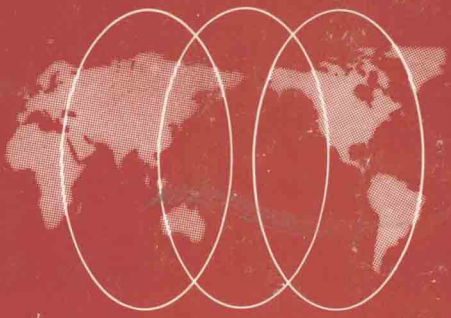

Melvyn Dubofsky
Editor

# TECHNOLOGICAL CHANGE AND WORKERS' MOVEMENTS

EXPLORATIONS IN THE WORLD-ECONOMY

Volume 4

# TECHNOLOGICAL CHANGE AND WORKERS' MOVEMENTS

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# *Introduction*

The articles included in this collection were originally presented at the Third U.S.-U.S.S.R. Colloquium on World Labor and Social Change, held at the State University of New York at Binghamton in January 1983 under the auspices of the American Council of Learned Societies-U.S.S.R. Academy of Sciences Commission on Humanities and Social Sciences, administered by the United States International Research and Exchange Board (IREX). The Fernand Braudel Center for the Study of Economies, Historical Systems, and Civilizations coordinated American participation in the colloquium. The Soviet contributors were organized by the Institute of the International Labor Movement of the U.S.S.R. Academy of Sciences.

Two previous conferences were held in 1980 and 1981, the first in Binghamton and the second in Moscow, devoted, respectively, to the topics, "Labor in the World Social Structure" and "Economic Cycles, Depressions, and Worker Movements." The papers delivered at the first colloquium were edited by Professor Immanuel Wallerstein of SUNY-Binghamton and the Fernand Braudel Center and published under the title *Labor in the World Social Structure* (Sage, 1983).

All the following articles deal to one degree or another with interrelationships among the factors of technological change, economic and social structure, and the behavior of working people, the subject of the Third U.S.-U.S.S.R. Colloquium on World Labor. They treat developed and underdeveloped, capitalist and socialist states. Some are more historical in approach, others more contemporary. Some of the authors are especially interested in the changing behavior over time of working people and others in the technological and economic structures, which set the conditions for working-class organization and action. In general, the American and Soviet papers reflect the quite different ways that scholars in the two societies examine and analyze comparable phenomena. The Americans tend to be more historical and to focus on

volitional activity among working people. The Soviets concentrate on present and future tendencies and stress structural factors rather than human ones. To put this another way, the Americans conceive of "consciousness" as a problematic concept, which must be treated in an open-ended manner, while the Soviets tend to see "consciousness" as a reflexive response to economic cum technological forces (in the old Marxist formulation, the forces of production determine the relations of production). For a good example of this, see the chapter by Sivachev and Saveli'eva.

As a rule, the American scholars view technological change as a managerial strategy to deskill workers and hence dilute their power at the workplace. The Soviets stress the rising "qualifications" of labor in advanced industrial economies. They see technology as a source of rising unemployment and social-economic crisis in capitalist societies but as a force for greater productivity and higher standards of living in socialist states. As Sivachev and Saveli'eva note, in socialist states technology improves the skills of workers and the material conditions of life, while in capitalist ones it intensifies exploitation, heightens class struggle, and worsens society's contradictions.

But one should note that while the Soviet essayists stress unemployment and crisis in contemporary capitalist states, they do *not* expect or prophesy anything that might be called "the final crisis" of capitalism. Several times burned by false prophesies in the past, they are now more cautious, even suggesting that innovations in "state monopoly capitalism" (what they hypothesize as the system that resolved the crisis caused by the Great Depression of the 1930's) might temporarily ameliorate the current malaise of capitalism. (On this theme see especially the chapter by A. Gaĭkin.) The American scholars, as Andrew Walder's article on the People's Republic of China illustrates, believe that economic growth and technological change produce grave problems for socialist as well as capitalist states and that socialist economies merit equally critical scrutiny.

Their very diversity renders it extremely difficult to offer a simple summary of the questions raised and the hypotheses suggested by the American essays. Mary Nolan, for example, asks how what she characterizes as the "second industrial revolution" in Wilhelmine Germany affected the behavior of different sorts of workers and endowed German Social Democracy with its singular mode of behavior. Especially sensitive to German workers' different occupational, demo-

graphic, and ethno-religious backgrounds, Nolan offers one possible explanation for the political paralysis of the German Left in the period preceding the First World War. Heather Hogan examines a comparable development in a quite different historical setting—the process of technological change (Taylorization) in the metal trades of Romanov Russia. Like Nolan, sensitive to the different cultural strains among St. Petersburgh metal workers, Hogan analyzes how plant managers sought simultaneously to contain working-class discontent and to fashion a disciplined, modern work force. She discovers vastly different uses of "scientific management" by state bureaucrats and private entrepreneurs.

