



THE EFFECTS ON LABOR OF POST-INDUSTRIAL GLOBALIZATION:

A Comparison of Marxist And Non-Marxist Paradigms

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“The need of a constantly expanding market for its products chases the bourgeoisie over the whole surface of the globe. It must nestle everywhere, settle everywhere, establish connections everywhere.” - Karl Marx, Manifesto of the Communist Party, 1848

INTRODUCTION

In this paper I will be examining the changes in labor conditions that have occurred during the last ten years, how they are intimately linked to new notions of information technology and the rise of a global economic perspective. These changes have been slowly occurring since the 1950s, but only in the last ten years have they fully become the next way to conduct business. Usually one would situate these changes geographically, but the very nature of the changes denies such a local character. The changes are best located not within national boundaries, but within the boundaries of the transnational corporation (TNC). It is within these transnationals, which usually sprang from the economies of advanced capitalist countries, that one finds the new notions of global labor division and use of information technology. It is not a simple causal relationship, however. The TNC does not simply create these new production methods; these new production methods reshape the TNC as well. The TNC is not merely the investment of certain Americans, or Japanese, or Europeans in new markets. “Global capital is not an algebraic or geometrical summation of the existing national capital that are moving constantly across the globe from one country to another. It is rather an organic supranational socioeconomic entity that intimately corresponds to the structure of

global social relations.”¹ They manifest new concepts of work-place organization on a global level.

However various schools of analysis debate this new incarnation. Some Marxist critics argue that these are but superficial changes in the structure of capitalism, and will only bring the former so-called white collar jobs into the proletariat². Others argue that these new technologies are, by their very nature, bringing a new sense of economic democracy to global capitalism.

The key difference between these two schools of thought is their emphasis on so-called Human Capital. The Marxist school believes that human capital investment will not fundamentally alter the relationship of the owner of the physical capital and the worker, whereas the non-Marxist³ school sees human capital as the key to the resolution of the inherent conflict between Labor and Capital. In this paper, I will compare these two strains of thought as well, and attempt to provide a notion of where I believe them to be sufficient and lacking. If these new notions of globalized post-industrial labor resolve the antagonism between Labor and Capital, they would signal a critical shift in the socioeconomic dynamics of the world, similar in importance to the rise of monopoly capitalism and Fordism.

¹ Beyond Survival pg. 20

² See Braverman's Labor and Monopoly Capital for a complex discussion of the deskilling of white collar jobs. I derived much of my thought and vocabulary from his work. Pgs. 293 - 358

³ This is a problematic term, but these thinkers are far less homogenous than the Marxists, and therefore I will define them by what they are not.

WHAT EXACTLY IS POST-INDUSTRIAL GLOBALIZED LABOR?

Post-industrial, in this paper, refers to advanced capitalist economies, the TNCs they have created, and the general level of technology associated with them, especially advanced computer technology. These economies have gone through extensive mechanization, first labor-intensive, and then capital-intensive. They have applied Taylorist methods to their mechanized production to gain the high efficiencies of Fordist economies of scale. While they often still use such methods during the early phases of post-industrialism, there is an on-going and accelerating shift from a focus on mass production of goods to a mass production of information. In this paper information will be synonymous with knowledge, in contrast to Machlup's classic treatise The Production and Distribution of Knowledge in The United States. I have decided to do this because of the shift in common vocabulary since the publication of his book. The general usage of the term "information" and "knowledge" are used interchangeably in the media in reference to changes under post-industrialism.

Machlup states that "Knowledge can be classified either as a final product or as a necessary equipment - cost element [factor of production] - in the production of other goods and services."⁴ Increasingly the goods and services we consume as both intermediate products, e.g., marketing analyses, databases, surveys, and final products, e.g., mass media, computer software, the Internet, are information goods. People who produce such goods and services will be referred to as "knowledge workers".

The two schools debate how this transformation is actually taking place and where it is going. The Marxist school sees the replacement of office work, so-called white

collar labor⁵, with machines, while the non-Marxist school sees a transfer of capital investment away from mechanical capital to human capital.

