and the effectiveness of trade union organizing efforts within the Reserve, as follows:

The industrial reserve army of the unemployed, however, puts what might be called a spatial restriction on the effect of the trade unions: only the upper stratum of better placed workers, for whom unemployment is only periodical and, as Marx put it, "fluid," has access to trade-union organization and its effects. The lower strata of the proletariat consisting of unskilled laborers, is significantly less suited to trade union organization because of the spatial and temporal conditions inherent in the nature of their employment. The lowest strata is completely beyond the reach of organization. The efficacy of trade unions within the proletariat is thus only shallow on the vertical plane, while it is, in contrast, broad on the horizontal plane. 17

The social dynamics framing the composition of the industrial reserve, the social policy of unions, and industrial growth are of key importance in assessing the role of the African-American worker in early
modern industry. The African-American workforce entered the mainstream labor market as a marginally placed labor force. The accumulation process disenfranchises a certain portion of the workforce in general. Racism by design, however, has disproportionately concentrated the disenfranchising effects of the accumulation process within the ranks of the African-American workforce, reinforcing its marginality and thereby the racial stratification of the society as a whole.
Footnotes for CHAPTER I


14. Ibid.


CHAPTER II

An Agricultural History and the Impacts of Mechanization
The primary purpose of Chapter One was to set the theoretical framework and to identify the major tendencies related to development in a capitalist system. Within this context, technology was viewed as a capitalist tool that reinforced, but was also determined by the social relations of production particular to a given period of capitalist development. At the end of Chapter One, a brief analysis of the Industrial Reserve Army was undertaken to expose one of racism's consequences for the African-American workforce. The effect of racism was observed to disproportionately concentrate the labor-displacing tendencies of capitalism within the ranks of the African-American workforce. This last section of the chapter served only to provide an example of how dual institutions within the system, racist ideology and the economic structure, combine to repress the advancement of the African-American workforce.

Chapter Two provides an historical analysis of the social and economic dynamics that first restricted then discharged a large portion of the African-American workforce from the southern plantation economy. More specifically, the evolution of racism from a social ideology to an organized set of social institutions will be analyzed in conjunction with related technological trends in the economic structure of southern agriculture. The intent is to provide a solid analytical base from which to identify the social and economic constraints placed on development for the African-American population.
An understanding of the development of American slavery must fully recognize that the colonies did not exist in isolation from the rest of the world. They were a part of an expanding and development world economic system. Consequently, when the American colonies entered the slave trade market, the precedent of importing African slave labor had already been established by the Spanish, English and the French on sugar plantations in Latin America and the Caribbean. It should also be maintained that the racist ideology employed to justify the dehumanization of the African man and woman in this country was the same ideologically based doctrine used by the European colonizers to justify the dispossession of Africa from Africans.

In analyzing this particular period of African-American labor history, it is worth noting the fine distinction between slavery as a labor system versus slavery as an institution of social oppression maintained through the development of racist ideology. The following presentation should show quite clearly that slavery and racism unquestionably reinforced one another but were nonetheless semi-autonomous in their responses to changing conditions.

There is a special reason for remaining conscious of the interdependence that characterizes changes in the economic structure and social institutions. Such a perspective allows for a greater degree of analytical flexibility. It therefore avoids the trap of a deterministic analysis that ascribes changes in the social structure to the economic structure, which is considered the dominant base of society in that type of analysis. By avoiding the determinist's trap, a better understanding
of the dual forces impacting the African-American worker in general can be achieved.

In the United States, the regional distribution pattern of the African-American population directly paralleled the mode of agricultural production characterizing the region. This relationship is appropriately illustrated in Table 1.

**TABLE 1**

<table>
<thead>
<tr>
<th>Colony</th>
<th>Total Pop.</th>
<th>% African-American</th>
<th>Mode of Agricultural Production</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Hampshire</td>
<td>9,650</td>
<td>1.6</td>
<td></td>
</tr>
<tr>
<td>Massachusetts</td>
<td>96,000</td>
<td>2.1</td>
<td></td>
</tr>
<tr>
<td>Rhode Island</td>
<td>9,000</td>
<td>5.6</td>
<td>Small scale single family farms</td>
</tr>
<tr>
<td>Connecticut</td>
<td>47,500</td>
<td>3.2</td>
<td></td>
</tr>
<tr>
<td>New York</td>
<td>31,000</td>
<td>12.9*</td>
<td></td>
</tr>
<tr>
<td>New Jersey</td>
<td>22,500</td>
<td>6.7</td>
<td></td>
</tr>
<tr>
<td><strong>Pennsylvania-Del.</strong></td>
<td>45,500</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>Maryland</td>
<td>50,200</td>
<td>18.9</td>
<td>Mixed small scale farms and plantations</td>
</tr>
<tr>
<td>Virginia</td>
<td>95,000</td>
<td>24.2</td>
<td></td>
</tr>
<tr>
<td>North Carolina</td>
<td>11,200</td>
<td>33.0</td>
<td></td>
</tr>
<tr>
<td>South Carolina</td>
<td>16,750</td>
<td>62.7</td>
<td>Rice plantation economy</td>
</tr>
</tbody>
</table>

*New York was the site of a plantations experiment that failed, thereby explaining its higher than average proportion for a northeastern colony.

**Under one governor in 1715.

The progression observed is quite clear. The colonies characterized by large scale units of production or plantation agriculture had a greater dependence upon slave labor, and consequently had a higher proportion of
African-Americans within their population.

In 1750 there were about 236,000 slaves in the American colonies, which equalled four times the existing slave population in 1715.\(^2\) In the 1760's a new variety of cotton was introduced to the Georgian agricultural frontier that was only moderately received. Consequently, by 1792, the United States had a total output of only 6000 bales of cotton.\(^3\) However, towards the end of the 1700's, there existed several key technological innovations that would significantly impact southern agriculture, and consequently the development of slavery and African-American people in the United States.

These inventions and innovations (the application of an invention), marking the close of the 18th century, listed in their order of development, included:\(^5\)

1. The development and refinement of the spinning mule from 1768-1784.
2. Development of the steam engine in 1769.
3. Application of the steam engine to the English textile industry in 1785.
4. The invention of the cotton gin in 1793.

With the application of the steam engine to the textile industry, Britain developed a tremendous demand for the cotton grown in its former colonies. Coupled with Eli Whitney's solution to the problem of cotton seed removal (the cotton gin), the stage was set for sizable profits in cotton production.

The consequence, of course, was a phenomenal increase in the growth rate of cotton production and the growth of the slave population. The
results are presented below.

TABLE 2
Technological Innovations, Growth in Cotton Production, and Growth in Slave Population, 1790-1860

<table>
<thead>
<tr>
<th>Year</th>
<th>Innovation</th>
<th>Cotton Production/ bales</th>
<th>%</th>
<th>Slave Population</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1768</td>
<td>Spinning mule</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1769</td>
<td>Steam engine (SE)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1785</td>
<td>Application of SE to industry</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1790</td>
<td></td>
<td></td>
<td></td>
<td>697,624</td>
<td></td>
</tr>
<tr>
<td>1792</td>
<td></td>
<td></td>
<td>6,000</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1793</td>
<td>Cotton gin</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1795</td>
<td></td>
<td></td>
<td>17,000</td>
<td>183.3</td>
<td></td>
</tr>
<tr>
<td>1800</td>
<td></td>
<td></td>
<td>73,000</td>
<td>329.4</td>
<td></td>
</tr>
<tr>
<td>1805</td>
<td></td>
<td></td>
<td>146,000</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>1810</td>
<td></td>
<td></td>
<td>178,000</td>
<td>21.9</td>
<td>1,191,362</td>
</tr>
<tr>
<td>1815</td>
<td></td>
<td></td>
<td>209,000</td>
<td>17.4</td>
<td></td>
</tr>
<tr>
<td>1820</td>
<td></td>
<td></td>
<td></td>
<td>1,538,022</td>
<td>29.1</td>
</tr>
<tr>
<td>1830</td>
<td></td>
<td></td>
<td></td>
<td>2,009,043</td>
<td>30.6</td>
</tr>
<tr>
<td>1840</td>
<td></td>
<td></td>
<td>1,348,000</td>
<td>23.8</td>
<td>2,487,355</td>
</tr>
<tr>
<td>1850</td>
<td></td>
<td></td>
<td></td>
<td>3,204,313</td>
<td>28.8</td>
</tr>
<tr>
<td>1860</td>
<td></td>
<td></td>
<td>3,841,000</td>
<td>23.4</td>
<td>3,953,760</td>
</tr>
</tbody>
</table>

Jordan 1968:317
Foster 1954
Frazier 1949:39

The results speak for themselves. As the profitability of cotton increased, more land was brought under cultivation for cotton production, thereby increasing the demand for slave labor. With a cotton-based plantation
economy capable of absorbing large amounts of labor, the historical root of the African-American worker in southern agriculture and America in general is easily identified.

The dynamics in the previous section focused primarily on the economic imperatives that guided the course of slavery as a labor system for the southern plantation economy. These economic developments were not occurring in isolation from the general trends that were shaping southern society. It is important, therefore, to understand the plantation economy, not as a string of individual units, but as a viable institution capable of adapting to changing conditions. It is also equally important to understand the ideological development of racism and its concretization as an oppressive social process. These two issues are necessarily related to one another.

In "The Decadence of the Plantation System," Ulrich B. Phillips writes:

The plantation system indeed was less dependent upon slavery than slavery was upon it; and the plantation regime has persisted on a considerable scale to the present day in spite of the destruction of slavery a half century since. The plantation system formed, so to speak, the industrial social frame of government in black belt communities, while slavery was a code of written laws enacted for the furtherance of that system's purposes. 7

The Annals, Vol XXXV (Jan-March, 1910)

At the close of the Civil War and marking the beginning of the Reconstruction Period (1877), the most important change affecting southern agriculture was the abolition of slavery. Even though slavery had been abolished, the fundamental labor needs of the plantation system remained virtually unchanged. Through a set of economic and social arrangements, a labor force was coordinated for the big plantation owner. Jay R. Mandle
suggests in his book, the *Roots of Black Poverty*, that:

A plantation economy is defined as one in which the state of technology allows profit-maximizing large-scale farmers to produce a staple primarily for an external market. That same technology, however, requires the use of more workers than profitably low wage rates would attract. As a result, some non-market mechanism is required in order for the planters to be sure of a sufficient supply of workers to carry out profitable production. In turn, those non-market mechanisms help to define the class relations of the society. The culture which reemerges reinforces these class relations. 8

The model suggested by Mandle closely approximates social conditions particular to the post-Civil War south.

The Reconstruction Period from 1866 to 1877 is generally identified as one of the most politically progressive eras for African-Americans in the United States. As part of the Congressional Reconstruction mandate for readmission, all southern states that had seceded from the Union were required to ratify the 14th Amendment and grant universal suffrage to all of its natural born citizens. Consequently, at the outset of Reconstruction, the south had 700,000 African-American and 660,000 whites registered to vote. Table 3 demonstrates the potential political power base that never materialized for a number of reasons.
TABLE 3
African-American Representation in
Reconstruction Constitutional Conventions

<table>
<thead>
<tr>
<th>State</th>
<th>African-Americans in Population (%)</th>
<th>African-Americans in Convention (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>So. Carolina</td>
<td>60</td>
<td>61</td>
</tr>
<tr>
<td>Louisiana</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td>Florida</td>
<td>47</td>
<td>40</td>
</tr>
<tr>
<td>Virginia</td>
<td>41</td>
<td>24</td>
</tr>
<tr>
<td>Georgia</td>
<td>44</td>
<td>19</td>
</tr>
<tr>
<td>Mississippi</td>
<td>55</td>
<td>17</td>
</tr>
<tr>
<td>Alabama</td>
<td>45</td>
<td>17</td>
</tr>
<tr>
<td>Arkansas</td>
<td>27</td>
<td>12</td>
</tr>
<tr>
<td>No. Carolina</td>
<td>37</td>
<td>11</td>
</tr>
<tr>
<td>Texas</td>
<td>25</td>
<td>10</td>
</tr>
</tbody>
</table>

Even where African-Americans were a majority of the population, Reconstruction legislatures were never controlled by African-Americans. For all the potentially progressive legislation churned out during this period it was significantly deficient in a very critical area. This deficiency is framed by the failure of the legislation to provide for a comprehensive land redistribution program. The consequences of this failure regarding African-American self-reliant development are evidenced by the socio-economic conditions confronting the African-American population today.

As it had been stated earlier, the destruction of the slave labor system initially left plantation owners without the legal means to press their former slaves into servitude. So, even though planters were once again in control of their land resources, they were without the labor
resources necessary to turn a profit from the land. It is at this juncture
that we witness the accelerated institutional development of racist
ideology.

Many of the southern states solved the labor problem created in the
absence of the slave labor system by passing laws that were designed to
serve the social control functions previously served by slavery. These
so called "Black Codes" had the effect of limiting the social, economic,
and geographic mobility of the African-American population. As a result,
most African-Americans were forced to submit to a free market form of
slavery known as tenant sharecropping. It should be noted that between
1890 and 1910, manufacturing employment increased in the United States by
a total of 5.6 million jobs. Of these additional jobs, only 6.8 percent
were located in the six states where plantation agriculture was most
important--Alabama, Arkansas, Georgia, Louisiana, Mississippi, and South
Carolina. From these figures it is apparent that the industrial
sector offered very few opportunities for a substantial portion of the
African-American workforce to escape the confines of southern plantation
agriculture. Even if southern industrial expansion had opened new avenues
for employment, these options would have been closed off to the majority
of African-American workers, primarily for the purposes of maintaining a
substantive labor supply for the plantation economy.

The exact origins of the share tenancy arrangement are not clear.
However, it suffices to say that the motivating force was the necessity
to control labor at a time when land was plentiful and labor was needed
to work the land. Ultimately, the same basic forces that conditioned the
development of slavery were found to be operative in the spread of
sharecropping arrangement. This is evidenced by the fact that between 1866 and 1885, cotton production increased from 1,948,000 bales to 6,369,000 bales; and land under cultivation increased from 7,766,000 acres to 17,922,000 acres. Once again the economic issue is framed by the social issue of labor control. In slavery, the mechanisms of control involved force and legal status. Under the share-tenancy arrangement, force was still a factor, but the institutionalization of racist restrictions backed by force was the combination that maintained a steady supply of freed African-American labor to the plantation economy.

A conventional sharecroppers arrangement basically meant that the landlord would provide most of the supplies and the tenant family would supply the labor. The tenants were not paid until after the harvest. At that time, the landlord would weigh the harvest, determine its value, deduct his share, deduct the amount of the tenant's indebtedness incurred during the course of the growing season, and assign the balance to the tenant, if in fact there was anything left to assign. Since the landlord controlled the books, the tenants were completely vulnerable to the manipulative tactics used by the landlords to squeeze out extra profits from the transactions. Due to the control factor, share tenancy arrangements were preferred by the landlords over the hiring of wage labor. This preference is borne out by the fact that in 1880, 36.2 percent of all southern farms were tenant operated. This proportion increased to 55.6 percent by 1930.

Throughout the growth of the share-tenancy arrangement in the south, there was also a concurrent rise in the proportion of whites involved in cotton production. It is estimated that the proportion of the cotton
crop produced by whites increased from a negligible amount before the Civil War to almost 40 percent in 1876, and close to 65 percent in 1910. Table 4 identifies the racial composition of the southern agricultural sector for 1910.