Sanford Jacoby and Robert Thomas are both concerned with the factors that result either in labor-capital cooperation on the factory floor or lead to its disintegration. Although Jacoby examines the Second World War experience in the U.S. and Thomas compares the contemporary U.S. and Japanese automobile industries, both reach comparable conclusions. They see labor-capital cooperation largely as a response to economic crisis in which capital seeks to reduce labor costs and workers strive to defend wage and employment levels. Both thus assert that class struggle remains an inescapable reality on the shop floor. Joan Smith, too, analyzes change in the advanced capitalist world, in her case, the contemporary U.S. She asks how and why technological change and the needs of capital have drawn increasing numbers of women into the wage-labor force yet left them still with the least desirable jobs and mired in poverty. She also analyzes why in advanced capitalist societies the provision of services becomes more important than the production of commodities and results in the rising employment ot part-time workers.

By contrast, Charles Bergquist and Andrew Walder look at less developed regions of the world. Bergquist suggests that the history of workers in Latin America must be viewed from a perspective different from that of workers in the developed capitalist world. He posits his own model, in which the export structure of Latin American national economies shapes the behavior of workers, makes rural and extractive laborers as vital to history as industrial workers, and accounts for the different labor histories of such nations as Argentina, Chile, Colombia, and Venezuela. Walder examines how economic development and growth in a less developed socialist state—the People's Republic of China—has produced a segmented labor force, one with wide disparities

in wage rates, job security, and life chances. He asks whether or not socialism creates its own forms of inequality.

The chapters by Ponamarev, Timofeev, Galkin, and Mikhailov stress how the new technology of microcomputers and robotization has caused mass unemployment and social crisis in the capitalist world. They especially stress how the process has left new entrants to the job market and especially young people with meager employment prospects for today and tomorrow. Yet, bleak as is their perspective on the capitalist world and harsh as is their indictment of current Western economic policies, they all allow for the possibility, even likelihood, that the present crisis will be partly resolved by state action through further refinements in the practices of what they characterize as "state monopoly capitalism." Professor Timofeev also refers to the research by Soviet social scientists on the contemporary "crisis in capitalism" currently being pursued in his country.

Finally, the chapter by Sivachev and Saveli'eva discusses a totally new subject—Soviet historiography on American labor. We have included this essay for several reasons. First, it is the only truly historical one among the Soviet essays. Secondly, it may prove quite useful to those Western scholars unfamiliar with Soviet scholarship on U.S. labor history, for it spells out how Soviet histories of American labor differ from what Sivachev and Saveli'eva describe as "bourgeois" U.S. approaches. They also recognize that, while the "technological-scientific revolution" has accelerated the pace of proletarianization, it has also made the working class in the advanced capitalist societies a more complex and diverse social formation. Thirdly, and perhaps most important, before his untimely death in 1983, Professor Sivachev was the dean of Soviet historians of U.S. history and at Moscow State University, and elsewhere in the Soviet Union had done more than anyone else of his generation to advance the study of North American history in the Soviet Union. It is only fitting that this collection include an essay by Sivachev.

**Melvyn Dubofsky**

# 1

# *THE SCIENTIFIC-TECHNOLOGICAL REVOLUTION AND CONTRADICTIONS OF CAPITALISM*

**B. N. Ponomarev**

The content of a scientific-technological revolution can be roughly determined as follows:

—a radical transformation of the role played by science in the economy of society, and the transformation of science into a direct production force;
—radical changes in the technology of production—principally new sources of energy, raw materials, and automation—which change the character of labor and the position of man in the production process;
—the development of cybernetics, contributing to the increasing productivity of mental labor and creating a material and technological basis for scientific organization of the management of social processes;
—fundamental changes in the role played by the scientific-technological sphere in all human activities.

The scientific-technological revolution represents an integral social process, so its characteristics cannot be described only in terms of changes taking place in productive forces. Of crucial importance is the question of the class and social substance of this process, the motives for scientific-technological development, and the character of the utilization of its achievements in various social conditions.

The industrial revolution of the eighteenth and nineteenth centuries and subsequent scientific-technological progress at that time represented a form of the development of productive forces in bourgeois society. The monopoly of capitalism in the scientific-technological sphere has by now been eliminated, and in our contemporary epoch the

scientific-technological revolution represents one of the areas of competition and historical struggle taking place between socialism and capitalism.

The main effects of the scientific-technological revolution in the economy, social relations, and politics of capitalism might briefly be defined as these:

—scientific-technological development deliberately guided by the aims of retaining capital's dominant position in the world, multiplying its superprofits, and further refining the exploitation of the working people;
—an unprecedented concentration of production and capital, and the ensuing emergence and rapid growth of the role played by monopoly of a new type—the transnational monopoly complex;
—acceleration of the internationalization of production and exchange through economic integration, the emergence of new forms of the international division of labor, and further specialization of production;
—increasingly uneven development of capitalism and further sharpening of rivalry between the three centers: the U.S.A., Japan, and Western Europe;
—a widening of the economic gap between highly developed capitalist countries and newly free countries, and the further spread of neocolonialist exploitation;
—a revolution in the means of warfare, one of particular importance, for it puts the key question of international relations—that of war and peace—on a new plane;
—aggravation of the problem of man's interaction with nature, resulting in acute ecological crises and shortages in the supplies of raw materials, energy, and food under capitalism;
—as a result of all this, exacerbation of contradiction between the social character of production and the capitalist form of appropriation, and hence the subsequent growth of all social antagonisms, notably that between labor and capital.

The waste of resources, belonging to the society, by the militaristic machine taking place on a vast scale, is the most apparent and graphic example of historically obsolete capitalism. One sees here a striking contrast between the opportunities offered by the achievements of scientific-technological revolution and the dangers inherent in their use under the capitalist system.

When speaking of the interconnection between scientific-technological process in capitalist countries and militarism, it is only right to recall

that the dependence between warcraft and development of productive forces had been brilliantly shown by Marx and by Engels, who wrote in his *Anti-Dühring,*

> Nothing is more dependent on economic prerequisites than precisely army and navy. . . . Armament, composition, organisation, tactics and strategy depend above all on the stage reached at the time in production and on communications.

At the same time Engels also stressed the other aspect of this interconnection, namely the priority held by the "mankilling," as he put it, industry in antagonistic societies resulting in militaristic perversion of the scientific-technological process.

For many years some Western ideologues of the military-industrial complex maintained that the growth of military production exerted a stabilizing influence on the economy—that it sustained employment and contributed to the expansion of the market. There was even a special theory that tried to justify the "prosperity through armaments" slogan. The facts showed, however, that these contentions were entirely baseless: In the final analysis, militarization inhibited the growth of production and resulted in depressing the living standards of working masses.

This became abundantly clear during the last ten years, highlighted as they were by a sharp aggravation of the crisis of capitalism. The crisis of the 1970's struck the highly developed state-monopoly economy. Its unusual character showed that the economic contradictions inherent in the capitalist mode of production had acquired extraordinary intensity. Capitalist economy had not yet managed to recover from this crisis when, in the beginning of the 1980's, it began to enter a new one. At the same time there emerged and developed, precisely on the basis of scientific-technological revolution, an entire complex of essentially novel economic phenomena in capitalist society which, undoubtedly, will aggravate already existing contradictions and complicate its situation.

Marxists in various countries have to turn back to this question again and again, because the present economic situation has evidently ushered in a very long period of substantial deterioration as compared with the preceding 25 years.

At present we witness a relatively low rate of economic growth, mass unemployment, inflation, sluggish investment, stagnant purchasing power, considerable underloading of production facilities and a huge, ever-increasing balance of payment, trade, and state budget deficits.

Neither the cyclical crises nor the subsequent periods of some recovery and production growth could solve the contradictions that have accumulated during the preceding period of especially rapid introduction of the achievements of the scientific-technological revolution in production. Moreover, they could not be resolved by the usual capitalist methods, because many of them, closely connected with scientific-technological revolution, go beyond the framework of the cycle; they are of a long-term, chronic, structural, rather than periodic, character. This applies to the fuel, energy, raw materials, food, monetary, and ecological crises, and also to worldwide sectoral crises in the steel industry, shipbuilding, and automobiles.

Thus the interweaving, in an intricate tangle, of many acute crisis processes of various natures—cyclic and chronic, conjunctural and structural, domestic and international—is characteristic of a new period in the development of capitalist economy in the conditions of the scientific-technological revolution.

First and foremost is a new phenomenon: the combination of mass unemployment and inflation. In the past unemployment, while growing during the periods of crises of overproduction, usually was significantly reduced during the phase of recovery and subsequent rise in production. At present the army of unemployed, which emerged in developed capitalist countries in the first half of the 1970's, not only was not reduced but, on the contrary, greatly increased.

In the past the inflationary growth of prices usually accompanied capitalism during the years of relatively rapid growth of production, while during crises, as a rule, prices went down. The only exceptions were the periods following particularly severe postwar economic dislocations. At present prices continue to rise during the period of economic stagnation.

Such a situation resulted in the crisis of economic policy as well. Bourgeois economic thought has reached an impasse. During the crisis of the 1930's it put forward the reformist program of struggle against unemployment and other social flaws, but at present such a program is, to all intents and purposes, nonexistent.

The fact that the main bearers of the scientific-technological potential of contemporary capitalism are more and more becoming the so-called

transnational corporations is particularly negative from the point of view of popular masses and increasingly dangerous from the point of view of international relations. Transnationals also become an additional factor aggravating crisis processes. Their vast economic might and arbitrary approach embracing dozens of countries time and again collide even with the policies of bourgeois states, often violate the established rules of economic regulation, and result in unexpected crises in international production and trade links, particularly in the financial sphere. For instance, the speculative financial operations of transnational corporations played a significant role in the development of acute crises of the British pound, French franc, and U.S. dollar.

Transnational super-monopolies represent an ever growing threat to the economic self-sufficiency and national independence of even developed capitalist countries, to say nothing of less developed ones. They also represent the vanguard of contemporary neo-colonialism. In spite of the fact that during the last few years a considerable share of foreign enterprises engaged in the production of raw materials in newly free countries have been nationalized, the positions of international monopolies there are still very strong. They establish close links with the feudal-bureaucratic ruling cliques and, in a number of cases, with the reactionary local bourgeoisie. They provide them with significant amounts of shares, turning them into their junior partners. International monopolistic complexes do their utmost to gain control over the process of industrialization in developing countries in order to use it for their own ends. The removal of the most labor-consuming and material-consuming enterprises, as well as the enterprises polluting the environment, to those developing countries is taking place on a wide scale.

In the conditions of scientific-technological revolution, the already vast gap between the levels of economic development of capitalist and developing countries continues to expand. While during the first few postwar years the ratio of gross output per head of population between them was 1:10, by the mid-1970's it reached 1:13. The industrial energy production in the territories of developing countries does not exceed one-eighth of the corresponding production in industrially developed capitalist states.

Capitalism goes to any length to retain the subordinate position of the former colonial periphery in the system of the international capitalist division of labor. In order to achieve this, international monopolies impart to their subsidiaries located in developing countries the role of specialized enterprises completely dependent technologically

on their parent companies. This kind of "technological neo-colonialism" raises new obstacles on the road to complete liberation.

Scientific-technological progress has always been a factor of unevenness in the economic development of various countries and has served, in the final analysis, as an impulse of various kinds of contradictions. At present capitalist countries are trying to overcome these contradictions, first of all on the road to consolidation of their efforts in the struggle against the forces of socialism, and working class and national liberation movements.

Nevertheless, differences of economic and political interests in various countries and circles in the system of capitalism are ineradicable. At present there is developing a new round in the free-for-all war of currency, trade, and customs. The position of the U.S.A. in the course of this war is becoming weaker. Its superiority in industrial and financial power, which until recently was overwhelming, is noticeably diminishing at present. But still the United States owns the lion's share of foreign investments and the greatest amount of monopolistic profits and superprofits. The U.S.A. remains the leader of the capitalist world, the spearhead of its military might.

One of the consequences of the scientific-technological revolution was unprecedented growth in the consumption of petroleum. This resulted in a sharp aggravation of struggle for oil fields. It is very indicative that, while owning vast resources of petroleum of its own, the United States refrained from exploiting them fully. Moreover, it does its utmost to secure for itself petroleum sources in other countries, interfering in the affairs of the states of the Middle East, Latin America, and other regions. This is the essence of current U.S. oil diplomacy.

We see that contradictions under capitalism are ineradicable. The scientific-technological revolution, while strengthening the unevenness of development, while broadening these contradictions and making them more acute during certain moments, inevitably influences the forms and methods of responses from the ruling circles, from the leaders of the capitalist world. But all their attempts to get rid of these contradictions, and to change the character of the capitalist economy (which is by nature ridden with crises) come to nothing. Despite the fact that an entire intergovernmental system has been set up for the regulation of relations in the capitalist world, including frequent consultations and meetings at the top level, economic shocks and the general crisis of the capitalist system continue with no sign of