Globalization refers to the international character of the late 20th Century goods and services markets. Although goods and services are produced and consumed domestically in most countries, there is an increasing interdependence of economies around the world, as evidenced by effects of the Asian market collapse on the rest of the world in November 1997. Outside of currency markets, as corporations become increasingly global, they will maximize their profits by allocating their factors of production across the world. Thus the fiscal and monetary policies of individual nations must take this into account when they are setting discount rates, tax brackets, and labor laws.

If the late 19th Century had a problem with bending corporations to the need of society, the late 20th Century has a greater problem still. The corporations, when their profits are threatened, can simply up and leave the threatening country. Unless laws are passed internationally and enforced, the powers of an individual nation controlling a TNC are limited. Many TNCs have larger operating budgets than entire nations. The General Motors corporation for instance, as of 1990, had more gross sales than the GDP of Indonesia, Norway, Turkey, Argentina, Portugal, and many other countries⁶. True, these countries are not the G-7. However the figures illustrate that these TNC differ with older corporate structure by more than degree; they differ of kind.

⁴ Machlup p. 29

⁵ See White Collar for a discussion of the evolution of white work.

⁶ The Internationalization of Capitalism pg. 110

Labor is the group of people who earn wages from a firm. The notion of what labor is becomes complicated under post-industrialism. Under classical economics, there is an inherent difference between people and capital. The people, labor, operate the physical capital. The physical capital increases the efficiency of production of the laborer. However, as Taylorism proceeds, the skills of a job become increasingly divided among workers, or transferred to other people entirely -management. Under Taylorism, there is division between those who decide what actions to take and who takes the action. This leads to the Marxist notion of the “alienation of labor”. The Marxist school of analysis extends this model of alienation to the management. The belief is that the clerical workers will have their special abilities transferred to information machines (computers) like the skilled craftsmen had their abilities transferred to production machines (e.g., robots, complicated processing equipment). Additionally their labor will be “rendered repetitious and routine”, “labor ... is placed on an equal footing with simpler forms of so-called blue collar manual labor.”⁷ This conception is referred to as the “proletarianization of white collar labor”.

Under the non-Marxist paradigm, the laborer is not increasingly deskilled, but skilled. The efficiency of labor is still small for information production, but when coupled with the investment of human capital⁸, labor produces much more. Under the non-Marxist conception, the transition to a post-industrial economy is marked by increased human capital investment in people and not physical capital. The relationship between the owners of physical capital (the capitalist) and the human capital (post-industrial labor) becomes more complicated than in earlier times.

⁷ Braverman pg. 325

⁸ See G.S. Becker's Human Capital for a complete discussion of the topic.

THE MARXIST AND NEO-MARXIST MODEL OF POST-INDUSTRIAL GLOBAL LABOR

As stated before, the Marxist conception of economic evolution conceives of increased deskilling of labor. More simply put, they anticipate a convergence of the white collar to the blue collar, a decrease in autonomous action, and an increased reliance on planned action among information workers. For both physical and information goods, they anticipate a globalization of the labor process and a shedding of older, nationalist modes of production.

In their analyses the Marxist schools focuses solely on the physical forms of capital, and not on the implications of human capital. This myopia is due to the materialist focus of their paradigm, and is a specific example of Kuhn's general critique of paradigms. Indeed, human capital theory is absent from all the Marxist analyses I have read. All human capital relationships shown in this section of the paper are not from other sources, but are the logical extensions of Becker's human capital theory to the theoretical predications of Marxist analysis. They are not mutually exclusive, and in many ways, human capital theory supports the Marxist paradigm.

Marx anticipated that:

“In place of the old local and national seclusion and self-sufficiency, we have intercourse in every direction, universal inter-dependence of nations. And as in material, so also in intellectual production.”⁹

Bina argues that older notions of national monopolies competing globally is antiquated and does not examine the actual motivations of the corporation¹⁰. The goal of the corporation is to maximize profits, and if they can organize oligopolistically or monopolistically on a global level, and thereby increase profits, the TNCs will. The

conceptualization of nations competing through their corporations is obsolete. Now, it is the corporations autonomously competing among themselves.