**TABLE 4**

Farm Tenure by Race in the South, 1910

<table>
<thead>
<tr>
<th>Tenure</th>
<th>African-American</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Owners</td>
<td>218,467</td>
<td>1,326,044</td>
</tr>
<tr>
<td>full</td>
<td>59%</td>
<td>68%</td>
</tr>
<tr>
<td>part</td>
<td>41%</td>
<td>32%</td>
</tr>
<tr>
<td>Tenants</td>
<td>670,474</td>
<td>866,278</td>
</tr>
</tbody>
</table>

Even though Table 4 does not include wage laborers, the relative statistics for ownership adequately define the inequitable conditions in agriculture dominated by a socially based plantation economy. Of the total African-American farm operators, less than 25 percent were full or part owners, whereas the corresponding statistics for the white population approximated 60%. In relationship to the total African-American population, owners within the group represented only 2.6 percent of the total. The related statistic for the white population was close to 13 percent.

Even in light of the inequities, of key importance to this period was the increased interracial character of the tenant sharecropper system. The racial mix of this group created the base for the development of one of the few mass political movements in the south. Ironically, the aftermath of the movement resulted in the development of a politically
endorsed, segregated society. The movement in question here was the Populist Movement. The movement itself was a response to the distortions created in agriculture caused by the development of industrial capitalism. These distortions were characterized by high interest rates, high railroad rates, large mortgage debts, and increased pressure on southern landowners to ride the backs of their tenant sharecroppers.

The result was the development of the Granger movement coming out of the midwest and focusing on skyrocketing railroad rates. It began in 1867 and provided the foundation for the growth of the Greenback movement in 1875, whose platform was basically built around the accessibility of cheap money to ease the strain of agricultural debts. The organization that cornered the support of the southerners was the Southern Farmers Alliance, which excluded African-American farmers. As a compromising measure, the leadership of the Southern Alliance recognized the need for a coalition base, and consequently helped to found the Colored National Farmers Alliance in 1886.

The joint alliances cooperated in a farmer program to regulate railroad rates, create cheap money, establish cooperative, reduce taxes, nationalize transportation, and protect African-American political rights. As late as 1910, at least 90 percent of the total African-American population in the United States was located in the south. With close to 60 percent working in agriculture, even in light of racist attitudes, the southern Farmers Alliance was forced to court the political support of the Colored National Farmers Alliance.

In 1892, the various groups came together as the People's Party, in February of that year. For the record, the party pulled over
one million votes and carried four states in the presidential election. In addition, Populist governors were elected in four states, and the People's Party placed 345 representatives in 19 states during the 1893 elections. As a political concession for African-American support, Populist platforms consistently demanded a secret ballot and an end to lynchings. The political successes of the various alliances in the south directly threatened the economic and political domination of the plantation interests, who were politically represented by the Democratic party in the south.

Identifying race as the weak link in the Populist coalition, the Democrats methodically set out to exploit the weakness. A campaign was launched among the poor whites, consequently raising strong anti-African-American sentiments based upon the experiences of Reconstruction. Other tactics involved blatant cases of vote-tampering and election stealing. The People's Party resolved that if it was to remain politically viable, its alliance with the African-American agenda was going to have to be terminated. After sacrificing the African-American agenda, the end result of the agrarian revolt was a white race unified in opposition to African Americans.

A vehemently racist campaign was launched by the elitist plantation interests with the goal of disenfranchising African-Americans. From previous data we have seen that in those areas dominated by a plantation economy, there existed a high concentration of African-Americans within that given population. By manipulating the phobia of "African-American domination" on the part of poor whites, the Democratic Party (the plantation elite), was able to psyche the majority of the white voters into
supporting a party representing the interest of the planters rather than their own interest.

By 1910, Mississippi, South Carolina, Louisiana, North Carolina, Alabama, Virginia, Georgia, and Oklahoma had all enacted legislation restricting or eliminating African-Americans from the voter rolls. The political excess was reinforced by violence. For example, in the core states of the south, between 1882 and 1903, there were 1217 lynchings committed against African-Americans, and a wave of Jim Crow legislation was enacted throughout the south. Prior to 1900, there was only one segregationist law on the books in the south, and that pertaining to separation on trains. The beginning of the twentieth century brought forth a wave of Jim Crow legislation that stressed segregation through all tiers of the social and economic processes in the south.

As a result, the cultural/social hegemony of racism had become a deeply institutionalized condition controlling relationships in the economic sphere, and consequently undercutting the base of development for the African-American population. Williams paraphrases Gramsci's formulation of cultural or ideological hegemony as follows:

An order in which a certain way of life and thought is dominant, in which one concept of reality is diffused throughout society in all its institutional and private manifestations, informing with its spirit all taste, morality, customs, religious, and political principles, and all social relations particularly in their intellectual and moral connotations.

The economic indicators for the African-American workforce show that in the south 62 percent of the African-American workforce was engaged in agriculture, with another 18 percent employed in domestic and personal
services. For the African-American population in general, it meant that 75 percent of its workforce entered the twentieth century with virtually no access to the industrial labor process.21

* * * * * * * * * * * * * *

Before continuing it is appropriate at this point to review briefly what has been presented. In the slave labor system we witness the ultimate form of capitalist economic exploitation. Drawing from Chapter One, we remember a couple of important relationships. Firstly, surplus value is the difference between total output and that portion which is paid to labor. Secondly, the wage paid to a worker is the combination of an economic component required by the worker to purchase basic necessities, and a social component of additional value that is determined by the standard of living for a given society. Under slavery, the owner paid no wages. He provided only that which was minimally required for the slave to reproduce his/her labor power. Consequently, the only restriction placed upon the potential expropriation of surplus value from the slaves, during the course of the work day, was the physical limit of exhaustion that would prevent the slave from performing the desired tasks the following day.

In order for slavery to be profitable, a mode of production was required that could efficiently absorb the quantity of labor being exploited. The plantation economy in southern agriculture provided the base for a scale of production capable of turning a profit from a labor intensive process of that magnitude. It is important to remember that the plantation economy was highly dependent upon the development of institutions capable of controlling and maintaining a steady supply of
labor for production purposes.

Up until the Civil War, the institution of slavery backed by racist ideology, served as the social control mechanism. After the Civil War, with the abolition of slavery and the dominance of the plantation elites threatened, racist ideology was institutionalized in the form of Jim Crow legislation and restrictions on the economic mobility of the African-American population in the south. The end result was a return to a modified version of slavery in the form of sharecropping. The desired outcome was achieved: a steady supply of plantation labor that was effectively controlled through the political structure and vigilante violence.

The mutually supportive relationship between racist ideology and the mode of production had transformed the plantation economy into a system of social and economic oppression, underwritten by the sanctioned use of violence by whites to control the African-American population. Furthermore, in responding to the labor needs of the plantation economy, racist ideology accelerated into a dynamic of its own, resulting in the social institution of segregation.

Following the two World Wars, developing conditions began weakening the underpinnings of the plantation system as a social and economic institution. The task of the next section is to take a look at some of those factors, and to scope the increased movement of the African-American population into non-agricultural employment.
In the previous section, a critical factor cited as a partial explanation for the massive concentration of African-American workers in agriculture was the lack of and exclusion from alternative employment options. Up until the First World War, the expanding labor requirements of northern industrial capitalism were filled by European immigrants. Between 1850 and 1920, foreign immigration averaged 500,000 per year, subject to fluctuations in the European and American economic cycles. However, a brief look at immigration figures from 1910 to 1919 highlight the void created by World War I.\textsuperscript{22}

\begin{table}[h]
\centering
\begin{tabular}{|c|c|}
\hline
Year & Immigration \\
\hline
1910 & 1,041,570 \\
1911 & 878,587 \\
1912 & 838,172 \\
1913 & 1,197,892 \\
1914 & 1,218,480 \\
1915 & 326,700 \\
1916 & 298,826 \\
1917 & 295,403 \\
1918 & 110,618 \\
1919 & 141,132 \\
\hline
\end{tabular}
\caption{European Migration 1910-1919}
\end{table}

The labor shortage, along with the needs of the war economy were the primary components of the economic pull factors triggering the first wave of African-American migrations to the industrial cities of the midwest and northeast.

During the war period, the corresponding figures for African-
American migration from the south totaled an estimated 425,000 persons. With the passing of a new immigration law in 1921, after a brief rise, European immigration rates never regained pre-war levels. Consequently between 1920 and 1930, African-American outmigration from the south increased by 65 percent, to slightly over 700,000 persons.23 Had it not been for the Depression Era, rates of outmigration would have continued at increasing rates, thereby accelerating the crisis that eventually confronted the plantation economy after the second World War.

In analyzing the pivotal factors involved in the geo-spatial transition of African-Americans, from the south to the north, a clear distinction can be made between the pre-World War II period and the post-World War II period. As the figures just presented suggest, prior to World War II, the pull of potentially economic conditions influenced the migratory rationale of the majority of African-Americans. However, after World War II, the combination of a push factor from agriculture and the pull of post-war expansion, resulted in the fundamental breakdown of the plantation economy. The expected outcome of course, was the release of African-Americans from agricultural employment in large numbers, and a steady flow of migrants out of the south. Graph I summarizes comparative migration figures for African-American and European migrants. Table 6 presents supportive data identifying regional and urban shifts.
Graph I - Rate of Immigration to United States and Black Out-Migration From Six Plantation States: (Alabama, Georgia, Louisiana, Mississippi, N. Carolina, S. Carolina)
TABLE 6
Percentage Distribution of African-American Population
by Region and Urban Areas, 1910-1960

<table>
<thead>
<tr>
<th>Year</th>
<th>Regional U.S.</th>
<th>South</th>
<th>Non-South</th>
<th>Urban U.S.</th>
<th>South</th>
<th>Non-South</th>
</tr>
</thead>
<tbody>
<tr>
<td>1910</td>
<td>89.0</td>
<td>11.0</td>
<td>27.4</td>
<td>21.2</td>
<td>77.5</td>
<td></td>
</tr>
<tr>
<td>1920</td>
<td>85.1</td>
<td>15.9</td>
<td>34.0</td>
<td>25.3</td>
<td>84.5</td>
<td></td>
</tr>
<tr>
<td>1930</td>
<td>78.8</td>
<td>21.2</td>
<td>43.7</td>
<td>31.7</td>
<td>88.1</td>
<td></td>
</tr>
<tr>
<td>1940</td>
<td>77.1</td>
<td>22.9</td>
<td>48.6</td>
<td>36.5</td>
<td>89.1</td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>68.0</td>
<td>32.0</td>
<td>62.4</td>
<td>47.6</td>
<td>95.2</td>
<td></td>
</tr>
<tr>
<td>1960</td>
<td>60.0</td>
<td>40.0</td>
<td>73.2</td>
<td>58.4</td>
<td>95.2</td>
<td></td>
</tr>
</tbody>
</table>

An analysis of the breakdown of the plantation economy reveals that a combination of market/non-market, system-wide and regional dynamics were involved. The outcome was a rapid mechanization of agriculture in the south that had a disproportionate impact on African-Americans due to their concentrated status as laborers and tenants.

It is important to recognize that the basic tendencies of capitalist development that apply to industry are also applicable to agriculture. Just as increased productivity in industry allows for a smaller workforce to produce the goods demanded by the population, over time, increased mechanization of agriculture allows for a drastically reduced percentage of the farm population to engage in agricultural production and yet still adequately supply the needs of the nation. The tendency towards concentration that is characterized by monopolist domination in the industrial sector is expressed as a progressive increase in the amount of acreage.
cultivated on a decreasing number of farms. The following figures support this contention. Between 1940 and 1969, although the amount of land in farms remained relatively constant at 1,065,000 acres, the total number of farms decreased from 6,102,000 to 2,730,000. In the south during the same period, the number of farms declined from 3,007,000 to 1,161,000. The tendencies identified above were for the most dormant in southern agriculture until after the second World War.

The plantation economy was insulated against the technological trends sweeping agriculture, primarily due to the institutional arrangements that provided for a steady supply of African-American labor power. The low wages that could be maintained through a labor-intensive mode of production effectively blocked any major shifts towards capital-intensive production in southern agriculture. This condition is clearly highlighted by national statistics rating the relative levels of tractor power in use. Of the 920,000 tractors on farms in 1930, only 16 percent were in the south. In addition, well under 20 percent of farm operations were performed by tractor power in the south compared to a national average of over 50 percent for the same operations. Even as late as 1939, the figure for the south was just approaching 25 percent.

As we noted in the previous section, consistent with the growth of the plantation economy, was a decline in the number of owner operated farms, and an increase in the rate of tenant farming by both African-Americans and whites. However, on the eve of World War II, tenant farming still carried with it a racially determined status. Sixty percent of all African-American tenants were sharecroppers as opposed to 25 percent of
white tenants. Fifty-two percent of the white farm operators were full owners, whereas the corresponding statistic for African-American farm operators was 18 percent. When compared against total ownership, African-American holdings only represented 11 percent of the total. From a security standpoint based upon ownership, the figures indicate that African-Americans involved in the agricultural sector were almost twice as vulnerable to changing conditions. It is important to add that these numbers do not include full and part-time laborers. Naturally an inclusion of these workers radically intensifies the impacts that any labor altering change in agriculture would have on the African-American population in general.

Advances in production methods generally occur when a firm or operation is faced with a production problem that requires a technological breakthrough. The production problem encountered by southern agriculture was basically the result of a dwindling supply of labor. This was further complicated by the fact the cost of manufactured goods were rising in comparison to the price paid for agricultural produce. Very simply, this means that over time farmers lose purchasing power. The problem for the plantation economy was defined then as the need to produce more with a shrinking supply of labor. The system was thus trapped in a production fix that would eventually be answered through mechanization.

From Graph I, we noticed that the forebodings of a potential labor crisis were briefly glimpsed between 1910 and 1930 when 1.1 million African-Americans migrated from the south. However, the Depression and reduced employment opportunities in the north abruptly halted the trend.
This was not to be the case from 1940 on. The war required an available pool of labor capable of immediately filling the voids in northern industry. Between voluntary migration and the labor recruiters from northern-based war industries, African-American out-migration between 1940-50 surpassed the previous twenty year total at slightly over 1.1 million persons. This movement is reflected through statistics showing a decrease in the percentage of the African-American work force in agriculture, from 41 percent to 28 percent, between 1940 and 1944.28

The response of southern agriculture is predictable. Between 1940 and 1945, tractors on farms increased by 136 percent, and accelerated to a 250 percent increase between 1945 and 1948.29 Following innovations in International Harvester's model picker, harvesting of the cotton crop, which had remained labor-intensive, also became increasingly mechanized. Prior to its actual impacts, it was predicted that the complete mechanization of all operations would reduce labor requirements by a total of 82 percent per each acre of cotton cultivated or likewise a reduction from 160 man hours per bale to 28 man hours per bale.30 The House of Representatives Committee on Industrialization in the South, in 1947 projected a displacement figure of 1.2 million to be expected by 1965. By 1969, the actual job loss was 2.3 million.31

The traditional mode of southern plantation agriculture had finally become subject to the basic tendencies of capitalist development. By 1964, the average acreage for a commercial farm in the south had increased from 123 acres in 1940 to 252 acres. Given the fact that between 1950 and 1964 the number of farms decreased by 2,228,000, while land acreage remained fairly constant, the increase in farm size could have only come
about through the consolidation of land forfeited by bankrupt small farmers. The process is not unlike monopolist development in the industrial sector. Increasing scales of operation require greater amounts of capital in order to produce profitably, consequently squeezing out the smaller operators who can no longer compete effectively. Table 7 illustrates this trend in agriculture.

