

TWO FUTURES FOR THE AMERICAN ECONOMY:
THE ROLE OF ECONOMIC CONVERSION

by Seymour Melman

Professor Emeritus of Industrial Engineering, Columbia University

Capability for converting industrial and allied resources from military to civilian uses is the missing link between reversing the arms race and rebuilding the decayed industrial system and infrastructure of American society.¹

Without economic conversion planning in place throughout the network of military-serving factories, bases and laboratories it is unreasonable to expect that resources removed from military use would be applied efficiently to civilian needs. Indeed, it is altogether sensible to assume that the absence of economic conversion planning could deter possible international agreements and autonomous initiatives to reverse the arms race. That is why this paper presents an assessment of economic and political factors that counter economic conversion planning as against those factors that are favorable to conversion planning.

Economic and Political Factors against Economic Conversion.

The top management of the U.S. military economy centered in the Pentagon has a staff of approximately 120,000 men and women. This management apparatus, in turn, governs the affairs of more than 35,000 prime contracting factories and other facilities in much the same way that the central administrative office of a large multi-division firm dictates policy and production compliance among the managers of subordinate divisions. The state management in the Pentagon, however, has unique properties. Its functional chairman, the Secretary of Defense, is a member of the President's Cabinet, while the President of the United States is functionally the Chairman of the Board. Since the powers and privilege of this enormous management hierarchy are tied to the

¹ Economic conversion is the process of designing and executing the changeover from military to civilian uses of the labor force, factories, machinery laboratories and bases that serve the armed forces. Economic conversion pertains to the actual physical resources used for military purposes.

continued operation of the arms race and its supporting industry, it is reasonable to expect that this state management will continue to oppose every form of conversion planning.

Indeed, as pressures accumulate for economic conversion planning, one may expect the formulation of "false conversion" proposals from the Department of Defense. These will take two forms:

- * First, proposals for dual use of industrial and other facilities.
- * Second, proposals that military research managers of the Defense Advanced Research Project Agency (DARPA) take responsibility for the general development of civilian technology.

The dual use proposal means that civilian work will be introduced factories that have been primarily devoted to military products. One sure effect of this change will be to introduce the military industry pattern of cost-maximizing and product unreliability to civilian work. If this is sustained then the conventional incompetence of military industry will further penetrate the civilian sector and will accentuate non-competitiveness and business failures. The same consequences will emerge from giving DARPA control over the development of advanced technology for civilian products. It is not accidental that in the United States, where 75 percent of the Federal Government's R&D budgets are on military account (approximately \$45 billion in 1986 were devoted to military research). The manufacturing industry in the U.S. operates at dramatically lower efficiencies compared to the less military oriented manufacturing facilities of Germany and Japan.

Top managers of military-industrial firms have been unanimously resistant to preparing capability for competent civilian work. Moving away from the protective cloak of the Pentagon would end the profits and product orders guaranteed by the Pentagon regardless of product quality or product cost.

The Cold War institutions, ranging from mass media editors and staffs to military-oriented departments of political science in American universities, have developed elaborate expertise on strategy and tactics for Cold War operations. This knowledge is their intellectual capital. The Cold War ideologists are reluctant to see their intellectual capital rendered obsolete by an economic conversion policy.

In the Congress of the United States many Members have become accustomed to participating in a form of military Keynesianism. They have developed the connections and the skills for functioning as marketing managers for military-serving firms, bases and laboratories in their districts and states. As long as military spending remained high and even increased, these skills were politically serviceable as they enabled Members of Congress to bring jobs and incomes to their constituents. For many Members and their staffs, economic conversion policy appears as a disruption of established routines, reliable practices and reliable votes.

Finally, for many Americans in all walks of life, there is a downright fear of peace because of the unknown conditions of that state of politics and economy. That fear is fortified so long as economic conversion planning is completely absent. That absence seems to justify the expectation that without the Pentagon's jobs and dollars no alternative livelihood would be possible.

