## Introduction: America's Permanent War Economy

### The Pentagon Loses $2,300,000,000,000

On September 10th, 2001, Secretary of Defense Donald H. Rumsfeld made a stunning announcement. "…we cannot track $2.3 trillion in transactions …" [1] In the realm of business, with its emphasis on profit maximizing, such looseness in accounting would either be evidence of monumental incompetence or deliberate falsification.

But not in the Pentagon. For there, the dominant measure of success is gain in power, the ability to control the behavior of groups of people, even whole nations. When it comes to maximizing power, monetary efficiency often comes second. Thus it appears to be normal for Pentagon managers to treat the inability to match payments made with goods or services received as a mere inconvenience that may be brushed off as so much "budget dust".* Magnitudes such as 2.3 trillion, while ordinary in astronomy are unusual in economy. Note that $2.3 trillion exceeds the net value of the entire plant and equipment of U.S. manufacturing industries, currently measured as $1.8 trillion. [2]

The Pentagon managers' loss of $2.3 trillion has a far greater significance than as a mere exhibition of trashy administration. The U.S. is now in the grip of a highly militarized form of state-capitalism that was gradually installed during the half century of Cold War (as I will discuss in Chapters 1 & 2). Without formal announcement or debate, this development has spurred the deindustrialization of the U.S. (see Chapter 3).

This book aims to present an alternative.

In the process, I will draw on a variety of different sources including my own work in order to give readers access to an alternative view and to provide them with resources for change.

Contrary to the claims of the state managers, this combination of a permanent war economy and the deindustrialization of the U.S. has had disastrous consequences. Experience shows we can't have guns and butter; worse still, the nation's infrastructure is in disastrous shape. Fortunately, we can measure the cost.

Thanks to the initiative of the American Society of Civil Engineers we have a *Report Card for America's Infrastructure*. According to the ASCE, the current condition of U.S. infrastructure warrants a grade of D+. Achieving grade A infrastructure performance in the United States will require reconstruction of many significant areas. These include: roads; bridges; transit facilities; aviation; schools; drinking water; wastewater disposal; dams; solid and hazardous waste disposal; navigable waterways; energy supply. To round out the cost of a national effort to modernize and upgrade U.S. infrastructure I have added provision for replacing several million "worst-case" housing units; and the estimated cost of the electrification of U.S. railroads. Ironically, the total estimated cost of these improvement projects also equals $2.3 trillion. This brief discussion defines a great choice: Where should we allocate the great masses of wealth—to the permanent war economy, or to the reconstruction of American life? While this book argues for the latter, its central task is to offer ways to reverse the decay. It will show how an orderly process of modernization in infrastructure and related industries – as outlined by the ASCE – might well create between

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* Veterans of Pentagon administration confirm major points made by Secretary Rumsfeld in his Sept. 10, 2001 address on Pentagon accounting, including understanding that money paid out by the Pentagon is good for the economy.

one and four million new, productive jobs, and give fresh life to the great manufacturing industries of the U.S. (For details see Dr. Greg Bishak's report in Appendix A).

Our leaders show little interest in change.

Upon taking office (in 2000) the George W. Bush administration redirected billions of dollars to fund an ambitious effort to extend U.S. hegemony. This campaign for world hegemony for the United States, as displayed in Iraq, Afghanistan, and preparations for potential wars, has consumed resources urgently needed in the U.S. civilian economy. Meanwhile, industrial decay in the U.S. and major job losses for Americans have been accelerating as American managers – eager to garner the financial benefits of Chinese wages ranging from $60 to $140 a month – transfer production lines from their U.S. bases to China. On the current path, what will be left for young men and women other than to enroll in one of the Pentagon's formations?

The costly experience that yielded Secretary Rumsfeld's loss of $2.3 trillion also includes the costs of the technological feats of WWII to 2001. These included production of large complex aircraft as though they were Model-T's, while researching and erecting the military industrial (nuclear) establishment with vast physical assets, and a workforce that established it as by far the largest single enterprise in the United States. With those understandings, Americans could see losing or otherwise misplacing even $2.3 trillion without "batting an eyelash".

High level discussion among corporate and government chiefs regarding the continuing management of the U.S. war economy began as Hitler's armies were approaching military defeat in 1944. Leading business managers and senior government officials began to discuss a central problem of the post-war economy. The United States alone possessed an immense industrial system that was untouched by military destruction and therefore would be the final strategic location for producing and exporting the consumer and capital goods required for recovery in the rest of the world. Accordingly, the *Wall Street Journal* (January 6th, 1944) reported on the thinking of Vice Chairman Batt of the government's War Production Board. He urged the adoption of a plan for balancing the expected rush of machinery and other goods coming out of the United States.