### TABLE 7
Change in Number of Farms in Terms of Value of Gross Sales, 1950-64

<table>
<thead>
<tr>
<th>Farm Class</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>$2500-4999</td>
<td>-439,000</td>
</tr>
<tr>
<td>5000-9999</td>
<td>-217,000</td>
</tr>
<tr>
<td>10,000-</td>
<td>383,000</td>
</tr>
</tbody>
</table>

Data presented in Table 7 are based upon farm classes 1 through 5 ($2500 of sales and up). Class 6, which is the poorest strata of farmers, represented 37 percent of American farms, and accounted for 65% of all farms operated by African-Americans. The result is what seems to be an irreversible resource crisis for the African-American population. In 1910, aggregate ownership of land for African-Americans approached 16 million acres. The current figure stands closer to 3.5 million.

The uncontrolled transition of southern agriculture did not evolve in a vacuum. The social and economic sacrifice forced upon the African-American population was high. African-Americans absorbed the brunt of over 10 generations where more than half of the workforce was restricted to the agricultural sector, yet in the span of two decades were expected
to take full advantage of already exhausted or diminishing opportunities in the urban arena. The immediate consequences were seen in the urban explosions that ripped through the mid-sixties. Having left the south with expectations of better conditions, on a different level, many encountered conditions that paralleled those that they had left.

The industrial and urban transition of the African-American population has always been an ongoing process. The task of the next chapter is to present and analyze the obstacles responsible for distorting the transition, and to assess federal efforts to compensate for the inherent inequities of capitalist social and economic institutions.
Footnotes for CHAPTER II

1. James Geschwender, Racial Stratification in American; (Iowa, 1978), adapted from pp. 131, 132, and 133.


5. Adapted from Jordan and Foster.


7. Ibid., p. 10.


11. Idem.

12. Mandle, op. cit., p. 47.


Notes 16 through 19 taken from the following references:


Ibid., pp. 332-343.

August Meier and Elliot Rudwick, From Plantation to Ghetto, (New
(York: 1970), pp. 177-186.

20. Mandle, op. cit., p. 5.


23. Mandle, op. cit., p. 73.


Review, January 1945.

29. Ford, op. cit., p. 22.

30. Idem.


33. Ibid., p. 27.
CHAPTER III

The Transition Towards Industry and the Effects of Racism and Technological Change
During slavery, it was a standard practice for slave owners to hire out their slaves to area craftsmen and manufacturers for a fee. A precedent was set through this practice that would critically impact the advancement of African-Americans in non-agricultural pursuits.

First of all, the renting and ownership of slaves tended to be a very profitable arrangement for both manufacturers and slaveowners. The manufacturer could generally rent the slave's services for a fee that was far below the market rate for standard wage labor. The result of course was the increased displacement of white workers by slave labor and a general lowering of wages. The reactions of the white workers for the most part were never directed against the owners of capital who were responsible for controlling the process. The white workers' reactions were typically manifested by an escalated antaonism directed against African-Americans.

The second consequence of the hiring or owning of slaves by manufacturers was the standardization of job segregation. Slaves were generally employed to do the jobs that were considered too dangerous or dirty by the white workers. A corollary to segregation by tasks was the segregation by occupation. By 1850, approximately 5 percent of all slaves were industrially employed.

In the crafts a similar situation existed. Even though the plantation as a collective functioned as a coordinated system, each plantation individually was a self-reliant unit. Those slaves not working the fields were used as maintenance crews. As a result, a relatively high number of
slaves on the plantation and in the towns had developed highly tuned craft skills. Area craftsmen who needed extra helpers or apprentices quite often resorted to the use of African-American slaves. Economically, the choice of slave labor was less expensive. The result of the practice is witnessed by the statistic showing that in 1865, 5 out of every 6 artisans (100,000 out of 120,000) were African-Americans. The consequence for the white artisan was no different than the condition confronting the white industrial worker. This process of economically based racial competition was one of the platforms racist ideologues used to sharpen antagonisms between the races. Remembering the Reconstruction experience of the south taking place shortly after 1865, it should be specifically noted that the ideologues in question here are the plantation elites and the industrial capitalists, who, in the quest for profits, had forced the competition in the first place. When the preference for African-American labor no longer proved to be profitable, the context for the African-American worker in industry and the crafts was radically altered. In fact, once the African-American craftsman lost the "protection" of the capitalist interests, the reaction of lower class whites was carried out with a swift vengeance. Whereas in 1865 83 percent of the artisans were African-American, by 1900 only one out of 20, or five percent were.

The racist reaction in the south was matched by that in the north. Discriminatory employment practices and levels of violence were just as prominent. The competition between European immigrants and African-Americans from the south created an explosive situation. The immigrants were employed in large numbers at the exclusion of African-Americans prior to World War I. There exists no particular reason to assume that European
immigrants, also displaced from agricultural backgrounds, had any level of skills greater than that of African-Americans from the south. Exclusion was racially motivated, and the entitlement of favorability assumed by the immigrants, was forcefully defended. A competitive threat from African-Americans was reacted to violently.

A growing labor movement and the war based expansion of industry altered the situation. White employers who had formerly refused to hire African-American workers began to reverse their positions. Labor recruiters from the north were sent into the south, to bring back workers for industry. Industrialists employed this tactic for two basic reasons. The shrinking labor supply, a consequence of reduced immigration and the increased employment of surplus labor in war related production was driving up wages. The importation of African-American workers tended to moderate wage increases. The second objective behind the recruitment of African-American laborers was related to their use as strikebreakers. As one employer put it, "We took black labor out of the south until it hurt."5

As a result, much of the racial violence in the United States during World War I and the immediate post war years was closely related to job competition. A major riot in East St. Louis, Illinois, in 1917, that claimed the lives of 39 African-Americans, was in large part due to racial hostilities that had been inflamed by the use of African-Americans as strikebreakers.6 A Congressional committee report stated afterwards, "Responsibility for this influx of 10,000 or more Negroes into East St. Louis rests on the railroads and manufacturing establishments.... It is a lamentable fact that the employers of labor paid too little heed to the comfort or welfare of their men. They saw them crowded into wretched
In this process we see a classic enactment of the uses and purpose of the Industrial Reserve Army. As to the validity of the Industrial Reserve, it is attested to by the fact that northern industrialists in a calculated move, intentionally increased its ranks by importing African-American labor. The result was greater control over the labor process.

Violence also appeared as part of a major post-war attempt to reverse wartime African-American economic advances. At least 25 race riots took place in 1919 alone. The worst of these was in Chicago and was due to the use of African-American strikebreakers. The riot caused 15 white and 23 African-American deaths, with hundreds injured on both sides. It is a safe bet that none of the corporate bosses responsible were victimized by the violence. These occurrences continued with reduced frequency and lesser intensity for the next several years.

To focus attention on the African-American strikebreakers, inappropriately displaces the trade and labor union movement from the social and political contexts in which they evolved. Prior to the war, it was not uncommon for white workers to walk off the job in protest of having to work with African-Americans. Many of the racial antagonisms that were socially based were further sharpened in the workplace. Consequently, discriminatory practices of the union movement constituted a major barrier to African-American economic advancement. The class consciousness of the rank and file white laborer only extended as far as the racial boundary. Early American Federation of Labor leadership recognized the need to organize the growing mass of African-American workers in order to reduce their potential use as strikebreakers. The leadership of the AFL
advocated a non-discriminatory policy failed to forcefully back it up. Time and time again it acceded to the regional pressures of its membership. Ultimately the rank and file union membership has been able to counter the liberal tendencies advanced by the AFL leadership. By doing so, however, they ultimately played into the hands of capitalist manipulators. I would suggest here that the real issue behind African-American strikebreaking was not the class unconsciousness of the African-American worker, but the race consciousness of the white workers.

In spite of the obstacles limiting access to employment in manufacturing, migration after the war still continued, spurred on by the promise of wartime gains. Between 1914 and 1919, the number of wage workers engaged in manufacturing increased from 7 million to 9 million. From 1910 to 1920, the level of African-American employment in industry expanded 61 percent, (5551,825 to 901,181).

As wartime production contracted, the acceleration of African-Americans into manufacturing also slowed. The depression years of the thirties brought the momentum gained through the early twenties to a grinding halt. Therefore, from an historical perspective, African-Americans did not legitimately enter the mainstream of the labor process until 1940 or the beginnings of World War II. Table 8 is a reflection of African-American blue collar employment in 1920 and 1940.
### TABLE 8
Blue Collar Employment in Manufacturing by Race, 1920 to 1940

<table>
<thead>
<tr>
<th>Blue Collar</th>
<th>1920</th>
<th>1940</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>white</td>
<td>black</td>
</tr>
<tr>
<td>total employed</td>
<td>--</td>
<td>825,321</td>
</tr>
<tr>
<td>percent</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>skilled</td>
<td>32.4</td>
<td>16.6</td>
</tr>
<tr>
<td>semi-skilled</td>
<td>19.1</td>
<td>15.5</td>
</tr>
<tr>
<td>unskilled</td>
<td>48.5</td>
<td>67.9</td>
</tr>
</tbody>
</table>

A closer look at Table 8 reveals some interesting relationships. In 1920 an African-American blue collar worker stood a 40 percent greater chance of being concentrated in an unskilled laborer's position than a white blue collar worker. On the other hand, however, African-American "blues" were almost twice as likely not to be employed as skilled craftsman or machinist, relative to their white counterparts. By 1940, an African-American blue collar worker was three times more likely to be employed as a laborer than a white worker, and 1.5 times less likely to be employed as a semi-skilled operative. The comparative figures for skilled positions remained relatively the same. However, the 2.4 percent drop witnessed on the part of the skills category for African-American workers can probably be explained by racial exclusion from the trade unions.

A major shift within the blue collar category was seen in the rapid growth of the semi-skilled operative position. According to the
Statistical History of the United States, using 1947 as the base year, the index of output per man-hour for production workers, rose by 108 percent, from 44.6 to 93.2, between 1920 and 1940. The shift towards semi-skilled/operatives within the blue collar category, along with productivity increases, would seem to suggest a concurrent growth in the application of technology to the production process. In other words, the increased automation of the production processes in industry.

These comparative statistics are clearly reflective of the African-American worker's late start in manufacturing. The position of the worker once he was able to get past discriminatory hiring policies, was further conditioned by racism in the unions and on the shop floor, and seniority rights. The combination of these factors culminated in the saying, "Last hired, first fired." In reviewing the statistics for African-American blue collar workers, it should be maintained that the statistics only identify the internal dynamics of a particular occupational category, during 1940. As an isolated category, blue collar workers provide a clear perspective on the precedents that were set as African-Americans began breaking with their agricultural and domestic service positions. It is still important to note, however, that in 1940, slightly over a quarter of the African-American workforce was blue collar. The majority of the workforce, 66 percent, was evenly divided between agriculture and services. Even though World War II is associated with the major push of African-Americans into industry, the relative deprivation of its beginnings were blatantly apparent as late as the mid-sixties. Some brief illustrations of African-American occupational distribution for a few of the major industries in the sixties bear an undeniable
resemblance to the 1940 picture. The tables are presented below.

**TABLE 9**

**Big Three Automobile Companies:**

**Employment by Race, 1966**

<table>
<thead>
<tr>
<th>Occupational Group</th>
<th>All Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
</tr>
<tr>
<td>Officials and Managers</td>
<td>74,395</td>
</tr>
<tr>
<td>Professionals</td>
<td>51,053</td>
</tr>
<tr>
<td>Technicians</td>
<td>24,499</td>
</tr>
<tr>
<td>Sales, Office and Clerical</td>
<td>93,365</td>
</tr>
<tr>
<td><strong>Total White Collar</strong></td>
<td>243,312</td>
</tr>
<tr>
<td>Craftsmen</td>
<td>129,123</td>
</tr>
<tr>
<td>Operatives</td>
<td>515,843</td>
</tr>
<tr>
<td>Laborers</td>
<td>32,352</td>
</tr>
<tr>
<td>Service</td>
<td>26,755</td>
</tr>
<tr>
<td><strong>Total Blue Collar</strong></td>
<td>704,073</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>947,385</td>
</tr>
</tbody>
</table>

The table does not require too much of an explanation. African-American representation is clearly deficient in the white collar ranks, but disproportionately high in the blue collar ranks. Also worth noting is the fact that the prestige blue collar position of craftsman has a composition of three percent African-American, even though African-
Americans represent over 17 percent of the blue collar workforce. Of the 124,149 employed African-American blue collar workers, 83 percent were operatives. Likewise, for the 5,046 African-Americans employed as white collar workers, 70 percent were employed in office and/or clerical positions. Only 1.1 percent of the African-Americans employed were placed in the top three categories. The analysis is summarized with the fact that 96 percent of the African-Americans employed in the auto industry were concentrated in the lower wage, non-vertically integrated positions. And remember, these statistics are taken from 1966.

The situation was much the same in the steel industry as attested to by Table 10.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Craftsmen (skilled)</td>
<td>10.4</td>
<td>10.8</td>
<td>11.0</td>
<td>11.6</td>
</tr>
<tr>
<td>Operatives (semi-skilled)</td>
<td>51.9</td>
<td>52.2</td>
<td>51.4</td>
<td>51.8</td>
</tr>
<tr>
<td>Laborers (unskilled)</td>
<td>33.8</td>
<td>32.8</td>
<td>32.4</td>
<td>30.4</td>
</tr>
<tr>
<td>Service workers</td>
<td>2.6</td>
<td>2.5</td>
<td>2.7</td>
<td>2.9</td>
</tr>
<tr>
<td>(White collar)</td>
<td>(1.3)</td>
<td>(1.7)</td>
<td>(2.5)</td>
<td>(3.3)</td>
</tr>
<tr>
<td>Total blue collar</td>
<td>98.7</td>
<td>98.3</td>
<td>97.5</td>
<td>96.7</td>
</tr>
<tr>
<td>Total employment</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Over a five year period occupational distribution changed very little. From the figures it is evident that no less than 85 percent of the African-American blue collar workforce was concentrated in the lower wage positions, moving into the decade of the seventies. The corresponding figure for white blue collar workers was no more than 55 percent. As an added dimension, during this period blue collar position declined by 1.3 percent with 70 percent of the decline attributable to the disemployment of laborers. A further statistic reveals that in 1968, of all the African-American workers employed in the steel industry, 96.7 were blue collar employees. Of the remaining 2.3 percent in white collar positions, 64 percent were clerical or office employees.

A final example is taken from the aerospace industry. In this example we witness the technological impacts of a changing product mix on labor requirements. For instance, between 1950 and 1963, the Douglas Aircraft Company increased its portfolio of government/military contracts. The varying labor requirements for different products is shown by the following table.

**TABLE 11**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>1950</th>
<th>1963</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC-6 Planes</td>
<td></td>
<td>S-IV Saturn Project</td>
</tr>
<tr>
<td>Engineering personnel</td>
<td>11.7</td>
<td>41.0</td>
</tr>
<tr>
<td>Tooling workers</td>
<td>18.0</td>
<td>7.5</td>
</tr>
<tr>
<td>Manufacturing workers</td>
<td>69.3</td>
<td>50.7</td>
</tr>
</tbody>
</table>
The table shows a 250 percent increase for engineers, a 60 percent decrease for machine workers, and a 28 percent decrease in laborers. The blue collar jobs decreased and the white collar technical/professional jobs increased considerably. In 1963, disproportionately fewer African-Americans were capable of qualifying for the technical retraining programs, meaning that once displaced, the worker was forced to seek employment with other companies.