These considerations that militate against economic conversion planning are starkly challenged by the other political and economic trends — namely the Soviet Union's political reforms and America's economic decline. For there are, at the same time, an array of developments that demand economic conversion planning.

Economic and Political Factors for Economic Conversion.

The industrial system of the United States is in manifest decay. The characteristic discussion of the American economy proceeds in terms of "competitiveness". The reality includes the disappearance of major economic parts and even entire industries. For example) from 1973 to 1983 one-third of the metalworking machine tools installed in U.S. industry disappeared. Factories closed, machinery was scrapped and not replaced. The background of this industrial decay is the preemption of every sort of industrial resource for military use. Thus about thirty percent of the country's engineers and scientists are active participants in military industry and the supporting research functions. All this is paid for via the budgets of the Department of Defense which comprise the largest finance capital funds in the American economy. From 1951 to the present day the new budgeted funds of the Department of Defense have each year exceeded the combined net profits of all U.S. corporations.

The decay of U.S. manufacturing has produced an unprecedented economic problem. Until recently it was understood everywhere that the main aggregate economic problem of industrial capitalism was the fluctuation of market demand. Market demand has held the attention of economists since the depression in the 1930's. Economic policy in the U.S. has focused on government spending as a means to stabilize and restore purchasing power, employment and, thereby, market demand. However, the problem of fluctuation in market demand has been superceded by a new problem: competence in production. This is demonstrated by growing dependence on imports for both "ordinary" and hi-tech goods. Never before now was there doubt as to the capability of U.S. firms, even while paying the highest wages in the world, to produce goods of good quality and at attractive prices.

Behind the new problem of production competence there is the transformation of the interior working of U.S. industry from a pattern of cost-minimizing towards cost-maximizing. The pattern of cost-maximizing has long been established in the military economy. What is new is the prevalence of cost-maximizing in the civilian sphere, notably in the industries that produce machinery. This is of critical importance for the productivity of the U.S. economy as a whole as the availability of inexpensive machinery has long been a primary factor in the dynamics that spur additional productivity growth.

Thus, as wages to American workers advanced more rapidly than prices of machinery, users of machinery were strongly spurred to buy and use the new equipment. Increased productivity was the automatic consequence of this mechanism. All this was rendered possible as the machinery-producing firms themselves operated internally to maximize efficiency and minimize their own costs.

The accompanying table discloses the dramatic contrast between the Japanese and the U.S. economy with respect to changes in prices of machinery as compared to changes in wages to industrial workers. In Japan from 1975 to 1984, average hourly earnings of industrial workers increased 51 percent. But these wage increases were offset by all manner of efficiencies in the machinery-producing industries so that the prices of new machinery increased only seven percent. This is the classic pattern of a cost-minimizing economy, and it is the pattern that was once

characteristic in the United States. (See S. Melman, Dynamic Factors in Industrial Productivity, John Wiley, New York, 1956).

The American data now show the typical pattern of the cost-maximizing economy as prices of machinery increased more rapidly than wages to industrial workers. In the U.S. from 1975 to 1984, average hourly earnings of industrial workers increased 75 percent, but the prices of new machinery increased 82 percent. So in U.S. industries the purchase and use of new machinery was deterred. These data disclose a core difference between the operation of U.S. and Japanese industry during the 1970's and 1980's.

Cost-Minimizing and Cost-Maximizing in Machinery
Production, 1975-1984

	% change in average hourly earnings of industrial workers	% change in machinery prices
Japan	+51	+7
U.S.	+75	+82

Other Economic Crises.

The infrastructure of the American economy, there to support a modern industrial system, has fallen into gross disrepair. This refers to the array of roads, waterworks, sewer systems, the housing stock, public schools, the condition of parks, health services, libraries, et cetera. Repairing the infrastructure of the American economy will require an outlay in excess of \$3,000 billions. Such an outlay is unattainable given the recent composition of federal spending in which half of the administrative budget is on military account.