As such, the older model of Ricardian comparative advantage between nations is no longer valid. It is not nations that trade under globalized post-industrialism, but corporations. The corporations allocate resources internally and then move them around the world to maximize profits. Ranney states that “nearly 80% of U.S. external trade (both exports and imports) is currently undertaken by supranational corporations.”¹¹ Thus arise “transnational labor processes”¹². There has been “a significant increase over the past twenty years [1960-80] or so in the share of income being absorbed by employees ... [causing a] progressive long-term decline in rates of return to capital.”¹³ To increase the rate of return, the means of production would have to be put in areas of already low wages, or decrease the wages of the advanced capitalist countries (ACCs).

This transition of “Mobile capital ... requires technologies and institutions that would make it cost-effective.”¹⁴ These transnational labor processes are intimately connected to the new information technologies which transfer information skills into machines (henceforth referred to as information capital). It is difficult to train and encourage highly skill workers to move to lesser developed countries (LDCs), but it is easy to move and replicate information capital.

The computers and software from ACCs permit highly efficient manufacturing control to exist in areas with extremely low wages. Thus the capitalist, who formerly had

⁹ Manifesto of the Communist Party, The Marx-Engels Reader, pg. 476

¹⁰ Beyond Survival p. 21-22

¹¹ Qtd. Beyond p. 59, from UNCTC *World Investment Report 1992*, 200

¹² Beyond pg. 24

¹³ Jacques de Larosiere, former chairman of IMF, Qtd. Beyond Survival p. 58

to contend with the high labor wages in the ACCs, can now take the technology produced by a few highly paid knowledge workers to small developing countries with low wages, and achieve the same levels of efficient production. Decreased communications costs (through the Internet and other information networks), “allow spatially decentralized production, while at the same time allowing the management of far-flung production networks from a central place”¹⁵.

However, this redistribution of surplus value to the ACCs does not imply some sort of overall increase in wage level in the ACCs. On the contrary, with less of a demand for non-human capital intensive labor in the ACCs, the wage rate will fall and/or unemployment will spread. Mogensen states that “80% of Americans suffered losses in inflation-adjusted income from 1977 to 1988.”¹⁶ Only among those with high levels of human capital investment will wage rates exhibit any sort of increase or maintenance. However, as it becomes obvious that only human capital-intensive jobs provide good wages, the increase in supply of workers with specific human capital will most likely decrease the wage rate.

Additionally, older forms of skilled labor will be deskilled. The changing cost allocation of production factors illustrates the proletarianization of white collar labor. An increase in information capital purchases indicate the reallocation of resources away from labor. Information capital, e.g., the computer, did not exist before the mid-60s and did not assume the highly efficient form of the personal computer until the 1980s. Mogensen cites an article from the *Harvard Business Review* that analyzed the office costs of the

¹⁴ Beyond Survival p. 58

¹⁵ Capitalism in Third World p. 117, p. 115

¹⁶ Beyond p. 191

Citibank corporation. In the 60s and early 70s, labor as 70% of costs, computers 10%, and the remainder miscellaneous. In response Citibank shifted to information capital intensive knowledge production with computers as 70% of costs, and labor and miscellaneous making up the next 30%¹⁷.

The job skills of traditional white collar work have been moved to information capital. There is no need to invest in the human capital of such workers, and thus those who use information capital a lot “tend to be less educated than office workers overall”¹⁸. Such deskilled information work can be as easily transferred to LDCs as production work. “John Maxwell Hamilton, a World Bank official” stated that “in the data-entry business, one the essential ingredients is a dependable supply of low-wage workers”¹⁹. TNCs have started to set up satellite links and transfer information processed in the LDCs back to corporate headquarters in an ACC²⁰ to be analyzed by the workers with high levels of human capital investment. The low wages of the LDCs “make it far cheaper for American employers to have two data processors do the same job overseas to catch mistakes, than to do the work in the United States with one worker.”²¹

Older, nationalist modes of labor defending labor’s interests will not work in a post-industrial global economy. The definition of labor, contend Marxist analysts, must be expanded to include the proletarianized white collar labor, and extend the interests of labor globally. “National one-sidedness and narrow-mindedness [will] become more and

¹⁷ Beyond p. 179

¹⁸ Office Environment Index 63 Qtd. Beyond p. 185

¹⁹ Beyond p. 185

²⁰ Beyond pg. 187-189

²¹ Beyond p. 188

more impossible”²² and labor will have to see its transnational unity to extract real wage gains from capital. The Marxist analysis shows that post-industrial globalization is merely another stage in the evolution of capitalism towards socialism. It is a more advanced stage, but completely within the Marxist paradigm, which called for the international unity of the proletariat for the very reasons we see in the recent development of the global economy.