The rest of the world, Batt suggested, could pay for American exports of goods and finance capital by making available to the United States large quantities of raw materials. These, in turn, could be "mothballed" – removed from the marketplace by placing them in buried stockpiles. Thereby, a strategic economic problem could be "solved" while affording the United States a stockpile of raw materials, to help cope with future national military emergencies.

In a January 1944 speech to the Army Ordnance Association, Charles E. Wilson, president of the General Electric Corporation, proposed an alliance of business and the military in a permanent war economy. This was proposed as "a continuing program and not the creature of an emergency… The program must be insured and supported by the Congress in the beginning through resolution … later, by regularly scheduled and continuing appropriations. Industry's role in this program is to respond and cooperate … Let us make this 3-way [executive branch, congress and industry] partnership permanent and workable, not just an arrangement of momentary convenience."[3]

Recall that within the U.S. government the international political perspective at the close of World War II was dominated by the prospect of a worldwide competition between the United States and the Soviet Union. No long wait was required before the relentless competition that came to be called the Cold War was set in motion.

There is no question that the appearance of nuclear military capability in the Soviet Union, followed swiftly by Soviet invention of the hydrogen bomb, had a decisive effect in blurring a traditional "holding at arm's length" attitude among certain sectors of American business towards the federal government. The political and military aspects of the great contest between the U.S. government and Stalin's Russia bound the senior managers of the U.S. government with top corporate management of the United States.

A Permanent War Economy was no longer a speculation or merely a plan for smoothing U.S. economic relations with many countries in the world. The Permanent War Economy came to be the key strategy for waging the Cold War.

America's government and corporate managers joined in a favorable assessment of the post-World War II economy. From right to left the main verdict was that the U.S. economy could sustain both Guns and Butter. That was the verdict of both the government's National Security Council (1950) and the Marxist economist Paul Baran.[*]

## PRODUCTIVE AND PARASITIC GROWTH: EISENHOWER'S ASSESSMENT

A different perspective on the subject of military spending was pronounced by President Dwight D. Eisenhower in a 1953 address to the American Society of Newspaper Editors. He stated that:

> Every gun that is made, every warship launched, every rocket fired signifies, in the final sense, a theft from those who hunger and are not fed, those who are cold and are not clothed.
> This world in arms is not spending money alone. It is spending the sweat of its laborers, the genius of its scientists, the hopes of its children.
> The cost of one modern heavy bomber is this: a modern brick school in more than 30 cities. It is two electric power plants, each serving a town of 60,000 population. It is two fine, fully equipped hospitals. It is some 50 miles of concrete highway.
> We pay for a single fighter with a half million bushels of wheat. We pay for a single destroyer with new homes that could have housed more than 8,000 people.
> This, I repeat, is the best way of life to be found on the road the world has been taking.
> This is not a way of life at all, in any true sense. Under the cloud of threatening war, it is humanity hanging from a cross of iron. [4]

Despite such warnings, the economists deceived themselves, (and most of the American people) by failing to take into account the difference between productive and parasitic growth. Productive growth is represented by goods and services used for consumption or

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[*] NSC-68, "A Report to the National Security Council by the Executive Secretary on United States Objectives and Programs for National Security, April 14, 1950," *Naval War College Review,* May-June 1975 & Paul A. Baran, *The Political Economy of Growth* (Monthly Review Press, 1957), p. 41. See also S. Melman, *After Capitalism*, p 145.

further production. Parasitic growth refers to products that, (while money valued) are neither useful for consumption or for production. Though military industry is economically parasitic, the value of its production is nevertheless included in the accounting of national wealth called Gross Domestic Product, (GDP). Thus, production of war materiel masked the decline in production of civilian items. In overlooking this point, the U.S. managers established a policy that would later devastate U.S. manufacturing, (particularly capital goods) infrastructure and population.

The aim of this small book is to introduce the reader to two distinct characteristics of the organization of U.S. government and business, which together have considerable impact on the character of the nation. They are deindustrialization and warmaking. There is no denying that the topics included are wide ranging and even at times delve into territory unfamiliar to many people. However, these points detail how decisions over resources and people's lives are being exercised by those in positions of power.