Government economists and many others are beset with the consequences of the unfavorable balance of trade for the United States, which casts doubt on the value of the American dollar. The government deficit is now in crisis condition requiring restraint on expenditures and

even budget cuts. Thus federal administrations long committed to maintaining and expanding the military enterprise have turned to budget cutting, as in the closing of bases and the elimination of selected military contracts, in order to hold down expenditures.

A direct consequence of this budget paring, however modest at the close of the Reagan Administration, and now in the Bush Administration, is an array of layoffs in military industry and bases. The accompanying table shows recent and prospective layoffs in the military industry network of California, the flagship state of the military economy. To this of course must be added the layoffs known to be in process in other places in the country. The prospects of the Grumman Corporation on Eastern Long Island is a case in point. Cutbacks in the production of the F-14 and other military aircraft entail layoffs of 12,000 employees. That does not take into account the consequences of such cutbacks for sub-contractors that cluster around the Grumman enterprise. 2

Finally, I call attention to a decisive bit of evidence for defining the distressed condition of the American political economy. The New York Times of February 19, 1989, in its business pages, carried the following account:

The formidable chairman of Nomura Securities International, Masaaki Kurokawa, was expressing skepticism in a conversation about whether American political leaders would take action on the trade and budget deficits. The badly needed solutions, he said, might have to come from Japan.

What did he have in mind? Stressing that he was just brainstorming out loud, Mr. Kurokawa proposed allowing the yen to strengthen to 100 to the dollar, making it difficult for Japanese companies to export profitably to the American market.

Then came the quid-pro-quo: California would be turned into a joint economic zone to be shared by both countries. Millions of Japanese workers would be relocated to the high-tech factories of this brave new state, built on land dirt cheap by the standards of Japan's astronomical real estate market. If the plan worked, the whole West Coast could be turned into a Japanese-American condominium.

The meaning of this conjectural proposal by the chief officer of the Nomura firm should not be misunderstood. It is an American, not a Japanese problem. In this view the

2 Since December, 1988, the Soviet government has proposed and has been open to proposals for major cutbacks in its armed forces and the supporting industrial system. On June 8, 1989 a dispatch from Moscow in the New York Times reports that cuts of as much as one-third and more in the armed forces of the Soviet Union are in prospect. These are far greater reductions than the fourteen percent budget reductions hitherto promised by Mr. Gorbachev.

MILITARY LAYOFFS & CONVERSION ALTERNATIVES IN CALIFORNIA

by
Jonathan Feldman, Program Director National
Commission for Economic Conversion & Disarmament

Recent Defense Production Layoffs

Hughes Aircraft Company has cut its work force by 5 percent to 78,000 since 1985 according to a January report. A May report described projected cutbacks of 1,500 from the B-2 workforce. A June report described projected cutbacks of 6,000 employees worldwide over the next six months.

Litton Industries has cut employment at its Guidance and Control Division in the San Fernando Valley by 10 percent in the past year according to a May report.

Rockwell International Corporation employed 40,000 Californians two years ago , but now employs 35,000 according to a January report.

Northrop had dropped 2,000 jobs on its B-2 stealth bomber program in Pico Rivera and Palmdale in the last two years and expects to continue laying off workers according to a May report.

Lockheed began laying 1,500 production workers in southern California as it completed production of C-5B cargo planes according to a February 1988 report.

SOURCES: *The Wall Street Journal*, February 8, 1988 as cited in the Center for Economic Conversion Compilation, May 1988; Richard D. Stevenson, "California's 6-Year Boom May Be Over," *The New York Times*, January 11, 1989; Ralph Vartabedian, "Weapons Makers Face Protracted Downturn," *The Los Angeles Times*, May 4, 1989; Phone Interview with Peter Aseritis, First Boston Corporation, June 7, 1989.

Expected Base Closure Layoffs in California

Mather Air Force Base	1,988 military; 2,133 civilian
Presidio	2,140 military; 3,150 civilian
Hunters Point Naval Station	4,132 military; 93 civilian
George Air Force Base	4,852 military; 506 civilian
Norton Air Force Base	4,520 military; 2,133 civilian

SOURCE: *The New York Times*, December 30, 1988.