The pattern of displacement demonstrated in this example exposes a trend that could easily be referred to as the "donut phenomenon." The skilled middle gets knocked out by changing production technologies, whereas the white collar positions experience accelerated increases, and unskilled positions decrease at a slower rate than skilled positions. The overall occupational distribution of African-Americans in the aerospace industry for 1966 exhibited the usual concentration in the less skilled, lower wage categories, with 82 percent employed in blue collar positions. Unlike the previous examples, however, 40 percent of the African-American workforce in white collar positions were evenly employed as professionals or technicians. They still only accounted for 2.7 percent of the total technical and professional positions.

In choosing observation dates that correspond with the mid to late sixties, the purpose was to account for the effects of the Civil Rights Movement and the Urban Revolts. We saw that the conditions remained relatively the same throughout this period. Therefore, prior to 1964, we know that African-Americans were underrepresented in manufacturing, and of those employed in the sector, they were concentrated in low wage positions.
During the period leading into the mid-sixties, from 1947 on, trends were unfolding in the manufacturing (goods producing) sector, that would have increasing impact on labor in general and the African-American workforce in particular. Between 1947 and 1962, productivity in manufacturing increased by 50 percent. The meaning of this statistic is illustrated in the following list.

**LIST I - Changes in Labor Inputs Required to Produce a Given Quantity of Goods.**

1. The man-hours required to produce 1000 tons of steel fell from 14,700 in 1947 to 10,900 in 1962. A decrease of 26 percent.

2. The man-hours required to produce an automobile fell from 311 in 1947 to 151 in 1962. A decrease of 51 percent.

3. The man-hours required to produce 1000 tons of coal fell from 1300 in 1947 to 500 in 1962. A decrease of 62 percent.

4. The man-hours required to produce 1000 bushels of wheat fell from 340 in 1947 to 120 in 1962. A decrease of 65 percent.

5. By 1964, one man operating one machine which performed 500 separate manufacturing functions was capable of completing a job that formerly took 70 men to complete.

6. In a similar plant, 48 men using automated equipment turned out a finished product in 20 minutes that formerly took 400 men 40 minutes to turn out. A 90 percent decrease in labor inputs, and a 50 percent decrease in production time.

7. By 1964, an electronics plant where 200 men were used to assemble 1000 units a day, only two were required to assemble the same amount with the use of automated machines.

8. By 1964, a major government agency, using computers, had cut its clerical work force from 13,000 to 3000 workers.

The list demonstrates quite effectively that automation (one of the forms of technological innovation), has a pronounced impact on labor as the production process is transformed. A formal definition of
automation, given by engineers, is stated as:

The transference of control functions from human beings to computers and servomechanisms. 18

In a social context, however, automation implies a reduction in the number of workers needed to produce a given quantity of goods and services. A socio-economic index that registers its impacts is, of course, (un)employment rates.

At this point it might be helpful to return to Chapter One for a moment. Reviewing the tendencies inherent to the capital accumulation process will more clearly define the relationships between the following issues: productivity, automation, output, consumer demand, and (un)employment.

From Chapter One, we remember that the owners of capital can increase the total amount of surplus value expropriated during the course of a work day through any of the following methods. Since productivity is equal to output per worker, one alternative available to the capitalist is to increase the total number of workers employed at a given rate of productivity. Another option is to introduce new technologies that enable a smaller labor force to produce a standard quantity of goods. The optimal situation for a capitalist would be to encounter a growing market that accommodated both an increase in productivity (output per worker) and total output. Herein lies the catch to the whole process. Surplus value remains unrealized profits in the form of unsold goods until the profits are realized through the sale of the goods in the market.

If there is substantial increase in the demand for a good, a decision will be made to expand production. Without the introduction of a
new production technology, the result will be an increase in the em-
ployment of labor, assuming the full utilization of the labor force
already employed. However, the increased employment hinges upon a
growth in demand for the product. From the profit equation, \( \frac{s}{c+v} \),
we also know that an increase in labor's share of the production costs
\((v)\), must be matched by a proportionate increase in surplus value \((s)\),
otherwise the rate of profit will fall. Consequently we see that the
rate of surplus value \( \frac{s}{v} \) is another way of looking at the productivity
of labor.

Without a substantive increase in demand, the capitalist must find
a way to increase the profit rate given the limitation of the market.
In a highly competitive and saturated market, we can now understand the
importance of automation and other labor-displacing technology. As
opposed to increasing profits by producing and selling more goods at a
relative cost, in a tight competitive market, capitalists concentrate
instead upon increasing profits by reducing the costs of production. In
Chapter One we saw that this process gave rise to what Mandel called the
frantic search for technological rents. These technological rents are
nothing more than the monetary forms of competitive advantages gained
through the deployment of labor-displacing innovations. Automation,
therefore, regardless of its repercussions, has been capital's uncontrolled
response to heightened competition over a dwindling source of profits.

The following identity tends to guide the relationship between
productivity, output, and employment: With an increase in productivity
(output per worker), unless there is a proportionate increase in total
Output, actual and potential employment will decrease. This relationship and the general trend in industry from 1947 to 1962 are clearly outlined by the examples presented in Table 16.

(In reading this Table, the top figure in each category represents 1947-57, and the bottom figure represents 1957-62.)

**TABLE 16**

Average Annual Percent Changes in Employment, Output and Output-per-Worker for Selected Industries: 1947-57 and 1957-62

<table>
<thead>
<tr>
<th>Industry</th>
<th>Average Annual Percent Change: 1947-57</th>
<th>1957-62</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>employment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>total</td>
<td>production workers</td>
</tr>
<tr>
<td>Cement</td>
<td>1: 1.4</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>2: -1.7</td>
<td>-2.4</td>
</tr>
<tr>
<td>Coal</td>
<td>1: -6.0</td>
<td>-6.4</td>
</tr>
<tr>
<td></td>
<td>2: -9.5</td>
<td>-10.4</td>
</tr>
<tr>
<td>Glass</td>
<td>1: 1.4</td>
<td>1.5</td>
</tr>
<tr>
<td>Containers</td>
<td>2: 2.0</td>
<td>1.9</td>
</tr>
<tr>
<td>Iron and Steel</td>
<td>1: 0.9</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>2: -3.8</td>
<td>-4.6</td>
</tr>
<tr>
<td>Malt liquors</td>
<td>1: -0.6</td>
<td>-2.2</td>
</tr>
<tr>
<td></td>
<td>2: -3.1</td>
<td>-2.6</td>
</tr>
<tr>
<td>Railroads</td>
<td>1: -3.1</td>
<td>*</td>
</tr>
<tr>
<td></td>
<td>2: -6.6</td>
<td>*</td>
</tr>
<tr>
<td>Petroleum refining</td>
<td>1: 0.5</td>
<td>-0.1</td>
</tr>
<tr>
<td></td>
<td>2: -4.4</td>
<td>-4.9</td>
</tr>
<tr>
<td>Tires and Tubes</td>
<td>1: -1.8</td>
<td>-2.1</td>
</tr>
<tr>
<td></td>
<td>2: -2.2</td>
<td>-2.4</td>
</tr>
<tr>
<td>Tobacco cigars</td>
<td>1: -3.5</td>
<td>-3.6</td>
</tr>
<tr>
<td></td>
<td>2: -7.6</td>
<td>-8.1</td>
</tr>
</tbody>
</table>
In reviewing the table very briefly, the impacts of automation on labor are quite prominent, particularly in those cases where decreases in output are matched by rapid advances in productivity. The coal industry is a prime example. It suffices to say at this point that the examples presented in the table represent a trend that was not an isolated phenomenon unique for the particular industries listed. Nor is the trend confined to that particular period of economic history. The trend clearly identifies the labor-displacing tendency that becomes a necessary feature of the capitalist accumulation and development process. Here it is appropriate to requote Mattick from the first chapter:

...the reduction of labor costs remains a necessary requirement for each single enterprise or corporation. Their profitability increases as their labor costs decrease. It is for this reason that the displacement of labor by capital cannot be halted within the competitive capital formation process, even though it undermines the structure of capitalist society.

The distortions of the capital formation process to which Mattick refers were overtly evident by the early sixties. Between 1957 and 1962, official unemployment rates averaged from 5.5 to 6.5 percent of the active labor force.20 Official unemployment statistics have always understated the true magnitude of the problem, because they only count those people who are out of work and currently looking for jobs. These official statistics do not include those people who have temporarily abandoned their job hunting efforts, nor do they include those workers employed in part-time positions who would actually prefer full-time employment. When the subemployment figures are included with the standard unemployment figures, the new rate for 1962 approximated 15 percent, as opposed to
the standard rate of 6 percent. \textsuperscript{21} The 15 percent rate therefore provides a far more accurate appraisal of the system's (in)ability to provide a decent standard of living for all those desiring to work.

Whereas the problem of unemployment had reached dramatic proportions for the general population by 1962, the persistence of sub and unemployment for the African-American population had already entered the crisis stage. To begin with, the unemployment rate for unskilled workers in general averaged two and a half times the rate of unemployment for skilled workers. From earlier presentation we witnessed the overwhelming concentration of African-American workers in semi- and unskilled positions at an average rate of 1.5 to 2 times the rate for white workers. Lack of full-time employment opportunities increased the incidence of discrimination experienced by African-American workers in competition with white workers for a dwindling pool of production jobs. Including part-time workers, the subemployment rate for the African-American population approached 50 percent in certain metropolitan areas. It should be remembered that the final wave of displacement from southern agriculture during this period intensified the employment crisis in a number of African-American communities. In general, the average rate of subemployment for the African-American workforce floated between 30 and 35 percent. \textsuperscript{22} From these statistics we can see that the economic conditions for low-income African-American families in 1981 are similar to the conditions outlined in 1962. Improvements have been negligible.

Statistically it is very difficult to place an accurate figure on the rate of unemployment directly attributable to automation. However, estimates of job losses resulting from automation provide some legitimate
boundaries for analysis. Using the following formula:\(^{23}\)

\[
\text{total employment} \times \text{percent increase in productivity} = \text{jobs lost to automation}
\]

the American Foundation on Automation and Employment estimated that two million jobs were lost to automation in 1962. This is equivalent to approximately 40,000 jobs per week. Similar estimates include those given by the then Secretary of Labor, W. Willard Wirtz, which stood at 25,000 to 30,000 jobs lost per week to automation. The statistics are not nearly as straightforward as they are presented. This is due to the fact that the impacts of automation are not always direct impacts resulting in the actual release of a worker.

The effects of automation can be manifested in a number of different ways. Within a given industry, the introduction of a more efficient production technology may result in a redistribution of market shares between the individual firms that can afford the new technology vs. those that cannot. This usually results in the less efficient firm having to close shop, and the larger more solvent firms absorbing the abandoned market share. The consequence is unemployment for the workers in the smaller plant. Another hidden effect of automation relates to regional economic development imbalances. Workers in different parts of the country may experience greater difficulties in securing employment after having been displaced.

Returning to the two million automation displaced jobs, it is appropriate to incorporate an added dimension. Two million jobs were lost to automation in 1962. However, in the same year, employment rose by one million.\(^{24}\) This implies the creation of three million new jobs.
The problem is not solved at this juncture, it only becomes more complicated. The issue of primary concern behind the creation of the new jobs is not strictly related to the quantity of jobs created. The important issue for those carrying the weight of unemployment is clearly related to the question of "What kinds of jobs are being created?". A brief look at this question sharpens the perspective on the unemployment crisis confronting African-American communities.

Between 1947 and 1962, the number of white collar workers in the labor force increased 50 percent, from 20 to 30 million. It is important to note that this growth was marked by an average increase of over three percent each year. During this same period, the number of blue collar workers hovered between a high of 25.2 million from 1951 to 1956, to an average of around 24 million. The high established between 1951 and 1956 coincided with the Korean War. As to be expected, once the war ended, blue collar employment fell by eight percent in 1958.25

It is important to distinguish between white collar positions and service worker positions within the general category of non-production workers. From the statistics just presented, it is quite clear that automation had triggered a permanent shift in the structure of the labor force. In general the white collar positions can be identified as requiring some standard level of formal education and/or training. For the higher income white collar positions, at least four years of college was required. In many cases blue collar workers found that their skills were non-transferable in a white collar setting. The service sector, which has traditionally employed a disproportionately high number of
African-Americans in low-wage jobs, is clearly distinct from the white collar sector in this respect. In fact up through 1960, the distribution of African-American workers in service worker positions outnumbered those in white collar positions by at least 2.5 times.  

In other words an African-American worker displaced from a blue collar job stood very little chance of securing a better paying position in the white collar sector. With the white collar sector eliminated, and transfers between firms in the production sector limited, a lower-wage service sector position was one of the few options available. Lack of transfers between sectors, limited mobility between industries, and the presence of a low-wage service sector, contribute a partial explanation to the crippling subemployment rates experienced by African-American communities.

Within this context the following statistics have greater meaning. Actual employment between 1957 and 1963 increased by 4.3 million in the non-farm sector. Of this increase in jobs, only five percent were full-time industrial placements. Sixty-five percent were government related, and 14 percent were part-time jobs. These statistics point to the failure of the industrial sector to generate new jobs for a constantly growing workforce.

The impact of automation on the African-American workforce can be defined in part as a problem of displacement, and in part as a problem of access and occupational stagnation. In short, this means that given the disproportionate concentration of African-American workers in the low-wage blue collar positions, the initial waves of mechanization reduced the level of physical output required in a production process.
As levels of automation increased, the need for low wage laborers continued to decrease. Increased automation also meant that machines were capable of performing a greater number of functions that were traditionally the responsibility of skilled craftsmen. The result was a relative decrease in the number of craftsmen in general, and an absolute decrease in particular industries.

The outcomes of this process are somewhat hidden. Within the blue collar sector, the reduction of skilled positions meant that avenues of vertical mobility for unskilled laborers and semi-skilled operatives were being closed off. Consequently the vertical gap between white collar and blue collar positions was also widening. As automation concentrated increasing portions of the production process in the machines and required a reduced level of worker disgression within the production process, it becomes evident that this relationship is in fact one of the major factors behind the increasing separation between management and production workers.

From the case examples presented earlier in the chapter, we know that as late as 1966, the majority, over 95 percent, of the African-American blue collar population was concentrated in the un- and semi-skilled positions. From the preceding scenario, the stagnating impact of automation on African-American labor force advancement becomes evident. It must also be kept in mind that the move of African-Americans out of agriculture and services, and into industrial employment did not become substantial until after 1940. However, we have seen that shortly after the war, radical changes in the industrial sector were severely limiting opportunities for late-comers to the process.
Up to this point the consequences of early automation have been observed somewhat out of context. The economic repression of the African-American worker cannot be isolated from the overriding socio-political conditions of the general period from the mid-fifties to the late sixties. The next chapter begins by establishing the context that necessitated and determined the ineffectiveness of federal intervention programs in the socio-economic arena. The transformed impetus guiding federal intervention in the employment and training areas will be assessed within a critique of the dominant theory and assumptions that guided program and policy development.
Footnotes for CHAPTER III


7. Harris and Spero, op. cit., p. 163.


15. Ibid., p. 161.


18. Ibid., p. 49.

19. Adapted from National Commission on Technology, Automation, and Economic Progress, p. 29-77.

20. Ibid., p. 129.

21. Ibid., p. 97.

22. Ibid., p. 129.

23. Ibid., p. 139.


CHAPTER IV

The Case of Federal Intervention
The automation induced constraints on African-American labor force advancement cannot be isolated from the general web of racial oppression undercutting the socio-economic development of African-American communities. Whether the base of comparison was housing, education, health care, income, poverty, etc., the relative levels of deprivation for the African-American population greatly exceeded those of the white population. In the previous chapter, we observed the disproportionate impact of automation on African-American workers. The resultant conditions of increased automation were not independent of the racially based factors that were initially responsible for concentrating African-American workers in the low-wage/low skill positions.