²² Marx-Engels Reader p. 477

NON-MARXIST MODEL OF POST-INDUSTRIAL GLOBALIZATION

The non-Marxist model does not see labor and capital as inherent antagonists. Marshall states that the success of capitalism in the Cold War era was due to “consensus-based public/private strategies [taking] advantage of market forces, not from unbridled market forces alone.”²³ He believes that market forces can serve social ends. However confident Marshall is about the past, he anticipates a need to change the methods of that regulation today.

Marshall says “The traditional (i.e., mass production, Keynesian economics, and adversarial industrial relations) system’s foundations have eroded since the 1960s, mainly because of *internationalization* and *technological changes*” [emphasis his].²⁴ The changing economic relationships between nations, indeed supranational, are causing them to try “emerge from a crisis of outdated agreements” and look for “not-yet-existing answers to existing questions”²⁵. The non-Marxist, like his or her Marxist analogue, recognizes that new social forms are emerging from new economic conditions. As Harris and Silverman so succinctly state, “Technology based on information and knowledge rather than natural resources and physical capital cannot be restricted to national borders. Highly mobile capital pushes corporations to seek low-wage environments that threaten the hard-won fringe benefits that constituted the private insurance systems of more-fortunate workers.”²⁶ These emergent social forms are colliding with the vestigial sociopolitical forms of the last economic era, such as nationalist identity, nation-states, and national unions.

²³ Double Shift p 159

²⁴ Double Shift p. 160

²⁵ Capital, The State, and Labor p 347

Marshall emphasizes unions as the way to combat the inequities of the labor/capital relationship. Until the 60s, the unions of America coupled with Keynesian social programs and Cold War production “manipulated government spending and interest rates to generate enough total demand to keep the system operating at relatively low levels of unemployment.”²⁷ The question of the success of unions in America and their decline is far beyond the scope of this paper. Many of its causes are outside of economics, yet their decline can be partly accounted for by the rise of the TNC’s use of globalized labor and the changing demand for labor in unionized industries.

However, unlike the Marxist analysis, the non-Marxist analysis emphasizes the important role of human capital investment as the key to sustained development. Marshall states that “the work of Theodore Schultz, Robert Solow, and other economists [have] demonstrated, the process of substituting knowledge and skills for physical resources [to] have been the main source of improved productivity at least since the 1920s.”²⁸ The so-called Solow Growth Residual reflects this change in productivity²⁹. The Residual is a number that is used to balance the economic equation to measure GDP growth:

$$\frac{\Delta Y}{Y} = \alpha \frac{\Delta K}{K} + (1 - \alpha) \frac{\Delta L}{L} + \frac{\Delta A}{A}$$

The Residual is thought to represent the efficiency of the production methods and the general level of increase in productivity. Mankiw states that “growth in labor efficiency relates to growth in total factor productivity ... [by] $\frac{\Delta A}{A} = (1 - \alpha) \frac{\Delta E}{E}$, where alpha is

²⁶ Double Shift p. 266

²⁷ Double Shift p 164

capital's share [of income]."³⁰ One would think that the efficiency of labor could be an analogue of the investment in human capital for the workforce. Indeed, when one examines the figures for the post-W.W.II period one finds that the Total Factor Productivity has dominated other factors in U.S. GDP growth:³¹

Years	GDP Growth	Capital	Labor	Residual
1950-59	4.0	0.4	0.5	3.1
1960-69	4.1	0.9	1.2	2.0
1970-79	2.9	1.1	1.5	0.3
1980-89	2.5	0.9	1.3	0.3
1990-94	2.0	0.6	0.6	0.9
1950-94	3.2	0.8	1.0	1.4

The domination of GDP growth by the Residual indicates the importance of human capital to the growth of the U.S. economy. Indeed, the GI Bill probably accounts for a large portion of the post-war growth in the Residual.

The importance of human capital investment and usage, quantified by the Residual, forms the backbone of the non-Marxist argument. Marshall states that "Firms and economies can compete in more global knowledge-intensive markets either by lowering their wages or by becoming more productive."³² Either way the TNC will

²⁸ Double Shift p. 166

²⁹ Macroeconomics p. 120

³⁰ Macroeconomics p. 120

³¹ Table taken from Macroeconomics p 121

³² Double Shift p 167

become more efficient and productive. The argument shows ways to retain *American* corporations and have other TNC allocate their labor production to the U.S..

Marshall's argument rests upon archaic assumptions of nationalism, but it can be extended for the global economy as a whole. After all, assuming the LDCs develop like the ACCs, it will only be a matter of time before all low-wage areas develop into high-wage areas. "With a cost-cutting strategy" and not a productivity increasing strategy, "the only way to improve incomes is to use more resources and work harder, which is clearly self-limiting."³³ This is the path America is taking right now. People are substituting leisure time for more hours of work at lower pay rates.

The alternative is to increase productivity by investing in human capital, that is, to put "people and enterprises on steep learning and earning curves, where the potential for improvement has no clearly defined limits."³⁴ A higher investment in human capital is necessary for a more flexible production model necessitated by the competitiveness of a global, and increasingly universal, market. "More flexible manufacturing processes often entail the introduction of sophisticated electronically directed machinery ... whose systems can be most effectively operated by a work force well informed about fairly advanced mathematics and statistics."³⁵

The non-Marxist model of development can be seen as the consequence of a new stage of technology. The movement from land capital to mechanical capital to human capital is an inevitable one because of what types of products are most efficiently produced and needed. Once there was a high surplus value derived from land capital

³³ Double Shift p 168

³⁴ Double Shift p 168

³⁵ Double Shift p. 203

production, the surplus value could be invested in mechanical capital. Similarly, once mechanical capital reached a certain level of efficiency, it became advantageous for utility maximizing societies to reinvest the surpluses in human capital. This is derived from the classic economic equation, $\frac{MPK_1}{Cost_1} = \frac{MPK_2}{Cost_2} = \dots = \frac{MPK_n}{Cost_n}$, that relates how money should be allocated among labor and various forms of capital. As the marginal product of additional physical capital falls, societies will reinvest in human capital, which has a higher marginal product.

The structure of firms would be radically altered by such an investment in human capital however. Human capital is not like physical capital; it has a psychology. “Skilled, educated workers are less tolerant of monotonous, routine work, and authoritarian managerial controls” which would demand a democratization of the workplace. Under this envisionment of post-industrial labor, blue collar labor converges to white collar labor. The average worker becomes more skilled. Taylorist division of action and thought is reunited, and the “managerial information monopolies ... must be shared ... because in high-performance systems machines do more of the routine, direct work and front-line workers do more indirect work formerly done mainly administrative staffs.”³⁶ With a greater sense of the entire production process and more autonomy, the alienation of the worker decreases. The managers in this type of human capital-intensive production know “that workers and effective work organization, not managers or technology, are the keys to high performance.”³⁷

³⁶ Double Shift p 168

³⁷ Double Shift p 169

The unity of human capital and labor, under post-industrialism, complicates the capital/labor relationship. Labor is no longer interchangeable, nor can capital be used by the next worker. Indeed, the investment of human capital obviates the need for direct control. The education of the worker gives them a sense of satisfaction from their work in a way that Taylorist jobs did not. Giving the wage-earner the freedom to exercise their mind, as well as their hands, is the best way for the capitalist to make use of his or her investment in human capital.

The different nature of human capital will also create a new type of corporate atmosphere. In physical capital-intensive industries, new machines replaced depreciating physical capital. In human capital-intensive industries, *learning* replaces depreciating human capital. The necessity of learning to usefulness of the employee can be seen by the recent emphasis in the media and corporate discourse on “lifetime learning”.

Additionally, since it is advantageous for information to be shared among the workers, the learning is “likely to be more communal and cooperative”³⁸, which will foster a sense of community among the employees. This community will further combat the alienation that is so characteristic of the Taylorist employee.

In addition to learning, the new post-industrial firm organizes production not along “job-individual” assignments, but along job-team assignments³⁹. The team model creates a work environment that is both less monotonous and more efficient. It encourages pro-active planning for the benefit of the corporation, and enables greater flexibility⁴⁰.

³⁸ Double Shift p 169

³⁹ Double Shift p 216

⁴⁰ Double Shift p 199

Information capital in the form of cutting-edge technology and methods is crucial to this form of organization. Standardized technology is easily transferable to low-wage LDCs. The use of technology that has yet to be standardized or widely accessible to produce new products flexibly is an important advantage gained by the human capital-intensive firm (HCIF). Since it is this type of technology which the HCIF excels at, they would have considerable incentive to develop new technologies, further accelerating the Residual. Which plan would be more efficient? “The most productive systems ... have workers with higher-order thinking skills who can develop and use leading-edge technology ... in a more dynamic and competitive global economy.”⁴¹ Yet, Marshall himself admits that “the evidence for this proposition is difficult to establish because worker-participation processes in the United States are relatively new ... and never occur in isolation from other factors.”⁴²

⁴¹ Double Shift p 170

⁴² Double Shift p 179

CONCLUSION

The Marxist paradigm envisions a future of globalized alienated labor, where Capital, in its new incarnation of the transnational corporation, uses the new information technologies to exploit new pools of labor in order to bolster declining returns to capital. The non-Marxist paradigm envisions a new corporate order of a democratically-controlled workplace. The alienation of monopoly capitalism decreases due to increased autonomy of the workers. The workers enter a new era of more rewarding jobs and high wages.

Can these two visions of the future be reconciled? I believe the answer lies in human capital theory, which neither one of them explicitly addresses, but both require to be understood fully and correctly.

Unlike in eras past when capital and labor operated within one country, or perhaps on a limited international basis, where the surplus value of the developing nation's labor was invested domestically. Under the auspices of the TNC's plan of development profits are reinvested in the human capital of the ACCs, which allows new types of information capital to be developed. The new types of information capital increases the productivity of the workers, both in the ACCs and in the LDCs. However the profits used for capital formation in the ACCs and *not* the LDCs.

This is the most efficient allocation of goods for the TNCs due to the nature of human capital. Human capital exhibits, for a time, increasing returns to scale, which implies that areas of high human capital investment will be a better place to invest more human capital. Becker states that

“rates of return on education and other human capital are higher in developed than in undeveloped countries, both absolutely and relative to rates on physical capital. ... Consequently, we readily explain why the ‘brain drain’ of educated and skilled persons almost invariably occurs from poorer to richer countries.”⁴³

Thus corporations will increasingly allocate physical capital to the LDCs and human capital to the ACCs, for the production of information capital to be used in the LDCs. ACC labor with a low level of human capital, i.e. the unskilled labor, most people, will become increasingly unemployed, underemployed, and paid less. If the ACC’s labor focuses on national-based and not globally-based strategies “to raise wages ... [they will be] self-defeating since they open up unit labor cost differentials and inhibit domestic accumulations.”⁴⁴

In the ACCs, the information capital industries will have high levels of human capital investment. They will most likely develop along the lines developed under the non-Marxist model, which maximizes gains from the human capital investment. The LDCs, at least in the near future, will probably develop under the Marxist model. The TNCs will maximize profits by transferring information capital to these countries and using the low-wage workers there to manufacture goods and services.

However, the development of the ACCs population without heavy human capital investment will not share in the gains of the TNCs. They will face higher levels of unemployment and lower wages, as they will not command the levels of human capital necessary to share in the development of the new technologies. Whether this new post-industrial proletariat, comprised of the populations excluded from knowledge work in the ACCs, will organize and extend their solidarity internationally to those groups in the

⁴³ Human Capital p. 346

⁴⁴ Capitalism in the Third World p. 116

LDCs, whose wages are also low from lack of human capital investment, is a question that can only be resolved by the future course of events.

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