United States has nothing left to sell for the billions of U.S. dollars that the Japanese now hold except the United States itself. And so what began as a short-term accommodation—borrowing in order to maintain U.S. military outlays and their accompanying short-term income and job effects— has been transformed into an altogether different problem. What is at stake now is the sovereignty of the United States itself.

Make no mistake as to what this means* Which Members of Congress, for example, would care to take responsibility for a committee to negotiate the price of California, and the price of the West Coast?

For Competent Economic Conversion Planning.

Two policy priorities and eleven defined criteria lie behind the proposals for economic conversion planning presented by Representative Ted Weiss. The policy priorities are:

- * Decentralization.
- * No subsidy to the former military-serving firms.

The idea of decentralization refers to the strong preference that planning for a civilian future by military-serving factories, bases and laboratories be done by the people on the spot who are most knowledgeable with respect to their capabilities, their resources and their limitations. This means reliance on locally-based alternative use committees to involve management and labor that have full responsibility and authority for planning and carrying-out future civilian activity once the Pentagon contracting and allied work has been completed. This policy implies a strong preference against centralized, remote control of conversion planning and conversion operations.

The policy of no subsidy to the firms serving the Pentagon means removing a primary incentive to cost-maximizing that has long prevailed. Removing that incentive is an indispensable requirement for replacing cost-maximizing with the classic efficiencies of cost-minimizing rules of operation.

In addition to these baseline policies, the Weiss proposal fulfills eleven criteria. These are listed in the first column of the accompanying table. To show the differences between the

legislative proposals from Representative Weiss and those that have come from Representatives Gejdenson and Mavroules, I show in the accompanying table the contrast in the composition of these bills. The Weiss proposal is the more comprehensive of the three.

Only the Weiss proposal includes elements that are indispensable for competent conversion planning. The alternative use committee criteria from Representative Weiss includes provision for this planning group to have full access to the data of the enterprise. Without such access, competent planning is foreclosed. Only the Weiss proposal includes provision for advance planning for conversion from military to civilian economy. Such advance planning is indispensable for a competent changeover to civilian work. Without it conversion is rendered unfeasible.

In a statement to this committee on June 28, 1988 I discussed some of the critical meanings of these eleven criteria. The discussion of these essential features for competent economic conversion planning is further detailed in the accompanying paper on "Criteria for Economic Conversion Legislation", by Jonathan Feldman, Robert Krinsky and Seymour Melman (Briefing Paper Four, National Commission for Economic Conversion and Disarmament, December, 1988. Box 15025 Washington, DC, 20003).

Two Futures for the U.S. Economy.

If the developments of the last decade in industrial economy continue, then the United States will shortly attain the status of a third-rate industrial economy. I have carefully defined the conditions of a first rate industrial economy (see S. Melman, The Demilitarized Society; Disarmament and Conversion, Harvest House, Montreal, 1988, pp. 1-6). By the late 1980s, the United States failed each of the seven criteria for a first-rate industrial economy, and thereby must be understood to be a second rate economy. The core criterion of this failure was the low level of U.S. productivity growth compared with other industrialized countries.

As the processes of decay continue, the conditions of a third-rate industrial economy will be reached: there will be a lack of resources needed to restore industrial and infrastructure incompetence. That condition will be heralded by the decline in the competence of machinery-

producing industries. Thereby the U.S. will, like an underdeveloped country, have to depend on importation of capital goods and technical talent from more advanced industrialized countries. (The forthcoming results of the U.S. Census of Manufacturers for 1987 will show the conditions of decline in numerous machinery-producing industries. The machine tool industry of the United States will have lost much of its production capacity.)

An altogether different economic future can be defined for the United States. I begin by presenting a set of estimates of required new funding for repairing the infrastructure of the United States. These estimates and the sources from which they are derived are shown in the accompanying table.