The motivating factors behind increasing automation were derived from a set of considerations that were not heavily dependent upon the objectives of racist intentions. However, once the process was set into motion, the effects of structural unemployment combined with discriminatory hiring practices, registered a disproportionate impact on the African-American work force. The process of automation occurred without the direct intervention of a single racist, yet when applied within a racially stratified social order, this dynamic became a fundamental part of racism. Engel's writes:

The "superstructure" of an individual society—the society's customs, religions, politics, and social ideologies—will affect both the relative importance and the form of economic determinants. The economic situation is the basis, but the various elements of the superstructure...also exercise their influence upon the course of the historical struggles, and in many cases preponderate in determining their form. The
Changing historical circumstances also change the forms in which, and the institutions through which, economic relationships are made manifest. It is within this context that the increasing presence of federal intervention into the economic and social arenas must be viewed. By 1964, the Civil Rights Movement, increasing unemployment, and an intensification of urban poverty, had created an explosive environment of mixed expectation, frustration, and anger in African-American communities across the country. A substantial number of African-Americans who had migrated from the south as victims of agricultural mechanization and Jim Crow social policies arrived in the cities only to be victimized once again by technological change and a set of social and economic institutions that was no less effective than Jim Crow. The consequence was a chain reaction of innercity explosions across the nation in successive summers from 1964 to 1968. At the time of these revolts, 40 percent of the African-American population was living below the poverty line, and 50 percent of these poor families lived in the central cities. A summary of 1964 shows that over 85 percent of the African-American work force was distributed throughout the relatively low-wage blue collar, service, farm laborer, and clerical occupational sectors.

Prior to the riots, however, the high rates of structural unemployment, brought on by technical progress in the manufacturing sector, had been given far greater concern than the deteriorating socio-economic conditions of the African-American population. This fact is mirrored in

the Manpower Development and Training Act of 1962. Its major objective was embodied in a single concept: the need to retrain skilled workers who had been displaced by automation. A secondary consideration was the training of unskilled, unemployed workers. However, retraining of skilled workers absorbed such a large portion of the allocated resources that the "unskilled" phase of the program remained relatively under-developed.

Much of the focus placed upon the retraining of skilled workers can be traced to the relative strength of the craft unions. The contradiction forced onto the MDTA (1962) lay in the fact that the group of workers reaping the benefits of the federally-sponsored programs were also members of the craft and trade unions, which through racist policies, denied access for occupational advancement to African-American workers. As of 1962, African-Americans only represented 1.47 percent of all apprentices in training. With these kinds of restrictions on advanced or upgraded training, it can be inferred that the training received by unskilled, unemployed workers probably did not consist of much more than operative work. It is important to add that a major component of training for unskilled workers under the Act was the on-the-job training (OJT) program.

Within the context of program arrangement, government subsidies were made available to the firms employing the "inexperienced and disadvantaged worker." The subsidy was granted on the assumption that the firm was risking a productivity loss by taking on an untested and un-conditioned worker. However, it is interesting to note that between 1963 and 1968, OJT placements increased from 2,000 to 125,000.
Corporate consciousness, social responsibility, and moral obligation are heavily discounted as probably reasons behind the rapid growth. I would suggest the following explanation for the increase.

Firstly, the assumption that an unskilled worker was less productive than an experienced worker may not have been entirely correct. (This supposition will be advanced later on in the chapter.) With the increased automation of production processes, more control over the entire work/production process was being assumed by the machine, consequently reducing the necessary requirements of the worker to perform adequately. Productivity, therefore, would not be entirely dependent upon differences between level of semi-skilled vs. unskilled workers. The outcome would be based more upon an individual's level of socialization within the work process. In other words, having adjusted to the social relations of the production process, and having become synchronized with the rhythm of the machine, the productivity of an unskilled OJT participant was probably equivalent to that of a more experienced operative.

Coupled with the government subsidy, corporate interests were able to increase surplus value at a below market wage for labor without a noticeable sacrifice in productivity. Very simply, it was a profitable arrangement. This may in part explain the absolute increase of African-American operatives in those industries where the absolute number of operative positions was declining.

In summary, the major emphasis of the MDTA of 1962 was on unemployment resulting from automation and technological change; in other words structural changes in employment opportunities. The basic assumption centered around the concept that there existed a continuous process
whereby certain skills were being rendered obsolete as a consequence of the many technological advances being made throughout industry.

During the early stages of program development and implementation, eligibility for admission to training was restricted to unemployed heads of households who had at least three years of consecutive work experience. By design, MDTA was namely a retraining program for experienced workers. 7 And by design it excluded those groups hardest hit by structural unemployment, people of color in economically depressed areas.

The African-American revolts transformed the traditionally isolated base of manpower policy development into a key component of the War on Poverty as declared by the "Great Society" Johnson administration in 1964. The declared objectives of the "War on Poverty" legislation were to provide an escape from poverty and to upgrade the workforce. For example, a series of legislative amendments adopted between 1963 and 1966 expanded the scope of the MDTA program considerably. The revised MDTA training programs were to be divided between a) training for labor shortage occupations, and b) training specifically tailored to the needs of the economically disenfranchised. 8 Beginning in 1967, 25 percent of the enrollees had to be disadvantaged youths, 40 percent had to be disadvantaged adults, and 35 percent of the enrollees had to be trained in occupations where skilled manpower was in short supply. 9 Other amendments included: 1) extending the maximum length allowed for the training period so that occupations requiring more extensive training could be included; 2) increasing the emphasis on remedial education; 3) increasing trainee's compensation allowance to $10 above the unemployment allowance in various states; and 4) establishing local advisory boards. 10
In viewing these programs as a collective response to a set of changing conditions, their development and implementation must be seen within the context of the socio-political dynamics that brought the programs into being. While proclamations of the "Great Society" were being sounded, it must be maintained that the fundamental basis of the social and economic structures had remained unchanged. Under the code name of "law and order," old laws were redefined and new laws passed to insure the spatial containment of urban core African-Americans. For example, Public Law 831 was reactivated for use against "rioting blacks" instead of communists.\textsuperscript{11}

Originally known as the Internal Security Act of 1950 and the Subversive Activities Control Act of 1950, these acts were designed to protect the U.S. against certain "un-American" and subversive activities by requiring the registration of communist organizations and other groups. Title II of the Act states very clearly that the Attorney General, during declared Presidential emergencies, is authorized to hold in detention centers persons believed "probably will engage in...acts of espionage or sabotage." It is important to recognize that these are persons who have not yet committed a crime or an act, but persons who might do so.\textsuperscript{12}

In its 1968 report, \textit{Guerilla Warfare Advocates in the U.S.}, the House Un-American Activities Committee recommended a plan by which African-American citizens, such as the militants who advocated self-defense during the mid-sixties rebellions, could be "isolated and destroyed in a short period of time."\textsuperscript{13} As a point of reference, the plan was released on May 6, 1968, one month after the assassination of Martin Luther King. Amidst all the eulogizing, it was still business
as usual. Sections of the plan are excerpted as follows:

...Once the ghetto is sealed off, and depending upon the violence being perpetrated by the guerillas, the following actions could be taken by the authorities:

1) A curfew would be imposed in the enclosed isolated area. No one would be allowed out of or into the area after sundown.

2) During the night the authorities would not only patrol the boundary lines, but would also attempt to control the streets, and if necessary, send out foot patrols through the entire area. If the guerillas attempted to either break out of the area or to engage the authorities in open combat they would be readily suppressed.

3) During a guerilla uprising most civil liberties would have to be suspended, search and seizure operations would be instituted during the daylight hours, and anyone found armed or without proper identification would immediately be arrested. Most of the people in the ghetto would not be involved in the guerilla operation and, under conditions of police and military control, some would help in ferreting out the guerillas. Their help would be invaluable.

4) If the guerillas were able to hold out for a period of time, then the population of the ghetto would be classified through an office for the "control and organization of the inhabitants." This office would distribute "census cards" which would bear a photograph of the individual, a letter of the district in which he lives, his house and street number. The classification would aid the authorities in knowing the exact location of any suspect and who is in control of any given district. Under such a system, movement would be proscribed and the ability of the guerilla to move freely from place to place seriously curtailed.

5) The population within the ghetto would be exhorted to work with the authorities and to report both on guerillas and any suspicious activity they might note. The police agencies would be in a position to make immediate arrests, without warrants, under suspension of guarantees usually provided by the Constitution.

6) Acts of overt violence by the guerillas would mean that they had declared a "state of war" within the country and, therefore, would forfeit their rights as in wartime. The McCarran
Act provides for various detention centers to be operated throughout the country and these might well be utilized for the temporary imprisonment of warring guerillas.

7) The very nature of the guerilla operation as presently envisioned by certain Communists and black nationalists would be impossible to sustain. According to the most knowledgeable guerilla war experts in this country the revolutionaries could be isolated and destroyed in a short period of time.

A brief assessment of the excerpts brings to light two very important observations. The first should be rather straightforward, but is still worth mentioning. Throughout the text of the report, the "ghetto" is continually referred to with tones more appropriately used when speaking of another country or any outside aggressor. This, of course, is the issue to be identified. The socio-economic segregation of African-Americans is clearly reflected through comparative standard of living statistics. Concurrently, a manifestation of this condition is reinforced by the geo-spatial segregation and concentration of African Americans in the urban cores of the nation's cities. The combination of these factors gave rise to what was called the "internal colony" theory of African-American exploitation. The important point is the fact that the marginality and alienation of the African-American population was acknowledged by both sides of the issue.

The second observation is located in "item 6" of the Un-American Activities Committee report. Reading into the statute one can readily project the expanded use of detention centers as concentration camps. The tactic has been deployed previously against the Asian-Americans during World War II. And it was only the Asian-Americans who were incarcerated, even though the United States was also at war against the
Germans and the Italians. In the event of an officially classified "internal threat," it should not take too much imagination to perceive the consequences for the African-American population, given such conditions.

The key issue which should remain at the forefront is the fact that the manpower programs implemented were not derived from a coordinated and established policy base. In the throes of a social/political crisis, the government reacted with a crisis-oriented, ad hoc manpower policy that was more closely related to a "riot insurance" policy, as opposed to a tool directing the efficient allocation and development of labor throughout all sectors of the market.

This position is evidenced by the generally fragmented nature of the set of policies and programs developed and implemented. New programs were formulated to address the special employment problems of various groups (youth, uneducated, elderly, people of color, etc.). With each program intending to assist a particular target group, each also specified different objectives, had different approaches for solving problems, and consequently evolved different standards for judging effectiveness.

Also related to the question of process was the inefficient system of delivery. The dominant tendency was to disperse manpower functions among a number of different departments and agencies. Each agency would draw its authority from a different legislative act, and each act imposed its own conditions on the utilization of funds, and the funding cycles were dependent upon the level of government allocating the aid (federal, state, or local). Literally over a dozen federal agencies have been involved in the distribution of manpower services. These included:
the Department of Labor; the Economic Development Administration of the Department of Commerce; the Department of Housing and Urban Development; and three branches of the Department of Health, Education, and Welfare, including the Bureau of Adult and Vocational Education in the Office of Education. In brief, as the War on Poverty expanded, the agencies involved in administering its programs proliferated into a complicated bureaucratic network that became increasingly difficult to administer efficiently.

Generally speaking, the evolution of manpower legislation is usually viewed as corresponding with the change of administrations, from Johnson to Nixon. Along this continuum several trends in manpower development can be identified representing specific shortcomings of the system as a whole.

One of the shortcomings is implied by the fact that manpower programs can be easily targeted as political casualties. This level of vulnerability clearly attests to the marginal nature of the program, and reflects on the general position of the target populations within the overall socioeconomic hierarchy. By having been deployed so haphazardly, the programs and their client populations were inadvertently set up as targets of conservative attacks. Also worth noting is the fact that the initial social crises which had precipitated the rapid growth of these programs had for the most part run their course by the end of Nixon's first term.

With the manpower effort no longer having to be concerned with placating the severely disenfranchised, quite expectedly, a transition in the target population of programs transpired. As opposed to confronting the
dilemma related to issues concerning the poorest of the poor, under the
Nixon administration a new avenue of policy development was pursued aimed
at tapping the possible benefits of courting a "black privileged" class.  
Black capitalism was the catch phrase during this period. The process
in general was somewhat similar to neo-colonial attempts to breed a
national bourgeoisie that would be capable of functioning as a proxy on
behalf of neo-colonial interests. This effort by the Nixon administration
should not be taken out of context, for Nixon is quoted as telling one
of his aides the following: "Give them all the rhetoric they want to
hear, just as long as it doesn't cost anything." 16

Towards the end of the Johnson administration and the War on Poverty,
policy-makers in recognizing the need to enlist the direct input of private
enterprises established Jobs in the Business Sector (JOBS) in 1968. The
program itself was in part coordinated by the National Alliance of Busi-
nessmen. The conceptualization of the program was strong, however, its
operationalization was significantly weakened by structural constraints of
the labor market. From Chapter 3, we remember that the number of produc-
tion workers relative to non-production workers was declining in the manu-
facturing sector. In programmatic terms one would expect the number of
placement slots to decrease over time. It should be maintained that a
good portion of the JOBS clientele was unskilled and inexperienced. It
is for this reason that training placements were generally associated with
semi-skilled blue collar positions. In reviewing figures for the program,
some statistics outline one of the program's major weaknesses.

Between 1969 and 1973, the number of available training slots per
year decreased by 62 percent. Program enrollment was also declining
during this period, however the number of enrollees outpaced the available placements by an average 1.4:1. \(^{17}\) Along with this particular dynamic, the per capital funding for each enrollee declined during that same five year period by 33\% without discounting for inflation. \(^{18}\) The decrease in on-the-job training placements was a function of structural changes in the economy, but it was also compounded by a general attitude on the part of private sector interests which over time functioned to further isolate the manpower sector from the mainstream labor market.

Given its "Great Society" roots, manpower policy and programs had come to be seen as a tool in the anti-poverty program pushed by liberals. As the threat of African-American violence subsided, the obligatory nature of private sector participation subsided. Voicing the general attitude of private sector interests towards the manpower sector, Bakke states:

> When it is well understood, however, that Congress and the Administration have authorized, and the leading manpower program administrators have accepted, the mission to concentrate their attention on the disadvantaged unemployed, those (agencies and individuals) concerned with fiscal, monetary, trade, income, urban and regional development, and military policies may be excused for saying, "What significance does manpower policy have for our task?" I am not aware of any statement from such sources as bold and icy as that. But in conversations with some of them, I sense an assessment of the utility, for their purposes, of close collaboration with the manpower authorities as about equivalent to close collaboration with the Salvation Army. \(^{18}\)

The accuracy of Bakke's statement is reflected in part by the decreasing number of overall on-the-job training opportunities under the MDTA which fell from 144,500 placements in 1967 to 70,000 placements by 1973. \(^{19}\) Funding for the OJT component remained more or less the same during this period.

With private sector support for manpower placement efforts shrinking, the post-War on Poverty focus shifted to the public sector. With
rapidly increasing demand for public services at both state and local levels, along with the urban fiscal crises, forced the federal government to give financial support to programs which place the unemployed in public-sector positions. Substantial funding for this operation was initiated in 1970.

This approach reinforced the departure in orientation of the Nixon administration from the Johnson administration by concentrating efforts on higher placed members of the workforce, versus concentrating on the unskilled and uneducated. The two pieces of federal manpower legislation enacted during this period were the Public Service Careers program and the Public Employment Program. Under already existing manpower programs such as Neighborhood Youth Corps, Operation Mainstream, and the Work Incentive Program, individuals had been placed in the public sector. However, the enrollees in those programs were mainly given "work experience" positions that usually only paid minimum wage. It was a rare occasion when an enrollee from one of the aforementioned programs was placed in an unsubsidized position.

The two new programs often involved the employment of professionals and paraprofessionals at significantly higher payscales than found in the other manpower programs. The success of the Public Services Careers Program, and Public Employment Program, in reducing the unemployment rate was limited. In 1972 which was the peak employment year for these programs in the 1969-1973 period, there were only 226,000 public employment placements, which meant that with at least 7.5 million unemployed in 1972, the programs could have only reduced the unemployment rate by at most three percent of the total unemployed. A major criticism of the
program was the accusation that it skimmed the most employable of the unemployed workers and had little impact on seriously disadvantaged groups. This is again consistent with the political consequences of a reversal in ideological trends.

The Public Employment Program which came out of the Emergency Employment Act of 1971, set the stage for the continued trend towards decentralization under the Nixon administration through the enactment of the Comprehensive Employment and Training Act of 1974. As it was demonstrated earlier in the chapter, ad hoc attempts to centralize manpower planning from the top had resulted in a discontinuous mass of policies and programs that were not always capable of adapting to the particular conditions of a given environment. The trend towards decentralization was based upon the supposition that the federal government controlled the effective channels through which to raise revenue, however, it could only be through the transition of authority for manpower development and training from the federal government to the local governments that manpower programs could be truly responsive to the problems of those they were intended to serve.

The transition of authority for manpower development and training from the federal government to the state and local governments meant that the smaller governing units, within the limit of the law, were responsible for designing, implementing, and to some extent evaluating manpower programs. This decentralized approach, which took effect in fiscal year 1974, gave to eligible local and state governments the authority to determine, develop, and operate related manpower policies and programs. The state and local governments were also granted the option to delegate
some or all of their authority to other public or private organizations. Funding for these prime sponsors was carried out through a form of revenue sharing.

With the sub-units of government in control of development and implementation it is important to raise the following point. The predominance of a states rights movement trend was clearly in line with the generally conservative mood of the country. Within the context of African-American history "states rights" have always been associated with the attempts of state governments to maintain socially repressive standards void of federal intervention. In a similar vein, it has already been pointed out in this chapter that the thrust of manpower policy in the Nixon years was away from the extremely disadvantaged, and directed more towards the qualified workers populating the ranks of the unemployed. With African-Americans disproportionately concentrated within the lower ranks of the unemployed, the level to which they would be (dis)enfranchised was entirely dependent upon the socio-political conditions of the state. Naturally, this uncertainty warps the presupposition that a more localized control apparatus over manpower service delivery necessarily means a more truly responsive system.

The key issue relating to the method of revenue sharing is the fact that by decategorizing the allocation of funds, federal appropriations were no longer earmarked for specific programs. This meant that the prime sponsors (recipients of the funds) could determine what programs to fund after they had identified their target population and assessed its need. Quite naturally this paved the way for an increased measure of coercive leverage hostile political machines could exercise against
programs that were considered political threats.

In a brief summary, manpower policy and programs were developed as a reaction to a social crisis. Its post-1964 origins therefore become associated with attempts to reduce the level of alienation experienced by the marginal and disadvantaged worker in the laborforce. As a result, given its initial clientele of poor people of color, the programs and their participants were continually isolated from mainstream labor markets. Aside from the politics of the programs themselves, when looked at from the following angles a rather blunt appraisal of their effectiveness is presented.

In 1972, a peak year for first-time enrollments of 1,973,000 applicants, there existed a total of 1,562,300 placements. These placements represented only 25 percent of the total unemployed. In the context of employment creating devices, their effectiveness is questionable on the basis of the fact that following the peak years of the Viet Nam War unemployment rates registered as follows:\textsuperscript{23}

<table>
<thead>
<tr>
<th>Year</th>
<th>Unemployment Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1971</td>
<td>5.3</td>
</tr>
<tr>
<td>1972</td>
<td>4.9</td>
</tr>
<tr>
<td>1973</td>
<td>4.1</td>
</tr>
<tr>
<td>1974</td>
<td>4.8</td>
</tr>
<tr>
<td>1975</td>
<td>7.9</td>
</tr>
<tr>
<td>1976</td>
<td>7.0</td>
</tr>
<tr>
<td>1977</td>
<td>6.2</td>
</tr>
</tbody>
</table>

The drastic fluctuations in the rate would seem to indicate that the manpower labor market is really incapable of functioning as an employment stabilization tool. This condition is due to the fact that being a
tangential sector of the private sector market, manpower program viability is in fact dependent upon the private sector activity. In a comparison of rates of poverty, the following table shows that whereas the overall rate of poverty has declined, the relative deprivation of African-Americans to whites has become standardized at 3:1 to 3.5:1.24

<table>
<thead>
<tr>
<th>Year</th>
<th>Race</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>White</td>
<td>Black</td>
</tr>
<tr>
<td>1959</td>
<td>18.3</td>
<td>56.2</td>
</tr>
<tr>
<td>1966</td>
<td>11.3</td>
<td>39.8</td>
</tr>
<tr>
<td>1969</td>
<td>9.5</td>
<td>31.0</td>
</tr>
<tr>
<td>1975</td>
<td>9.7</td>
<td>29.3</td>
</tr>
<tr>
<td>1977</td>
<td>8.9</td>
<td>29.0</td>
</tr>
</tbody>
</table>

An important point to raise here is the fact that the standards for measuring poverty have changed over time. In 1959, the standard used for poverty represented 54 percent of the median U.S. income level, $2943/$5417, whereas in 1970, the standard of $3970 represented 41 percent of the median U.S. income, $3970/$967026 If the poverty standard were to be represented once again by the 54 percent standard, the related poverty level would have been $5221 and the total number of persons falling below the actual poverty margin in 1971 would have been 36.6 million, as opposed to 25.5 million. Using the 54% standard Table 17 would be represented as follows:
From both tables, it is clear that the manpower programs have had limited effect on substantially increasing the socio-economic mobility of the economically disenfranchised African-American family. In fact, in 1922, a study suggested that 70 percent of the families in poverty for a given year were in poverty the year before. Of the remaining 30 percent, 11 percent were accounted for by way of death or imprisonment, and 19 percent managed to raise their incomes above the poverty margin. Of the 19 percent, 12 percent were still within $2000 of the poverty line. It was also shown that families who escaped from poverty in any one year also stood a significant probability of falling back into poverty in succeeding years. As a consequence, data on poverty would probably indicate a low degree of economic mobility among the low income population.

The initial thesis of the anti-poverty program was that the major employment problems of low-income people stemmed primarily from their own limitations as workers. The thesis over time expanded to include assumptions that many disadvantaged members of the labor force needed additional

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TABLE 18
Percent of Persons Below the Poverty Level
(54 Percent of Median Income Standard)\(^{27}\)

<table>
<thead>
<tr>
<th>Year</th>
<th>White</th>
<th>Black</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>26.7</td>
<td>66.8</td>
<td>2.5:1</td>
</tr>
<tr>
<td>1966</td>
<td>17.3</td>
<td>50.9</td>
<td>3.0:1</td>
</tr>
<tr>
<td>1969</td>
<td>14.0</td>
<td>42.0</td>
<td>3.0:1</td>
</tr>
<tr>
<td>1975</td>
<td>14.5</td>
<td>38.2</td>
<td>2.6:1</td>
</tr>
<tr>
<td>1977</td>
<td>13.3</td>
<td>38.5</td>
<td>2.9:1</td>
</tr>
</tbody>
</table>
social services in order to gain, retain, and compete for higher paying positions which would enable them to improve their standard of living.

The initial thesis of the poverty programs is closely related to what is usually identified as the human capital theory. Its fundamental orientation focuses on the inadequacies of the worker, and when applied by conservatives vs. liberals, the theory yields different policy and program results.

As an aspect of traditional labor economics, the human capital analysis is well coordinated with the "queue theory" of labor economics. According to this theory employers rank present and potential employees along a single ordinal vector based on the worker's respective marginal productivity. Simply put, employers will base their hiring patterns upon their own assessment of an additional worker's ability to match or surpass the rate of surplus value already standardized for a particular production process for a given workforce in general. Therefore marginal productivity is nothing more than the output generated by a single additional worker. Within the context of the theory, marginal productivity is generally the function of the degree to which an individual develops some level of manual dexterity and/or mental aptitude. It can easily be seen that the roles of education and training are given primary consideration as alternatives through which labor can increase its marginal productivity.

From this framework, differences in wages, salaries, and therefore income are the result of differences in the marginal productivity between individual workers in the same job, or groups of workers in different occupational sector: the determinants being education, ability and
experience. Consequently, within the neo-classical framework, issues of poverty are classically attributed to the victim via the logic of the model. At the bottom line: 29

If an individual's income is too low, his productivity is too low. His income can be increased only if his productivity can be raised.

An assessment of the model exposes a number of weaknesses and inaccuracies. The fundamental weakness of the theory is its incompatibility with real life situations. First of all, the model assumes that employers view all employees the same, except for differences in their marginal productivities. Hopefully by now the reader can readily identify the many ways in which this assumption is false. In its present form the theory lacks the ability to accurately account for racially determined income and employment patterns. And when racism is introduced, it is presented as a preferred choice by white employers and employees for which they are willing to pay a price in hidden economic costs. By placing a cost of racism on the racist, in a perverted sort of way the model justifies/rationalizes racists and their "isms" on the basis of free market mechanisms. The model also fails to acknowledge the critical issues concerning equality of access to "human capital" developing opportunities. By restricting the extent of the model to an isolated internal representation of the labor market, void of any superstructural analysis, the human capital theory has proved to be an insufficient base from which to develop effective policies and programs.

The relative impacts of education are questioned by the following tables.
### TABLE 19
Income Returns on Education by Race, 1961

<table>
<thead>
<tr>
<th>Education</th>
<th>White</th>
<th>Black</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Elementary</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 8 years</td>
<td>3556</td>
<td>2294</td>
<td>.627:1</td>
</tr>
<tr>
<td>8 years</td>
<td>4911</td>
<td>3338</td>
<td>.680:1</td>
</tr>
<tr>
<td><strong>High School</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to 3 years</td>
<td>5882</td>
<td>3449</td>
<td>.586:1</td>
</tr>
<tr>
<td>4 years</td>
<td>6390</td>
<td>4559</td>
<td>.713:1</td>
</tr>
<tr>
<td><strong>College</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to 3 years</td>
<td>7344</td>
<td>5525</td>
<td>.742:1</td>
</tr>
<tr>
<td>4 years</td>
<td>9315</td>
<td>7875</td>
<td>.845:1</td>
</tr>
</tbody>
</table>

### TABLE 20
Median Income Comparisons of Education by Race, 1975

<table>
<thead>
<tr>
<th>Education</th>
<th>Median Income</th>
<th>Percent Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Black</td>
<td>White</td>
</tr>
<tr>
<td><strong>Elementary</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 8 years</td>
<td>$3871</td>
<td>4843</td>
</tr>
<tr>
<td>8 years</td>
<td>5149</td>
<td>6640</td>
</tr>
<tr>
<td><strong>High School</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to 3 years</td>
<td>5356</td>
<td>7864</td>
</tr>
<tr>
<td>4 years</td>
<td>7468</td>
<td>10,463</td>
</tr>
<tr>
<td><strong>College</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 to 3 years</td>
<td>8300</td>
<td>10,656</td>
</tr>
<tr>
<td>4 years</td>
<td>10,573</td>
<td>14,656</td>
</tr>
<tr>
<td>Post-Graduate</td>
<td>14,539</td>
<td>17,622</td>
</tr>
</tbody>
</table>
In comparing these two tables we find that categorical comparisons within levels of educational attainment show the median income ratios between African-Americans and whites approaching unity. However, these categorical trends misrepresent the overall relationship between African-American and white income distributions. A more accurate reflection of this relationship is shown by the column marked "percent distribution" in Table 20. From this array of figures we can see that African-Americans are disproportionately concentrated in the lower and middle sections of the educational attainments spectrum. Consequently this general position is reflected through the system-wide median income ratio, which shows a much wider disparity between African-American and white incomes. For the related periods indicated by the tables, in 1961 the ratio of African-American to white median incomes was listed as .53:1, the corresponding figure for 1975 was .61:1.32 The overall ratios indicate a marked departure from the much higher intra-categorical ratios representing levels of educational attainment. The lower overall figures also imply quite heavily that as late as 1975, the intergenerational effects of the plantation economy on educational attainment for elder African-Americans are still being accounted for in current socio-economic determinations.

It should be mentioned that among the younger age groups of African-Americans, educational deficits have been substantially reduced. In 1940, for example, the median for years of schooling completed for the general population was 8.6 years for adults over 25 years of age and 5.7 years for African-Americans in the same age bracket.33 By 1972 the figures were 12.2 median years of schooling completed, while African-Americans had raised their figure to 10.3 median years of schooling completed.34
These gains are even more clearly highlighted by isolating the attainment levels of the 25-29 age group. In 1940 the educational gap at this age level was 3.3 years (total--10.3 years, African-Americans--7.0 years), but by 1972 it was reduced to 0.4 years, (total--12.7 years, African-Americans--12.3 years). The issue of quality is not engaged in these statistics.

In a quick review of Tables 19 and 20, a generally accepted supposition is brought to the forefront. The monetary payoff of educational attainment is less for African-Americans than for the at-large white population. In fact, looking at the figures presented for 1975 in Table 20, we find that the median income for an African-American college graduate was only $110 more than the median income for a white high school graduate. This meant in quasi-economic terms that a college degree for an African-American was worth only $110 relative to what could have been earned if he was a white high school graduate. This condition is sharply contrasted against the quasi-economic worth of a college degree for a white person. Using the same base of comparison against a white high school graduate, a degree is worth $4,193 to a white college grad. This is 38 times greater or a 3700 percent increase over the $110 improvement in median income experienced by the African-American degree holder vs. the white high school graduate.

Worth further consideration is the following relationship. Referring once again to Table 20, it is interesting to note that the higher incidence of income equality occur at the opposite poles of the educational attainment spectrum, identified by "post-graduate" and "less than 8 years" of formal education. The mid-range of the spectrum represented by the
high school years, registers the greatest disparity related to income disparities. The explanation to be offered is by no means conclusive. However, it does engage some of the basic issues presented in previous chapters.

If we make the assumption that those workers with a high school education would most likely be found in blue collar positions, we would then be led to the following conclusions. Knowing that the number of production worker positions have been declining over time, we can safely infer that the competition generated by a growing number of capable workers over a dwindling pool of jobs was heightened. From the information documented earlier, I would suggest that what we see in that particular section of Table 20 is a replication of discriminatory hiring practices that historically have always intensified under conditions of scarcity. This pattern was identified during Reconstruction, the labor movement, and so on.

The figures also register the existence and impacts of a dual labor market, where employment opportunities for African-American metropolitan workers are generally limited to the secondary sector. This sector is characteristically described as being a low productivity, low wage, labor intensive and unstable sector. In an application to real conditions, the dual labor market theory would suggest that upon graduation from high school, the innercity graduate would have less employment opportunities to choose from, and of those available, only a few would allow access to primary sector positions. In brief, the primary sector is associated with high productivity, high wage, extended market firms.
Within the parameters of the dual labor market theory it is necessary to add a qualifier.

The basic foundation of the theory is correct in identifying the employment effects of a structurally bifurcated labor market. However, it is also worth noting that within the primary sector industries, some workers are placed in positions that are no better than their counterparts in the secondary sector. It is for this reason that the structural orientation of the theory must be broadened to accommodate not only an analysis of cross-sectoral structural constraints, but also the vertical constraints on mobility within sectors that is a part of discriminatory hiring practices. Table 21 provides information which identifies the tandem impacts of not only racism and dual labor market structures, but also implicitly identifies the repressive element contributed by a segmented educational system.

**TABLE 21**

<table>
<thead>
<tr>
<th>Education and Occupation by Race for Males, 1970</th>
<th>Blue Collar Positions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary</td>
<td>High School</td>
</tr>
<tr>
<td>8 years or less</td>
<td>1-3 yrs.</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td><strong>total</strong></td>
</tr>
<tr>
<td>Craftsmen</td>
<td>25.1</td>
</tr>
<tr>
<td>Operatives</td>
<td>29.0</td>
</tr>
<tr>
<td>Laborers</td>
<td>11.6</td>
</tr>
<tr>
<td>Service</td>
<td>11.7</td>
</tr>
<tr>
<td><strong>Total % of categorical workforce</strong></td>
<td>77.4</td>
</tr>
</tbody>
</table>
Table 21 is a good illustration of a cross sampling of potential explanations capable of accounting for the overextended concentration of educated African-Americans in blue collar positions relative to the educational attainment levels of the white population. In the craft positions we observe what is by now a familiar pattern. Up through the high school years, African-Americans were considerably underrepresented in the crafts. Even with a high school diploma chances were two to one that a white high school graduate would be accepted into an apprentice program with the high school degree than would an African-American. Furthermore, with the acquisition of the diploma, the number of white workers represented in the blue collar sector declines by close to 20 percent, from 23.7 to 59.8. The corresponding figure for African-Americans was 10 percent. Seen in this light, the upward mobility factor of a high school diploma for a white graduate had twice the impact of a high school degree held by an African-American.

Even with some college experience, 50.9 percent of the African-Americans in that particular education attainment cohort were still blue collar workers, whereas the corresponding figure for the white population was 34.2 percent. One other item worth pointing out is the increasing margin of difference distinguishing the distribution of operatives throughout all educational attainment levels, between African-American and white workers. At the elementary attainment level, operatives are about evenly represented within both groups, at 29.0 for whites and 29.6 for African-Americans, respectively. At the high school level the marginal difference has increased by 7 percentage points at 27.3 and 34.2 for dropouts, 12 percentage points for high school graduates. In the case of the high
school graduates, once again we witness a noticeably decreased impact on the occupation distribution for African-American diploma holders relative to the upward mobility of a high school diploma on white worker distribution. With a diploma the representation of white workers in semi-skilled positions declined by 25 percent. The figure for African-American workers was 4.5 percent. The examples are endless.

Within Table 21 we can see evidence of the dual labor market theory on the basis that certain selected job opportunities are limited for African-Americans. Either through geographic dislocation or discriminatory hiring practices, openings are not available to African-Americans as they are to the general white population. Consequently, African-Americans are found being forced to take jobs that on the basis of societal standards do not provide incomes commensurate with the level of education attained. Another point to bring out is the following: It seems that the concentration and overrepresentation of African-American workers in semi-skilled positions was in fact the function of job stratification and segregation. As the automation of production processes increased, the flow of white workers into the white collar sector far outpaced the flow for African-American workers. This in part explains the higher educational level for African-American workers in certain blue collar positions relative to white workers. Basically, certain white collar positions, explicitly or implicitly, were being reserved for white workers. Another issue related to this whole dynamic relates very clearly to the added burden of proof that white employers tend to project into an African-American worker. The greater proportion of African-American workers in semi-skilled positions, with higher educational attainment levels relative to a cross-section of semi-skilled white workers, would seem to bear this position out to a degree. Looked at from a
different angle, it requires less for the white worker to get his foot in the door; whereas the higher level of educational attainment required of the African-American worker is added insurance for the employer that the job will get done.

The implications of this attitude are presented as follows:

Automation results in machinery of a more automatic nature directed by highly automatic controls. Both machinery and control devices are complex and sophisticated in their actions, and must be carefully adjusted and attended to achieve performance requirements. Therefore, employees manning and servicing this equipment need a higher degree of understanding and education. They will require additional training, higher types of skills, and even new levels of education. Intense concentration seems to be necessary. Thus, the job content of individual tasks associated with the new machinery will require more skill. An upgrading effect is obvious.

In short, the position being presented here suggests that a more highly automated machine requires a more highly skilled worker. James Bright in his study, *Automation and Management*, presents evidence which clearly challenges this position. A brief synopsis of the study is appropriate at this point. Bright summarizes the underlying assumptions behind the upgrading hypothesis. These include three basic notions:

1. Automatic machinery requires higher degrees of worker skill and/or training than does conventional equipment.
2. More engineers and technicians are required to design, build, install, and/or operate highly automatic machinery.
3. The average workforce cannot meet the demands of new equipment without elaborate retraining.

These notions are graphically illustrated below:
Graph II - How Demands on the Worker Are Commonly Assumed to Increase with Automation

"Skill vs Automation"
Common Notion

Increasing "skill" required by operator

Increasing degree of automatic operation

General assumption
Possible expectations
In analyzing the labor process and automation paths, Bright identifies a number of relationships between mechanization and the worker. Below is what could be considered a checklist of tasks carried out by a worker during the course of a production cycle.

1. **Physical effort**—the expenditure of energy through bodily movement either to manipulate materials and tools or to control something in the environment.

2. **Mental effort**—the use of mental powers to sense and analyze job requirements and to decide and direct the necessary response action. This contribution also implies the need for attention and concentration.

3. **Manipulative skill**—the employment of specialized physical dexterity, presumably acquired only by training and/or practice, or possibly by unique physical aptitudes.

4. **Education**—the knowledge of and competence in the use of a formally organized body of theory and fact apparently required by the task.

5. **Experience**—elements of ability, comprehension, and judgment that are only acquired by practice at the task.

6. **Responsibility**—the extent to which the operator controls safety, product quality, or productivity of the activity with respect to persons, equipment, and/or materials.

7. **Decisionmaking**—the extent to which the worker must or can make judgments that have a significant effect on successful performance.

8. **Productivity**—the extent to which the worker increases output above an expected norm by contributing exceptional effort, skill, knowledge, or ability.

From Bright's list we can assume that as the character of mechanization applied to a given job is changed, the contributions of the worker will also change in some aspect. Therefore, in order to understand how automation affects workforce skills, we must consider how each of the demands in a given job is affected by increasing degrees of mechanization and
automatic control.

In focusing our attention on items 6. and 7. of the list, Responsibility and Decisionmaking, it can be easily understood how an automatic, self-monitoring, and self-correcting machine assumes the tasks formerly delegated to the worker. A perfect example is sited by Braverman where he observed that at least 2.5 to 3 years were required to at least become moderately familiar with the tasks of being a machinist. However, with the introduction of numerical control machines, an operator can be trained in the space of six months. The difference therefore lies in the distinction separating a machine operator from an experienced machinist. In Chapter One we explored some of the motivating factors behind increased automation and the reduction of worker control over the production process. The question being considered is whether or not greater demands are made upon the worker who only monitors a machine, versus the worker who must plan, and negotiate the actions of the machine. By way of suggestion, the point should be fairly clear. When a pattern of predetermined actions can be mechanically achieved, there is no particular need for the understanding, training and education of the operator that existed when adjustment and control lay in the operator's hands. On the basis of these observations, the relationships depicted in Graph II are more accurately represented by the interactions of the level of workers' skill required and automation shown in Graph III.
Graph III - How Demands On the Worker Increase With Automation

"Skill versus Automation"
As suggested by actual experience

Increasing skill required by operator

Increasing degree of automatic operation

Research Indications

General assumption
Graph III summarizes the results of Bright's research rather neatly. Very simply, as the machine assumes greater control of the work process through increased automation, after a certain point, the demands on the worker during the production cycle decrease. For a given array of production jobs, the infinitely increased ability of capital to disaggregate production processes and move to remote parts of the world in order to better exploit lower wage costs would tend to support the basic argument of Bright's thesis. The conceptual application of the hypothesis is aptly presented by Folker Frobel in his book *The New International Division of Labor*:

The development and refinement of technology and job organization makes it possible to decompose complex production process into elementary units such that even unskilled labor can be easily trained in quite a short period of time to carry out these rudimentary operations. In this way skilled labor receiving higher wages can be replaced by un- or semi-skilled labor receiving lower wages. If it is impossible, for economic reasons, to use machinery in place of fragmented operations, then the access to, and use of, a very cheap, un- or semi-skilled work-force provides the opportunity for an improved valorization of capital. The fragmentation of jobs has progressed so far, especially in manufacturing, that the execution of all processes now often requires a training period of no more than a few weeks even for unskilled labor. In this way capital acquires a monopoly of the knowledge related to the control and execution of the labor process: this knowledge is removed from the production process, which is managed exclusively by capital...

Bourgeois institutions like the traditional school system contribute to the successful implementation of discipline by instilling such capitalist virtues as subservience, obedience and punctuality.

In light of Bright's conclusions and the evidence presented in previous chapters a number of conclusions can be drawn about the social and economic consequences of technological rationalization on the position of the African-American workforce and the African-American population as a whole.
This chapter began with an appraisal of federal efforts to compensate for the disenfranchising effects of both social and economic institutions on African-American development. The general approach involved attempted to move unskilled/disadvantaged workers into private sector placements. Structural changes in the economy and specifically within the manufacturing sector undercut this effort substantially. The result, of course, was not surprising. The programs designed to raise a substantial portion of low-income African-Americans from positions of economic marginality in actuality were reduced to that level themselves. Consequently, the ability of federal anti-poverty and manpower programs to facilitate access for disadvantaged workers to mainstream labor markets was severely impaired. With the technological rationalization of work, even though the lower wage unskilled positions were within the capabilities of African-American workers, the shrinking number of production jobs turned the private sector away from making any firm commitment to support efforts on behalf of the unemployed, disadvantaged worker of color. It was because of the fact that there was increasing competition for a dwindling pool of jobs that education was employed as a rationing and allocative tool. As was presented in this chapter, educational attainment and ability to perform adequately clearly depended upon the nature of the work being done. In regard to the semi- and unskilled production jobs, Newman writes:

Whatever the job sphere technological advances have generally resulted in the need for less skill than more.... As early as 1966, studies prepared by the U.S. National Commission on Technology, Automation, and Economic Progress showed that while the technological change created many types of jobs, most of the new jobs had low skill requirements. 43

There are then two effects stemming from technological innovations. The economic effect registers as an absolute reduction in available
opportunities and/or structural limitations placed on the options available depending upon the sector being entered. The second effect is the further entrenchment of stratified class structures, racial and economic. Increased competition between low-income white workers and African-American workers heightens the tendency towards discriminatory hiring practices. An issue raised before, but that is applicable here, identified the widening chasm limiting transectoral and occupational mobility between blue and decent-salaried white collar positions. The restructuring means that with a potentially higher-paying production moving further out of reach, and lack of skills transfer between mid-level white collar positions and blue collar work, it becomes increasingly clear that the opportunities and avenues for advancement for a substantial portion of the African-American population are being foreclosed permanently. Within this context we can see why affirmative action has tended to concentrate its efforts within the ranks of expanding middle class white collar positions, as opposed to also challenging the restrictions placed on low income people of color.

Earlier chapters have attempted to outline the trends and dynamics responsible for the marginally-based position of the mass African-American workforce within the mainstream labor market. The task of the next chapter is to broadly assess the implications of these trends on the already tenuous position of the African-American worker as we move through the 80's.
Footnotes for CHAPTER IV


4. *Idem*.


7. *Idem*.

8-10. *Idem*.


12-14. *Idem*.


18. *Idem*.

19. *Idem*.


22. Idem.


25. Ibid., adapted.


27. Adapted from footnotes 25 and 26.


30. Scoville, op. cit., p. 147.


32. Introduction of this thesis.


34-35. Idem.


39-41. Ibid., pp. 209-221.

CHAPTER V

The Impending Crisis
The evolution of particular dynamics that have had major impacts on the growth and viability of the African-American workforce have been appropriately outlined in previous chapters. Technology and its application to production processes has been observed to produce effects that are not evenly distributed throughout the socio-economic structure of the society. In particular, the racial and economic stratification of American society has sharpened the disenfranchising effects of technologically transformed work processes and thereby labor markets which imperil the advancement of the African-American worker. The following table provides an illustration of comparative trends in occupational distribution.

TABLE 22

Employed Persons: Percent Distribution, By Occupation and Race:

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<tbody>
<tr>
<td>White collar workers</td>
<td></td>
<td></td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>professional, technical managers, administrators, exc. farm salesworkers</td>
<td>12.1</td>
<td>14.8</td>
<td>15.5</td>
<td>15.5</td>
<td>4.8</td>
<td>9.1</td>
<td>11.4</td>
<td>11.7</td>
</tr>
<tr>
<td>clerical workers</td>
<td>15.7</td>
<td>18.0</td>
<td>18.1</td>
<td>18.0</td>
<td>7.3</td>
<td>13.2</td>
<td>15.7</td>
<td>16.9</td>
</tr>
<tr>
<td>Blue-collar workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>craft and kindred workers</td>
<td>13.8</td>
<td>13.5</td>
<td>13.4</td>
<td>13.7</td>
<td>6.0</td>
<td>8.2</td>
<td>8.8</td>
<td>8.8</td>
</tr>
<tr>
<td>operatives</td>
<td>17.9</td>
<td>17.0</td>
<td>14.6</td>
<td>14.6</td>
<td>20.4</td>
<td>23.7</td>
<td>20.0</td>
<td>20.5</td>
</tr>
<tr>
<td>nonfarm laborers</td>
<td>4.4</td>
<td>4.1</td>
<td>4.4</td>
<td>4.6</td>
<td>13.7</td>
<td>10.3</td>
<td>8.7</td>
<td>7.9</td>
</tr>
<tr>
<td>Service workers</td>
<td>9.9</td>
<td>10.7</td>
<td>12.3</td>
<td>12.3</td>
<td>31.7</td>
<td>26.0</td>
<td>25.8</td>
<td>24.1</td>
</tr>
<tr>
<td>Farm workers</td>
<td>7.4</td>
<td>4.0</td>
<td>3.6</td>
<td>3.0</td>
<td>12.1</td>
<td>3.9</td>
<td>2.6</td>
<td>2.4</td>
</tr>
</tbody>
</table>
Changes in the African-American occupational distribution can be accounted for by the combination of two primary factors. First of all, the close to 12 percent (16.1 to 27.9) increase in African-American white collar workers between 1960-1970 to a great degree reflects the immediate gains resulting from the Civil Rights and urban movements of the mid to late sixties. This shift upward consisted primarily of a 36 percent increase in professional and technical employee representation and a 50 percent increase in clerical. The period between 1970 and 1975 continued to register positive gains though not on quite the same scale. During this period total African-American white collar representation grew by close to 7 percent with professional and technical increases accounting for 33 percent of the growth and clerical positions accounting for 35 percent. Between 1975 and 1978, white collar representation for African-Americans increased by only 1.5 percent over that five year period, with professional and technical accounting for 20 percent of the growth margin and clerical accounting for 80 percent.

From 1960 to 1978, the total white collar increase in distribution was 5.1 percent, as compared to the African-American figure of 20.1 percent. Prior to the Civil Rights movement an African-American worker was 200 percent less likely to be a white collar employee; 220 percent more likely to have been employed in the low wage service sector; and about twice as likely to still be working on a farm. Drawing from Chapter Two, there should be a fundamental understanding of the disproportionate concentrations and their roots. So, in 1978, while slightly over 50 percent of the white workforce was employed in white collar
positions, a little over 60 percent of the African-American workforce was engaged in blue collar work. Entering the 80's if craftsmen are excluded from the blue collar category, 53 percent of the African-American workforce is employed in a relatively low wage earning occupation. The comparative differences are pointed out by the following table, which exhibits income distribution for African-American and white families.

**TABLE 23**

Distribution of Families by Income:

1976 and 1977

<table>
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<tr>
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<tbody>
<tr>
<td>Income of families</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution by Income Level</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All families</td>
<td>5,804</td>
<td>5,806</td>
<td>50,083</td>
<td>50,530</td>
</tr>
<tr>
<td>Percent</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Under $3000</td>
<td>9</td>
<td>10</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>$3,000 to $4,999</td>
<td>15</td>
<td>14</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>$5,000 to $6,999</td>
<td>12</td>
<td>13</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>$7,000 to $9,999</td>
<td>15</td>
<td>15</td>
<td>11</td>
<td>10</td>
</tr>
<tr>
<td>$10,000 to $11,999</td>
<td>8</td>
<td>8</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>$12,000 to $14,999</td>
<td>11</td>
<td>10</td>
<td>11</td>
<td>11</td>
</tr>
<tr>
<td>$15,000 to $24,999</td>
<td>22</td>
<td>21</td>
<td>34</td>
<td>33</td>
</tr>
<tr>
<td>$25,000 and over</td>
<td>8</td>
<td>9</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>Median Income</td>
<td>$9,838</td>
<td>$9,563</td>
<td>$16,539</td>
<td>$16,740</td>
</tr>
</tbody>
</table>

(Adjusted for price changes in 1977 dollars)
A brief overview of Table 23 shows the relative concentrations of families within particular income ranges. We can see quite clearly that whereas 52 percent of all African-American families are concentrated in income brackets below $10,000 annually, 75 percent of all white families are dispersed throughout the income brackets above $10,000 a year. Furthermore, the median income for African-Americans declined by 2.7 percent between 1976 and 1977, while the median income for white families increased by 1.2 percent. By reviewing the changes in income distributions between 1976 and 1977, it is evident that there was a shift downward, within the lower percentiles of the African-American income categories, while the lower percentiles of the white distribution remained stable. Also worth noting is the counter increase within the upper ranks of the African-American distribution during 1977 at the same time that the downward shift occurred.

It is at this point that we engage the structural transformation of the economy, from the production of goods to the production of services. Within this formulation we also find a partial explanation for the widening income gaps between African-Americans and whites.

In Chapter III an attempt was made to document the following trend which can be stated as follows:

One of the dominant characteristics of development in the advanced stages of capitalism is the ability of a reduced number of workers to produce the required amount of goods demanded by society as a whole.

This condition that becomes manifest in the manufacturing sector, after a certain stage of development, is not unlike the condition in agriculture. In the agricultural sector we witnessed the massive exodus of people from
the land along with an incredible increase in productivity capable of feeding the nation and providing a base for international trade and foreign policy extortion. As it has already been stated, the dynamics within industry follow the same basic pattern. The result generated by this pattern of industrial development has been the growth and expansion of the service or non-production sector.

In a formulation of the service sector, Ginzberg and Vojta identify four basic components. 3

- Distributive services—wholesale and retail trade, communication, transportation, and public utilities
- Producer services—accounting, legal counsel, marketing, banking, architecture, engineering, and management consulting.
- Consumer services—restaurants, hotels, resorts, drycleaning, entertainment, etc.
- Non-profit and government—education, health, justice system, national defense

The itemized categories within the components are not intended to be exhaustive, but only to provide an idea of the scope of economic activities within each component.

The following statistics provide a framework from which to identify the magnitude of service sector growth over the past five decades. In 1929, 45 percent of the American workforce was employed in the production of goods. By 1977 the proportion had dropped to 32 percent. 4 By way of simple addition, during this same period the service sector experienced a 13 percent increase in size with the major portion of the growth trend accelerating after 1948. This date quite expectedly conforms with that period usually identified as the takeoff period in American industrial productivity. Worth noting is the correlation between the productivity
take-off year and the end of World War II. Improvements in wartime or defense-oriented production processes when transferred to domestic sector production register as increases in output per man hour for the sector as a whole.

In 1948, the goods producing sector accounted for 46 percent of the gross national product, while the service sector contributed one percent. By 1978, the figure for the goods producing sector had fallen to 34 percent, while the share of GNP contributed by the service sector had risen to 66 percent.5 In the employment arena, employment in the goods producing sector increased by 20 percent from 1948 to 1977 (20.9 million to 25.1 million). On the other hand, employment in the service sector increased by 100 percent from 27.2 million to 54.4 million.6 Isolating the goods producing sector against the manufacturing component, we note the following. In 1948, manufacturing employment accounted for 74 percent of the goods producing sector employment. In 1978 the related figure was 76 percent. However, of the 3.6 million increase in manufacturing employment from 15.5 million (1948) to 19.1 million (1978), three million or 83 percent of the increase in manufacturing was attributable to non-production workers.7

Since 1967 the number of production workers in manufacturing had declined from 14 million to 13.1 million in 1976.8 The number of laborers in manufacturing declined by 47.2 percent between 1968 and 1970, while the number of machinists fell by 25 percent.9 For manufacturing in general, even though the absolute number of production workers declined, value added increased 95 percent from 1967 to 1976. Also, assets per employee increased by 33.8 percent during this period, with the total
value of machinery increasing relative to the total wage bill by a rate of 1.2:1.  

As with any sector of the labor market, it is important to avoid monolithic categorizations that negate the existence of subsectors within the whole. Just as dual markets exist in the industrial sector, a dual market or in other words different levels of entry also exist within the service sector. The primary breakdown is usually seen as a division between white collar jobs and service jobs in the laborer occupation group. One of the key issues then centers around the question of where workers find employment once they have been displaced or denied entrance to jobs in industry.

Between 1959 and 1978 total employment increased by 30 million. Of these new jobs, 16 million were high level professional, technical, managerial, administrative, sales and crafts occupations. Within the service sector in 1959, 42.7 percent of the jobs were white collar positions, by 1978 50 percent were white collar jobs. Appropriate to add to this scenario are some figures on education.

In 1948 the median year of high school completed was 10.6, by 1978 the figure had risen to 12.6. The median of school years completed for African-Americans was 12.3. In 1948, 40 percent of the potential employees had completed high school while only 9 percent completed college. By 1978, the figures had risen to 75 percent and 33 percent respectively. Within occupational categories, the median years of schooling for the professional and managerial occupations rose from 12.8 years in 1948 to 16.5 in 1978. For administrators, the figure was 12.2 in 1948 and
13.4 in 1978. Moving on to the blue collar category, respective figures show an increase from 9.0 in 1948 to 12.2 in 1978. For service workers, the 1978 median figure is also 12.2. The issue being raised may already be clear. 14

Referring back to James Bright in Chapter IV, it was theoretically supported that as levels of automation increased, the demand on the worker did not necessarily increase, but in fact decreased. On the other side of the issue, those white collar employees involved in the planning of the production process and creation of new labor-saving techniques are highly scrutinized. Consequently there are certain academic prerequisites which are expected of a potential high-level white collar employee. One prerequisite of course is a college degree. With the median level of schooling for blue collar workers in general identified as 12.2 years, chances are slim that a blue collar worker displaced from production work would be hired into a high level white collar position. Underemployed as a blue collar worker in another industry, displaced or rejected manufacturing production workers must find employment in the middle to low wage service sector.

What tends to substantiate this position are the respective service sector figures shown in Table 22. There we see a 3.2 percent increase in the number of whites working in what has traditionally been a racially reserved sector. Even in 1978, African-Americans were still twice as concentrated as the white workers. 15 With a growing service sector, which is divided between white collar and manual labor, service, etc. occupations, the widening median income gaps between whites and African-Americans may in part be due to the excessive concentration of African-
American workers in the low wage service sector. It is important to remember that the increasingly automated production processes and just an overall accelerated pace of cybernation only serves to benefit a certain portion of the workforce. The rest, particularly the latecomers, get frozen out of the action.

A corollary to the structural transformation of the economy in the advanced stages of capitalist development is the increased presence of government as a moderating regulator of the accumulation process, on both economic and socio-political fronts. Prime examples of government's many roles and functions have been presented throughout the course of this thesis. In Chapter IV, the initial task of government was to restore peace as quickly as possible so that the accumulation process could continue undisrupted. In a drastically reduced definitive statement, the state is the political apparatus through which societal distortions, resulting from the unchecked drive of the accumulation process, are resolved. The state is the protectorate on both domestic and international fronts. It is upon this base that the issues characterizing the reindustrialization debate are brought to the forefront.

Another way of looking at the reindustrialization fix is to understand the crisis in US imperialism. Part of the crisis is rooted in the growing level of competition between the U.S. and its foreign competitors. The result is new restrictions on domestic and international markets.

As each capitalist country displaces labor, in order to gain a competitive advantage in production, it becomes necessary to solidify the bourgeois markets of the competitive countries. A perfect example is the case of the Japanese in the United States. The Japanese produce far more
cars than the Japanese could sell at home through their domestic markets. It is therefore necessary to tap the car markets in other countries. For the U.S., this direct challenge has had direct impacts on the solvency of particular elements in the auto industry. In this simplified formulation, we can begin to identify the origins of the world overproduction crisis, triggered by the growing internal conditions of economic crisis, and the general collapse of international trade. Labor displacing technology begins suppressing the standard of living for all who are not of a privileged class. The consequence is a decline of both domestic and international markets. This condition is very similar to the one cited by Mattick on a domestic or national scale. However, it is important to understand that "reindustrialization" is as much a political process as anything else. The following statistics are generally cited as evidence that American industries need to be revitalized, relative to two of its strongest competition. 16

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<tbody>
<tr>
<td></td>
<td>U.S.</td>
<td>West Germany</td>
<td>Japan</td>
</tr>
<tr>
<td>Average Age of Equipment</td>
<td>16-17 years</td>
<td>12 years</td>
<td>10 years</td>
</tr>
<tr>
<td>Private Investment in Plant and Equipment as a Share of GNP (1970-79 average)</td>
<td>U.S.</td>
<td>10.2%</td>
<td>West Germany</td>
</tr>
<tr>
<td>Productivity Growth in Manufacturing (average annual rate 1970-79)</td>
<td>U.S.</td>
<td>2.3%</td>
<td>West Germany</td>
</tr>
</tbody>
</table>
From the statistics the politics of reindustrialization become clear. Reindustrialization at this stage of American history carries with it the stigma of rearmament propaganda. Nonetheless, reindustrialization proponents will continue to harp on the U.S. productive base in an effort to create a supportive environment for the increased public support of industry. With a focus on productivity, the particular role and application of the microelectronics revolution takes on a new meaning. Marx stated quite appropriately: 17

The forces of production which are further developed will conflict evermore intensely with the existing mode of production and tend towards its overthrow.

We also know, however, that the rate of displacement is in fact determined by the relative strengths of capital and labor. It is the potential impact of the microprocessor based on its demonstrated abilities that makes its potential labor displacing effects so devastating. Referring back to Chapter One, we know that capital is constantly on the lookout for technological rents. If one capitalist is capable of cornering a technological innovation that substantially reduced labor costs, the impacts of that process will be limited to his firm. However, if that same process becomes the driving force behind production processes in not only the domestic arena but also the international arena, the consequences for the system as a whole, as stated earlier, are cause for great concern.

Presented now is a summary overview of the new technology. In 1960 one silicon chip was capable of performing the equivalent functions of one transistor. In 1978, it was possible to place on one silicon chip, measuring about one square inch, the equivalent of 100,000 transistor functions. Today it is 250,000 transistors to the chip. It is
anticipated by 1985 that 10,000,000 transistor functions will be placed on one silicon chip. Accordingly then, it is already possible to place on one chip all the essential circuitry of a modern computer. A chip that is constructed with the capabilities of a computer is called a micro-processor. The combination of a micro-processor with other chips for memory and the control of input/output functions comprise, together, what is called a micro-computer. To more fully demonstrate the power of the silicon chip technology, a comparison can be made against the earliest of modern computers, called ENIAC, which was developed in the 1950's. The micro-computer has more computer capacity than ENIAC. It is 20 times faster, has a larger memory, is more reliable, occupies 1/30,000 the space, and costs 1/10,000 as much.

In 1961, between 10,000 and 15,000 employees produced about 520 million devices, nearly all of which were discrete transistors, diodes and the like. By 1976, about 120,000 workers made a total of about 6 billion devices (devices averaged 50 transistors). This while the average labor productivity measured in devices per employee did not change greatly, measured in transistors per employee, the average labor productivity skyrocketed.

It has been stated by many experts that the development of the micro-processor is no less significant than the introduction of the assembly-line and mass production processes. In fact some have gone so far as to suggest that the era of automated machines producing automated machines is near. There are a number of overriding issues encompassed by this dynamic. Even though the potential impacts of this particular wave of technology seem overwhelming compared with previous innovative periods, it still follows the patterns established by previous waves. And from
the evidence already presented each era must be analyzed according to
the prevailing conditions at that particular point in time. Consequently
the impacts of displacement are relatively speaking generating strong
repercussions for any given era.

There does exist a special point to be made though. The first wave
of structural changes led from agriculture to industry. The second wave
from industry to the service sector. And at this, our current stage,
the cycle is characterized by varying degrees of technological ration-
alization throughout all sectors. The critical issue is, after the micro-
electronics wave has been standardized throughout all sectors, where will
the transformation of the service sector lead to?

In closing, this particular issue is of primary importance not only
to the development, but to the fundamental survival of the African-
American population in the United States. Throughout this paper we have
noticed that periods of economic upheaval have always had a feedback
effect which dictated a more repressive condition for African-Americans
in particular, and people of color in general. Should the foreboding
of the potential wave of microelectronics innovations materialize on a
large scale, for African-Americans an other groups who have traditionally
been only marginal participants in mainstream structures, the issue of
development will be reduced to one of survival.
Footnotes Chapter 5


4. Ibid.

5. Ibid.

6. Ibid.

7. Ibid.

8. Adapted from Statistical Abstracts 1979


10. Ibid.

Footnotes 11-13. Ginzberg and Vojta, The Service Sector, p.51


15. Statistical Abstracts 1979