## PROFIT AND POWER

The long duration of the U.S. Permanent War Economy – from the close of World War II until today – has afforded ample opportunity for erecting policies and administrative structures that have enabled continued collaboration of corporate managers focused on their classic profit maximizing, with state managers whose focus is on the accumulation of power. Profit maximizing becomes merged with power maximizing.

The two management styles have interpenetrated. The top managers from the corporate and from the state managerial traditions now work together in relatively smooth cooperating fashions, and move seamlessly from government to industry and back to government. All this is seen most clearly at the senior levels of the current U.S. government: President Bush and Vice President Cheney are both life-long politicians with solid corporate backgrounds.

Despite their overt differences in policy, the two traditional parties share this unspoken commitment to the Permanent War Economy and to the political and economic tactics that it requires. That is why political candidates of the two political parties often find more in common with each other than differences of any fundamental sort. Political candidates of both parties still find common ground in approving policies of "free trade" or "globalization". Neither of these terms reveal or give emphasis to the export of both blue and white-collar jobs from the United States and the consequent conversion of many towns and cities into "ghost towns", empty factories and empty main streets.

All this has been proceeding while the corporate-state managers and their economists celebrate the deindustrialization of the United States as a move towards an American "post-industrial" or "service economy"—a cover story in wide use and apparently quite useful for obscuring the intent of the state-corporate managers who dominate American economy and politics, and guide the spearheads of the military economy–such as weapons sales, weapons gifts and military training programs– that have proven to be so useful for enlarging the sphere of profit and power maximizing.

## THE PENTAGON—DEINDUSTRIALIZATION CONNECTION

Unlike Germany, Japan and the well-developed economies of Western Europe, the United States has had a massive preference for applying its stock of technologically savvy people to military problems. This shows up without ambiguity in the following collection of data.

**Government R&D In the U.S., Japan, Germany, 2001**

| | U.S. | Japan | Germany |
|---|---|---|---|
| Total Government R&D Spending, $ Billions | 86.7 | 23.2 | 17.9 |
| % for Defense | 52.7 | 4.3 | 7.1 |
| % for Industrial Production and Technology | 0.5 | 7.5 | 12.1 |
| Source: National Science Foundation, *Science and Engineering Indicators*: *2004*, Appendix Table 4-48. | | | |

The American government concentrates R&D money on the military: 52.7 percent of the U.S. government's R&D spending—almost $46 billion—goes to military research and development projects, and one half of one percent to Industrial Production and Technology. The Pentagon's R&D projects yield results that—however useful on the battlefield—do not promote efficiency in the production of consumer goods or capital goods (the means of production). [5]

In stark contrast, Japanese and German industrial workers and managers have been able to build solid reputations for high quality products while the Pentagon has led U.S. firms to achieve high profit, even as their managers have been abandoning American workplaces and their workers, (I discuss this below in Chapter 3).

The fact that the Pentagon has the largest budget for sponsoring R&D in the federal government since World War II has also made a lasting impression on American universities. The requirements of the military have been accepted by universities and our engineering schools as desirable training objectives.

Massive Pentagon R&D budgets consume resources that could otherwise be applied to advancing the design of civilian goods and the methods for producing them. Thus, in management circles, and in key newspapers, discussion about productivity in U.S. industry characteristically turns to worker behavior: on wages & union struggles for decision-making. Absent from these discussions is attention to the productivity of (fixed) capital and the array of factors that bear on stabilization of production operations.

In order to improve the productivity of manufacturing operations it is essential to take into account all the major elements that enter into production: age of production equipment; frequency of unscheduled downtime in production; percentage of scrap produced; waste in the use of raw materials, and energy; etc. However, no significant federal support has been available for research on improving productivity. So long as the federal government deploys its R&D funds with Pentagon priority and ignores improving productivity for civilian production and technology, U.S. firms will be at a disadvantage with respect to Japanese and German firms—who benefit from government sponsored R&D.

In this environment where few incentives exist for improving the productivity of U.S. civilian operations through innovation, many companies have opted to relocate their factories to foreign locations,.

As I will show in Chapter 4 some American engineers and workers have been able to thoroughly redesign production operations to economically produce not only consumer goods but also the most sophisticated capital goods.