This Save American budget, incomplete though it is, is illustrative of what is needed to move American society away from the path of continued economic and political decay. How could such an ambitious civilian-productive effort be financed? Here I present part two of the Save America budget. This is a list of military budget reductions that are feasible by the autonomous initiative of the government of the United States—without international agreements.

Neither all nor part of the military efficiency budget reductions enumerated here are politically feasible in the absence of economic conversion planning. For without this planning the prospect of such cuts would mean disruption in the lives of millions of people, and that would generate a sizeable backlash on the Congress and the Executive against making such budget reductions. That is precisely why, at the outset of this paper, I designated economic conversion as the missing link between arms reduction and economic redevelopment in the United States.

The political prospect for carrying out autonomous military reductions, as well as those mandated by international disarmament agreements, is clearly remote in the absence of economic conversion planning. By contrast, the perspective would be altogether different if the principal contracting firms, military bases and laboratories have in hand blueprint-ready plans for civilian work.

The proposals from Representative Weiss are precisely oriented to generating the necessary kind of blueprint-ready plans as well as the series of accompanying steps (income

maintenance, relocation allowances, occupational retraining, etc.) that would smooth the changeover to civilian work.

The presence of this conversion capability would, in turn, give confidence to American negotiators in the pursuit of mutual agreements for arms reduction, thereby opening the way to an exit from the long Cold War.

THE SAVE AMERICA BUDGET:

Estimated Annual Federal Outlays Needed for Selected Public Works and Services Environmental Repair

\$17.5 billion—First year of a ten-year program for cleaning up radioactive waste and Atomic Bomb plants. [1]

\$10.0 billion—First year of a ten-year program for cleaning up toxic wastes costing \$100 billion according to Office of Technological Assessment estimates.[2]

\$6 billion—Annual cost to cut sulfur dioxide emissions by 8-12 million tons/year in the United States to combat acid rain.[3]

Infrastructure

\$26 billion—The difference between needs and available revenues required for repair of roads, bridges, water and sewer systems from 1989 to 2000. [4]

\$10 billion—First year of a ten year program costing \$100 billion to prepare the nation's rail system for electric power propulsion.[5]

\$30 billion—One year of Department of Education spending for public education with a 50% increase in expenditures over and above current annual allocations by the federal government [6]

\$10 billion—Annual cost of a full preschool education entitlement, with adequate salaries for teaching staff.[7]

\$2.2 billion—A restoration of President Bush's proposed cuts from the compensatory education program.[8]

\$4.4 billion—An addition to the Head Start Program so that all eligible children could be served-P]

\$1.0 billion—To restore Bush's proposed cut of financial assistance to needy students. [10]

\$8.0 billion—The first year of a ten year program to address deferred maintenance at colleges and universities. [11]

\$1.1 billion—The first year cost of a two-year program to purchase 77,000 school buses needed, each costing \$30,000. [12]

Housing

\$30 billion—The annual cost of a comprehensive housing program to address the housing shortage and homelessness problem.[13]

Health

\$5.1 billion—The annual cost of providing pre-natal care for the poorest mothers. [14]

\$.1 billion—The first year cost of a five year program to construct waters and sewers for 100,000 residents along the Texas/Mexico border.[15]

\$1.0 billion—Restoration of proposed Bush cuts in supplemental Social Security assistance for the blind, elderly and disabled.[16]

\$9.6 billion—Restoration in the proposed Bush cut in Aid for Dependent Children.[17]

\$7.3 billion—Cost of providing food stamps for persons eligible but not receiving such assistance. [18]

Total Estimated Cost of A Save America Budget: \$173.3 billion.