## PENTAGON CAPITALISM AND DEINDUSTRIALIZATION

Since the end of the Cold War, the U.S. military budget continues to mushroom. Downsizing of the military and base closings have been offset by spending on enormously expensive high-tech weaponry. This is the legacy of the so called, "Revolution in Military Affairs". In March 2003, for example, the Navy was scheduled to receive the *U.S.S. Reagan*. With a crew of about 5000, this nuclear powered aircraft carrier alone will cost $5.4 billion, not counting the cost of the aircraft, nuclear fuel, the crew and immense arrays of equipment required to maintain a large and diverse body of aircraft. The *U.S.S Reagan* will be another of 12 main aircraft carrier battle groups, each with their complement of *Aegis* destroyers ($1.3 billion each), submarines and supply ships. Each major aircraft carrier battle group includes the equivalent of a "mini" air force with diverse aircraft and global reach. A principal fighter plane for the carriers is the *FA-18E-F* fighter, which is budgeted at $72 million per plane. A complement of 40 such planes costs $2.8 billion, and when added to the $5.4 billion basic cost of the carrier, the total is more than $8 billion. The United States Navy has also ordered three nuclear-powered attack submarines with a price tag of $2.3 billion each. No other nation is producing nuclear powered submarines or nuclear powered warships.

The Air Force is also receiving a fleet of *C-17* heavy airlift planes. These large aircraft have intercontinental range and enormous load carrying capacity. They cost $279 million per plane –exceeding the price of a fully equipped intercontinental passenger airliner. The Air Force is also to receive a fleet of *F-22 Raptor* fighter planes; more sophisticated than the equipment of any other air force in the world. The *Raptor* costs $285 million per plane. Then there is the *Joint Strike Fighter*. That is a controversial and ambitious project designed to serve the varied requirements of each of the principal military forces of the United States. It may be sold profitably to other countries as well. The *Joint Strike Fighter* program, which is scheduled for several thousand planes, is estimated to require an outlay of $750 billion. This program triggered an intense competition for the contracts among congressmen from principal aircraft producing states, like California, Texas and Washington. Some members of Congress see this as a bonanza with a long future.

These aircraft and naval vessels are major pieces of the new U.S. military arsenal. They are accompanied by hundreds of billions of dollars for great fleets of armored land vehicles and the equipment for scores of new military bases being constructed around the world. In countries of the Middle East and Central Asia, the United States has been constructing tens of new military bases – thirteen alone in the former Soviet Republics of Central Asia. (See the maps of new U.S. military bases in Chapter 2). These will extend air and ground-based U.S. military power eastward, to within three hundred miles of China.

Spending for conventional explosives and nuclear-equipped missiles has increased as well. The Pentagon has bought special missiles and bombs of varying size designed to penetrate steel, reinforced concrete, and deep underground military facilities of every sort and is pressing for the deployment of small nuclear tipped "bunker busting" bombs.

As we have seen, the military priorities of the federal government are accompanied by chaotic accounting conditions in the Pentagon – across all services. This means that the billions of dollars formally voted by the Congress are no measure of actual spending activity – which finally are under no adequate oversight.

While the U.S. government has been throwing money at military industry, a huge change has been happening in the rest of the American economy.

U.S. firms have been closing factories here and moving them to countries where unions cannot oppose management. This **de**industrialization has happened so quickly that America's capacity to produce anything is seriously undermined. For example, in 2002 the

New York City government announced plans to buy a new fleet of subway cars and invited bids for doing the work. Though these contracts are worth $3-4 billion, *not one U.S. firm responded.*[*] To take a more everyday example, of 100 products offered in the Fall 2003 *L.L. Bean mail order* catalogue 92 are *Imported* and only 8 *Made in the U.S.A.* All kinds of companies have shipped their factories abroad, leaving only top management offices in the U.S. Closing American factories has not only left millions without work, but has also diminished the U.S. production capability required for repairing our broken infrastructure.

Apart from its economic consequences, joblessness has a poisonous effect on the human psyche, for it sends a message: not needed, not wanted. Unfortunately, U.S. politicians– federal, state, city and county – have typically remained supportive of the federal government's military priorities , agreeing to compete for their "fair share" of the Pentagon's orders and the accompanying employment. This orientation continues to act as a barrier to reconsidering appropriate policies on behalf of America's working people.

## SHORTCHANGING AMERICA'S CITIES

The Mayor of New York City, Michael Bloomberg, has demanded cuts in spending by the City government, for he reckoned that a budget deficit of $1.1 billion for 2003 would be followed by an enlarged deficit in the 2004. How did the Mayor propose to cope with the prospective deficit? He offered a host of detailed plans for cutting the outlays for schools, libraries, the fire department, the police department, the sanitation department, cuts in the staffs for child welfare, for services for elderly people and children.

He offered increases in various City taxes, including income and property taxes and even considered charging for use of the City's bridges over the East River. Soon, with more progress in miniaturization, perhaps technology (like the E-Z-Pass used on bridges and tunnels) will enable the City to raise money by charging each citizen a fee for crossing the street. The Mayor did not propose making an appeal to the federal government to cut the size of the military budget.

This problem is not limited to the Big Apple, although its anticipated *$1.84 billion* deficit for 2004 is the nation's worst. City budget deficits have become endemic: Atlanta, $82 million (FY 2002); Los Angeles, $250 million (FY 2002); Cincinnati, $35 million (FY 2003); San Diego, $30 million (FY 2003); San Francisco, $347 million (FY 2003); Chicago, $116 million (FY 2003); Houston, $55 million (FY 2004); Philadelphia, $144 million (FY 2005).[*] [6]

In 1998 Allan G. Hevesi, then Comptroller in charge of the City's budget planning, prepared a report on the capital funds needed by the City. His report showed the money required by each City department for new buildings and equipment from 1998 to 2007. Of the $92 billion required, only half was made available by the time his report was prepared. Now, with financial crises ever larger because of the further militarization of our lives, the

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[*] On behalf of a few colleagues from Columbia, City College and Rutgers, I addressed chief officers of a group of firms that are well-established designers and manufacturers of heavy machinery, like agricultural, earth-moving and related equipment. I invited their attention to the possibility of undertaking design and production of subway cars with the New York City fleet of 6000 cars as a basis for serious entry to this industry. They responded – declining any interest, declaring that they were busy elsewhere, or that their current activities are in accord with the wishes of their stockholders.

[*] Editor's Note: The economic devastation wrought by natural disasters like Hurricane Katrina in 2005 only worsens the already dire situation facing many U.S. cities. Once again, in New Orleans, U.S. infrastructure failed its neediest citizens.

buildings and equipment needed by a modern city will not be available in any foreseeable future. Every City department will be a casualty of the federal government's warmaking.

## SOMETHING FOR THE SERFS

While millions of Americans suffered losses of savings and pension funds from the 2001-2 meltdown of corporate securities, the same events in securities markets created a new class of economic royalty. These were the American corporate and government insiders who used their positions to know when to buy and when to sell in the securities markets and thereby amass enormous profits. So the *New York Times* (Aug. 25, 2002) displayed a list of the 100 executives who made the most money from strategic selling of their company stocks. Altogether, these people reported $6.2 billion in executive rewards. The top CE got $1.4 billion and CE number 100 on the list took home a mere $9.6 million.

All this marked a historic turn of events. A new royalty was created, with royal outfitting: palaces (not just big houses); staffs of servants with butlers trained to oversee the underlings; lavish cars and other accoutrements.

What can we expect from the new American royals? Mr. Gary Winnick, once chairman of *Global Crossing* had gained a profit of $734 million by selling company stock before the shares became worthless. He told a Congressional committee that he "would write a check for $25 million to cover part of the retirement money several thousand employees lost when the stock collapsed." Said Winnick: "I call on other chairmen and C.E.O.'s of other companies to step up and write a check."

## THERE IS AN ALTERNATIVE

This book deals with two interrelated topics: how the U.S. war economy works; and the deindustrialization of America. Both phenomena reinforce each other. The many priorities given to the military have hastened the decline of America's civilian economy and spread deindustrialization. And deindustrialization—by crippling economic power—has increased U.S. state managers' reliance on military might. The classic proposition that you can't have both guns and butter *without limit* is proving true.

The United States is now housing a war system that is without geographic, economic or political limits. This war system has demonstrated destructive effects on American life. A crucial part of this war system is its direction by a modified U.S. government. The federal government is no longer a mere political structure. It has been made into a managerial system comprising top managers with corporate and political backgrounds. The combination is a species of state-capitalism with pretension to have abilities that include power without limit. The same state capitalist managers operate the U.S. economy as though its resources were unlimited. In reality, however, the U.S. engine for wealth production is being broken.

Chapter one explains further the hierarchical relationship that has in many respects merged the top managements of the Department of Defense (DoD), with the managements of business firms producing for the DoD, and how this merger has created a system of "cost maximizing" which causes a heavy drain on the federal treasury. Also detailed is the inherently parasitic relationship of the military economy to civilian economy, and the involvement of Congress in perpetuating this system. Operating a permanent war economy is now the main continuing activity of the U.S. government, dominating its spending and determining the number of people it employs.

Chapter two defines the power maximizing methods used by the combined corporate-state management. The intertwining of economic and political powers has endowed the state management with unusual capabilities that outstrip those available in the more limited

civilian managerial sphere of corporate economic rule. With these new capabilities, the state-corporate managers use military operations to enlarge their sphere of decision-making power. At different times, the rulers of two principal states, (Vietnam and Iraq), that had been war-targeted by the U.S. top managers actually petitioned the American ruling group to negotiate a settlement with each of them instead of seeking hegemony by imposing military defeat. The chiefs of these lesser states were rebuffed. Nevertheless, these characteristics do not guarantee that military superiority, short of genocidal intentions, can succeed. For conditions of guerilla warfare have operated to set unanticipated limits on military victories by the ruling group.

Chapter three describes how the main body of corporate and state executives has proceeded to deindustrialize manufacturing centers of the United States, relocating plants and research centers to countries like Mexico, India and China where governing bodies see to it that trade unions cannot get off the ground.

Chapter four shows the feasibility of producing both high quality capital goods and consumer goods in the United States. Solid research and development has enabled the New Balance firm—a major shoe manufacturer—to revise its U.S. production methods. The firm can produce shoes in the U.S. while planning to enlarge its U.S. produced share of the firm's worldwide network of factories. This chapter also reports on the innovative achievements of Haas Automation Inc. This firm, located in California, has been growing as a producer of high-tech computer numerical controlled machining centers—all produced in the U.S.—and growing. The Haas performance deserves special attention because machine tools are the basic "capital goods", the foundation for all other manufactured production.

Chapter five summarizes the consequences of continuing with the pillaging of American industry by a permanent war economy on the one hand, and contrasting that with the large economic and human gains that we could obtain for America, in place of wars without end. As an alternative to the processes of warmaking or preparing for war, and the core pattern of deindustrialization we call upon the strategic design for upgrading the infrastructure systems of the United States that was developed by the American Society of Civil Engineers. The permanent war economy currently has *stranded* the U.S. with a Model-T infrastructure in the twenty-first century. An effort to rebuild and upgrade American infrastructure can serve as a strategic framework for reconstituting a U.S. industrial system, and employment with efficiencies beyond compare. In this pursuit, particular attention is paid to the strategic part that could be played by reindustrializing the capital goods production capability of the United States.

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[1] Donald H. Rumsfeld, "DoD Acquisition and Logistics Excellence Week Kickoff—Bureaucracy to Battlefield Remarks", Speech at the Pentagon, Sept. 10, 2001. www.defenselink.mil/speeches/2001/s20010910-secdef.html & U.S. Department of Defense, Office of the Inspector General, "Audit Report: Internal Controls and Compliance with Laws and Regulations for the DoD Agency-Wide Financial Statements for FY 1999", (Report No. D-2000-091), Feb. 25, 2000.

[2] U.S. Department of Commerce, *Survey of Current Business*, Sept. 2002, Table 5, p. 30.

[3] Charles E. Wilson, "For the Common Defense, A Plea for a Continuing Program of Industrial Preparedness," *Army Ordnance*, Vol. XVI, No. 143, March-April, 1944. See other discussions of Wilson's proposals in: John M. Swomley Jr., "The Growing Power of the Military," *The Progressive*, Jan. 1959. See also Walter J. Oakes, "Toward a Permanent War Economy," *Politics*, Feb. 1944.

[4] Address by President Dwight D. Eisenhower, "The Chance for Peace", April 16, 1953. www.eisenhower.utexas.edu/chance.htm

[5] National Science Foundation, *Science and Engineering Indicators*: *2004*, Appendix Table 4-48.

[6] *New York Post*, Dec. 16, 2003; *Atlanta Journal-Constitution*, May 7, 2002; *Daily News of Los Angeles*, Jan. 16, 2003; *Cincinnati Enquirer*, Oct. 31, 2002; *San Diego Union-Tribune*, Feb. 22, 2003; *San Francisco Chronicle*, June 2, 2003; *The Bond Buyer*, Aug. 1, 2002 [Chicago]; *Houston Chronicle*, Apr. 6, 2003; *The Bond Buyer,* Jan. 5, 2004 [Philadelphia].