NOTES: Calculations are derived from the following source material:

1. *The New York Times*, January 6, 1989.
2. *The New York Times*, March 10, 1985.
3. Michael Rentier, "Enhancing Global Security," in *Suite of the World: 1989* (New York: W. W. Norton & Company, Inc., 1989).
4. U.S. Congress, Joint Economic Committee, *Hard Choices*, February 25, 1984.
5. Estimate prepared by Professor John E. Ullman, Hofstra University, Hempstead, New York.
6. A. Bastian, N. Fruchter, C. Green, "Reconstructing Education," in M. Raskin, C. Hartman, eds., *Winning America*, (Boston: South End Press, 1988), p. 11.
7. *Ibid.*, p. 204.
8. Center on Budget and Policy Priorities, "The Bush Budget," February 17, 1989, p. 10.
9. *TheNewYorkTimes*, Editorial, October 18, 1987.
10. Center on Budget and Policy Priorities, *op. cit.*, p. 10.
11. *The New York Times*, October 13, 1988.
12. *The New York Times*, March 29, 1989; National Transportation Safety Board.
13. C. Hartman, "Decent Affordable Housing for All," in *Winning America*, *op. cit.*, p. 197.
14. *The New York Times*, Editorial, September 27, 1988.
15. *The New York Times*, December 3, 1988.
16. Center for Budget and Policy Priorities, *op. cit.*, p. 5.
17. *Idem.*
18. *The New York Times*, March 23, 1988.

John Lehman, "A New Blueprint for U.S. Forces," *The New York Times*, March 26, 1989:

\$45 billion—A maximum estimate of the defense costs that could be reduced by reshaping the personnel of U.S. Armed Forces to make one third of them "ready reserves."

Stan Norris, Table C: Nuclear Weapons: FY 1982-1989, in "Nuclear Notebook," *Bulletin of the Atomic Scientists*, Vol. 44, No. 10, December 1988:

\$43 billion—Savings from reductions in nuclear war preparation. This source estimates that the direct costs of procuring and maintaining long range nuclear weapons, plus the indirect costs of preparing for nuclear war, for 1989 totals \$57.5 billion. A 75% reduction in this spending would amount to savings of \$43 billion and would leave multiple overkill capacity in place.

"Effective Defense for Less Money," News Release #160, Center for Defense Information, Washington, D.C., March 15, 1989:

\$4.9 billion—Savings in 1990 from termination of the research/development of space-based components of the SDI program. This proposal would continue research only for land-based ABM system consistent with the ABM Treaty.

\$3.4 billion—Savings in 1990 from termination of the Stealth bomber program.

\$2.9 billion—Savings in 1990 from termination of the C-17 airlift aircraft program.

\$2.0 billion—Savings in 1990 from suspension of the MX/Midgetman programs until rational mobile missile requirements are defined.

\$1.6 billion—Savings in 1990 from termination of the V-22 Osprey aircraft program.

\$1.5 billion—Savings in 1990 from ending overseas military construction and the U.S. contribution to NATO construction projects.

\$.4 billion—Savings in 1990 from reduction in DOD civilian employees by 5% per year.

\$.3 billion—Savings in 1990 from reduction of troop levels overseas by 5% per year.

\$.1 billion—Savings in 1990 from suspension of the manufacture of new chemical weapons.

Congressional Budget Office, *Reducing the Deficit: Spending and Revenue Options*, (Washington, D.C.: U.S. Government Printing Office, February 1989):

\$3.2 billion—Savings in 1990 if U.S. allies increased their spending for U.S. forces stationed

overseas.

\$1.7 billion—Savings in 1990 from cancellation of further development and procurement of the F-15 fighter plane.

\$1.4 billion—Savings in 1990 from slowing procurement of DDG-51 Guided-Missile Destroyers.

\$1.2 billion—Savings in 1990 from cancellation of the Rail MX basing system.

\$.5 billion—Savings in 1990 by retiring the two oldest aircraft carriers.

\$.38 billion—Savings in 1990 from cancellation of all future procurement of Phoenix Missiles.

\$.12 billion-Savings in 1990 from slowing funding for the National Aerospace plane.

\$.1 billion-Savings in 1990 from canceling all programs for manufacturing binary (nerve gas) munitions.

Sebert Costello, Assistant Secretary of Defense for procurement. (See report by Leonard Silk in the *New York Times*, April 28, 1989.)

\$50 billion—savings from elimination of waste in Pentagon procurement.

Total savings created by the military reductions enumerated above: