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THE MILITARY INDUSTRIAL COMPLEX: A DISCUSSION OF
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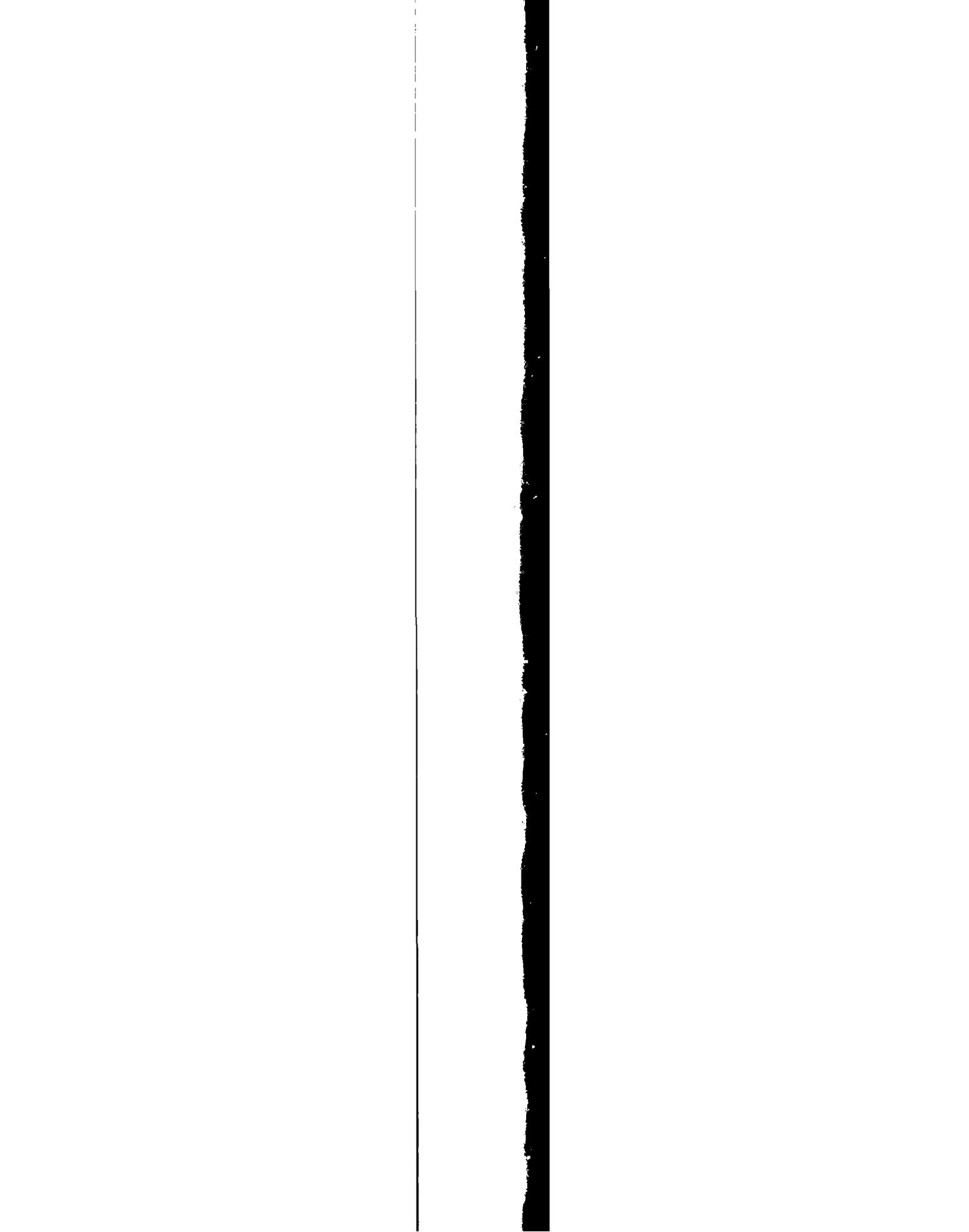
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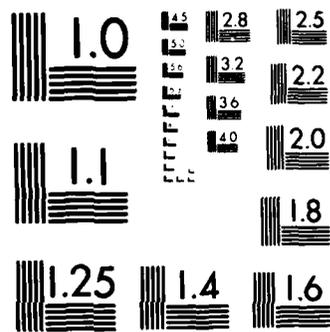
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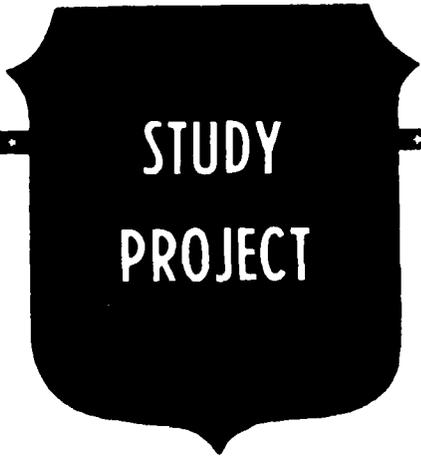




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THE MILITARY INDUSTRIAL COMPLEX:
A DISCUSSION OF SELECTED ISSUES

BY

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QUARTERMASTER

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USAWC MILITARY STUDIES PROGRAM

THE MILITARY INDUSTRIAL COMPLEX:
A DISCUSSION OF SELECTED ISSUES

INDIVIDUAL STUDY PROJECT

by

Lieutenant Colonel Neil W. Meoni
Quartermaster

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US Army War College
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ABSTRACT

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Recent defense budgets under the Reagan Administration have again fired up the controversy concerning the ominous "Military Industrial Complex," coined into existence by President Eisenhower over 23 years ago. This paper examines two major issues surrounding the "complex": (1) Is the complex the new phenomena Eisenhower spoke of or is it the evolved relationship deeply set in our American society from its beginnings as a nation? This is addressed in an historical perspective by tracing the evolution of the military-industrial relationship over our history as well as commenting on the need for this relationship. (2) Is the complex wasteful, corrupt and exerting too strong an influence on the nations resources? Each of these criticisms are presented in the form articulated by the opponents of the complex, rebuttal arguments are presented, followed by an analysis of available data. A conclusion is made as to the validity of each of the criticisms.

PREFACE

Recent defense budgets under the Reagan Administration have again fired up the controversy concerning the ominous "Military Industrial Complex," a phrase coined into existence by President Eisenhower in his farewell address to the nation on 17 January 1961.

However, although a new colloquialism "the Military Industrial Complex," came into being with the Eisenhower speech, the issue of a phenomenon such as the Military Industrial Complex was not new. At the turn of the century similar concerns were pronounced over the arms manufacturers (predominantly in Europe) who made substantial profits from World War I. At the time these "merchants of death" were believed to have entered into an international conspiracy that pushed nation states into armed conflict so as to generate markets for their weapons and munitions. The United States itself, the "arsenal of democracy" suffered similar criticisms and it is at that point in our history that the American Military Industrial Complex begins to take substantive form. But, even before then, the evolution of the relationship between the military and industry in America, as a source for defense weaponry, had become deeply rooted in the American experience.

It is my contention that the Military Industrial Complex, as it exists in the United States today, is not a new or even post World War II phenomena. It is an outgrowth of the political, social and economic system of our American democracy and has been and will continue to be shaped by this system as well as such newer influences as rapid technological change and the geo-political system that exists in the world.

This research paper defends the above thesis and deals with some of the major criticisms made of the Military Industrial Complex today. Fundamental to this presentation is the recognition of the threat to our national security interests which exists today--principally by the Soviet Union. The Military Industrial Complex, the unique informal relationship that exists between the military, industry, congress, scientists, technological experts and public opinion, is our response--given our history, culture, political and economic system--to the need for defense. This response satisfies our goal as citizens to make defense as effective and efficient as we can, while appreciating the necessity of defense until man truly learns to live in peace with his fellow man.

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CHAPTER I

INTRODUCTION

Samual P. Huntington once observed he had not seen an essay or heard a speech on the military industrial complex that did not begin with Eisenhower's warning of the dangers of unwarranted influence by the "complex".¹ Consistent with this trend, we can once again review the famous Eisenhower speech.

On January 17, 1961 President Dwight D. Eisenhower, in his farewell address to the nation, introduced a new colloquialism, "The Military Industrial Complex." In his address President Eisenhower stated:²

We can no longer risk emergency improvisations of national defense; we have been compelled to create a permanent armaments industry of vast proportions. Added to this, three and a half million men and women are directly engaged in the defense establishment. . . . This conjunction of an immense military establishment and a large arms industry is new in the American experience. The total influence--economic, political, even spiritual--is felt in every State House, every office of the Federal Government. We recognize the imperative need for the development. Yet, we must not fail to comprehend its grave implications. Our toil, resources, and livelihood are all involved; so is the very structure of our society.

In the councils of Government, we must guard against the acquisition of unwarranted influence, whether sought or unsought, by the Military Industrial Complex.

However, when President Eisenhower warned the American public of the existence of the Military Industrial Complex the issue was not new. As stated by B. F. Cooling:³

The relationship between national economic power, national and foreign policy aspirations and the

national military establishment has been of concern to some academicians, theologians, businessmen and statesmen (not to mention the professional military) for at least eight decades.

Fifty years prior to the Eisenhower speech similar concerns were expressed over the "merchants of death" of World War I.⁴ Chapter II will present a more detailed discussion on the historical relationship between the military and the industrial sector of our society. The phrase "Military Industrial Complex" was new in 1961, but the relationship it described was not.

THE PROBLEM

Charles Wolf, Jr. once stated he felt the different views held by most people concerning the "complex" could be bracketed between those of Dean Acheson and David Shoup:⁵

Acheson's view is that the problem really doesn't exist, or is at most 'marginal'. General Shoup's view is that 'the new American militarism' has an insidiously controlling grip at virtually all levels of our society, including local community affairs in which, he alleges, the performance-orientation of retired military officers gives them a decisive influence.

The "problems" ascribed to the military industrial complex run the full spectrum from emotional to statistical presentations, from arguments, that such a relationship, informal or otherwise, exists between the military and industrial sector of our society, to heated pronouncements the "complex" is wasteful, corrupt, permits profiteering by defense contractors and exerts too strong an influence on the nations resources. Chapter II deals with the "relationship issue" and the "wastefulness" issue is addressed in Chapter III, the "Evils of the Military Industrial Complex."

At this point we need to look at the definition of the military industrial complex. Here again we have a problem in obtaining agreement on a definition which satisfies everyone.

Huntington said it was ". . . a large permanent military establishment supported by and linked to a variety of related industrial, labor and geographical interests."⁶

David Mooney called it ". . . a group of national resources--public and private, military and civilian, political and academic--combined together for the common defense, in support of a national strategy of deterrence through preparedness."⁷

Marc Pilisuk and Tom Hayden saw it as ". . . an informal and changing coalition of groups with vested psychological, moral and national interests in the continuous development and maintenance of high levels of weaponry, in preservation of colonial markets, and in military-strategic conceptions of internal affairs."⁸

The Mooney definition is most accurate, especially if modified by stressing an informal association (grouping) as opposed to a structured formal one, and one which evolved in American society from its very beginnings as a nation.

MAGNITUDE OF THE "COMPLEX"

Let us briefly quantify this phenomena called the Military Industrial Complex. The key to the economic quantification is tied to defense spending and defense hiring of labor. Its political quantification is much more subjective. In a recent article, presented by the LA Times, the economic quantification of the complex was listed as follows:⁹

The jobs of one of ten Americans depend directly or indirectly on defense spending. The Pentagon is the

largest single purchaser of goods and services in the nation. Defense industries account for 10% of all US manufacturing. In certain states, including California, defense related employment is the largest single source of personal income. Defense employs more than 25% of all the nation's scientists and engineers. There are twice as many defense workers as there are farmers. . . . More than 30% of the country's mathematicians work somewhere in the Military Industrial Complex, along with 25% of the country's physicists, 47% of aeronautic engineers and 11% of computer programmers.

The political magnitude of the complex is "expressed" also in numbers of people employed and their influence on Congress as well as the lobbying efforts of major defense contractors and the Pentagon--the so called "iron triangle" of the complex described by Gordon Adams.¹⁰

METHODOLOGY

Having looked briefly at the background, definition, magnitude and "problems" of the Military Industrial Complex, the following describes the means by which the major two issues of the complex will be addressed:

1. Is the complex the "new" phenomena Eisenhower spoke of or is it the evolved relationship deeply set in our American society from its beginnings as a nation? This issue is addressed in a historical perspective by tracing the evolution of the military-industrial relationship over our history. Additionally, a comment on the need for this "relationship" is provided.
2. Is the complex wasteful, corrupt, and exerting too strong an influence on the nations resources? This issue is addressed by

expressing the criticism--then identifying and researching the facts and drawing conclusions as to the validity of the criticism.

A final comment and a recommendation concerning the complex is presented in Chapter IV.

CHAPTER II

HISTORY OF THE MILITARY-INDUSTRIAL RELATIONSHIP IN AMERICA

How does a nation arm itself? In particular how does a country such as the United States accomplish this critical task? The answer can be obtained by reading our history from the very beginnings of our existence as an independent nation.

REVOLUTIONARY PERIOD

During the Revolutionary War period and up to the War of 1812 the weapons industry in America stood in hectic disarray. Although Washington had signed bills establishing national armories at Springfield, Massachusetts and Harpers Ferry, Virginia in 1794, neither institution could meet the expanding needs of either the regular army or state militias.¹¹ Springfield had manufactured only 2,111 muskets by January 1798 and Harpers Ferry, the larger of the two armories, could not produce a single weapon until 1801.¹² Congress, fearful of the war with France in 1798, appropriated \$800,000 for the purchase of small arms and ammunition from private contractors.¹³ While this legislation helped place arms making on an industrial footing, the administration of the system and the quality of weapons left much to be desired. M. R. Smith reported:¹⁴

Twenty-seven arms makers, nineteen of whom were New Englanders signed contracts with the Treasury Department for the delivery of 40,200 muskets during the spring and summer of 1798. None of the parties involved were required to produce evidence of their ability of gunmakers, nor were they asked to produce bonds guaranteeing delivery within an allotted period.

of time. In addition to paying \$13.40 per musket, the Treasury also agreed to help ease the financial burdens of production by making outright monetary advances to certain contractors.

Smith goes on to explain that only three of the 27 original contractors met their agreements.¹⁵ Interestingly, one of those who did not meet his agreement was the famous Eli Whitney (of the "cotton gin Whitney"). At the time when contracts were being let to other gunmakers for lots of 100 at the most, Whitney offered to produce 10,000 within two years. He had his own "lead time" problems and in the end it required close to eleven years for him to execute his agreement. But finally he did so and in so doing he laid the foundation not only of modern war industry but of the modern industrial system as a whole.¹⁶

We can already see a pattern developing:

1. Arsenal cannot meet the crisis needs of the nation.
2. Private industry ultimately provides the weaponry.
3. "Pork barreling" was already in existence as we see most contracts going to New England firms--consistent with the power base in Congress.
4. There are time delays before the contractor produces.
5. The Treasury Department advanced money to the firms to alleviate their financial burdens.

THE CIVIL WAR PERIOD

The Civil War tested the American arms industry as never before and by 1865 northern industries had demonstrated that high quality weapons could be produced in large numbers. However, after Lee's surrender at Appomattox Congress moved quickly to dismantle the nation's war machine. By 1866, funding for the then called War Department had been reduced

from a high of \$1 billion in 1864 to \$264 million and of the 48 major arms contractors only 11 continued in business after 1870.¹⁷

Additionally the Civil War dramatically changed the "face" of war which impacted on all future wars. Walter Millis summarized this point by stating:¹⁸

War had changed, where, in Napoleonic times, the great set battle piece had usually decided the political issue, it was no longer capable of doing so. The major struggle of armies had come down to a kind of siege warfare in which now the whole people were involved--a struggle of fortification and concealment, of mines and countermines, on the fighting fronts, and a struggle over communications and resources, blockade, the capture of rail lines, the devastation of the productive farm areas, the terrorization of civilians, and the women and children behind the line. A new age of violence had dawned.

The post civil war era was to see several other changes develop that are with us today encased in the "Military Industrial Complex." First, a trend toward consolidation as larger more successful companies absorbed smaller companies. Secondly, arms corporate management recognized the potential for weapons inherent in the domestic and foreign markets and restructured their strategies accordingly. For example, sales of arms and ammunition were made to some 22 countries including China and Japan, by American Firms during the late 1860's and 1870's.¹⁹ Additionally, gun making equipment was exported overseas and for over 20 years after the Civil War, helped sustain arms manufactures and stabilize the machine-tool industry in the US.²⁰ Here again we see "characteristics" of the complex described by Eisenhower and others as a "new phenomena" of the 1960's. History tells us foreign sales of munitions as well as weapon machinery and technology were functioning a hundred

years before Eisenhower. Further, a "spin off" effect of the industrial commercial sector as a source of this weaponry stabilized another industry in the market place.

As for government arsenals during the twenty years after the Civil War, the Ordnance Department struggled unsuccessfully to prevent the deterioration of the arsenal program. The results came to fruition during the Spanish American War wherein by 1898 the US lagged nearly a decade behind the technology of Europe.²¹

WORLD WAR I

America's experience during WWI taught us a new lesson--that of how the momentum of technological change can change existing institutional arrangements within a society. By 1917, when the US entered the war the nature of war had been completely changed by the widespread use of mechanized weaponry. Military technology had become large, complex and very expensive. Additionally, the industrial prerequisites for producing such equipment had assumed far different proportions; so different, in fact, that traditional army procurement agencies could no longer cope effectively with the problems generated by massive mobilization. M. R. Smith sums up this point by saying:²²

Out of the wartime crisis emerged a new alignment between government and industry in which private businessmen played an active decision-making role. Such an arrangement contrasted sharply with former procedures. For more than 100 years the Ordnance Department and other Army agencies had exercised exclusive control over the selection of contractors and the allocation of contracts. Under the new system adopted in 1917, however, civilians now shared in planning the munitions for war.

. . . [Nonetheless] . . . the new military-industrial combination exacted a price. Quite unintentionally national defense had assumed a corporate

character, subject to the same pressures of bureaucratization, centralization and politicalization found in other sectors of American economic life.

War World I also brought forth organized criticism of the arms manufacturers. More than 50 years prior to the Eisenhower speech deep concerns were expressed over the European arms manufacturers who profited from WWI. These "merchants of death" were thought to have formed an international conspiracy that pushed nations into war in order to sell weapons and munitions. By the end of the war America's "arsenal of democracy" was also tainted, and a contemporary exposé tied US shipbuilding interests to an attempt to disrupt the naval limitation treaties of the interwar years. Hearings conducted before the "Nye committee" indicated that these attempts were primarily oriented toward molding public opinion or influencing the American negotiators at the various conferences.²³ During the late 1930's, as the US began preparation for war, the issue lost its force.

WORLD WAR II

World War II significantly strengthened the ties between the military and American business. It built linkages stronger than ever before. Massive changes in the technology of war, increased lead time, hazards, risk, costs and weapon sophistication made it all but impossible for a major industrial power to unilateral disarm. A new world had emerged. The destructive power of war, the range, speed and accuracy of weapons had increased tremendously. The US no longer had its "oceanic buffers."

Further, World War II again had taught us that we could no longer accept the system of arsenals as the source of military weaponry for the nation. The US learned anew the inadequacies of such a system and

modern science and technology all but removed the arsenal from the list of alternatives open to the government as a source in military defense supplies.

POST WW II--PRESENT

By the end of WW II the essential character and relationship between the military and industrial sector of our society was firmly entrenched. The criticisms which were heard denouncing the military industrial complex and most specifically the aerospace/defense industry in the 1960's was in some respects a distinctive phenomenon of the period. It grew out of the citizenry's concern for substantive increases in the peacetime defense budget of the late 1950's, and was highlighted by Eisenhower's warning. It most likely came to full fruition as part of public reaction to our involvement in Vietnam and the movement to make US business more "socially responsible."

However the realities of world politics and the experience of WW II had forever changed the concept of defense. Defense now included the maintenance of stocks of specialized plant equipment, machine tools and strategy, raw materials on a stand-by basis that would permit a rapid increase of arms production in case of need. The time-line of war had been drastically shortened as had the spectrum of conflict--from limited war to full strategic nuclear war. As Jacoby and Stockfish stated:²⁴

Even if defense is defined narrowly with reference to strictly military threats to US security, our country is now faced with the prospect of involvement in several types of war, each of which requires its own line of defense products. The US must now be prepared to fight (1) limited wars in any one of many possible regions of the world, (2) general wars

in several or all regions of the world involving only conventional weapons, and (3) an 'all-out' general war involving nuclear, thermonuclear, biological and chemical weapons as well as conventional means of destruction. With reluctance we have come to realize that reliance for our defense solely upon massive nuclear deterrence exposes the US to the possibility of piecemeal losses to an enemy whose limited attack we would not be prepared to counter.

THE MILITARY-INDUSTRY RELATIONSHIP

The US, unless it elects to unilaterally disarm, needs the products it gets from the Military Industrial Complex. Those who would advocate a return to a use of government arsenals to supply material for the military establishment or who would advocate a domestic industry which regards the sale of arms like any other commodity, open to international competition, ignore the lessons of history, the import of on-rushing technology on the weapons acquisition process or fail to recognize the nature of the products in question.

In the civilian economy the product is produced first and the customer exercises his/her free choice whether or not to buy the product. This is not the case with military weaponry. Survival of the US depends upon the high quality of military weapons which are produced and in what numbers. This is not the case for TVs or clothes dryers. Thus, it becomes clear that a much closer partnership between the government and the defense contractor is needed--a relationship very different from that which can prevail between the producers, and consumers of cars. Harold Laski, the British economist stated:²⁵

Anyone who thinks for one moment of the effort involved in building the atomic bomb will not find it difficult to realize that in the new warfare, the engineering factory is a unit of the Army and the worker may be in uniform without being aware of it.

As our defense posture has come more and more to depend on weapon systems incorporating the latest technology to respond to the threat spectrum (limited to total war), the armed services have relied less on their own laboratories and arsenals to design and produce weapons. For its part defense industry develops capabilities different from those normally required for the operation in a civilian market. The effect is to lock both in a relationship where each depends on the other. Lacking much of the capability needed to research, develop and, produce weapons of the latest technology, the services are dependent upon industry. Government oriented defense suppliers are equally dependent upon government contracts to support vast teams of technical talent they have assembled. The military brings to this environment a motivation turning on a primary concern for national security compiled with an awareness that it is spending public funds on devices and systems to maintain that security. No one can deny industry's primary motivation is profit. Those who expect industry to forego the profit motive ignore the primary reason for the use of private industry in the first place.

We have therefore evolved on the American scene a relationship of necessity between the military and the defense contractor. The military has a demand for a special product, in a sense a marketing category of its own. The nature of the demand, its importance to the survival of the nation will steer the military toward those contractors who are in the best position to satisfy the demand. The defense contractor desiring to compete for the military contract, will, of necessity, tailor his organization to suit the special needs of the military. Additionally, having assembled experts in such fields as military procurement and production design, he will understandably utilize this staff for research and development purposes to produce additional products for the military.

Anyone who has been exposed to military procurement and defense contracting will recognize that not every firm or business is suited or in many cases even willing, to accept defense contracts. Therefore we see a further reduction in the number of competent firms competing for defense contracts and a closer utilization tie between the government and a narrowing group of defense contractors.

Those who criticize the military-defense contractor relationship essentially criticize the basic law of supply and demand. The free economic system will guide supplier and demander towards one another. To this intersection of paths each bring a need to be satisfied by the other.

An unidentified Defense Department authority provided an excellent analysis of alternatives to the "complex":²⁶

I see no satisfactory alternative to a system under which private industry supplies the arms and the equipment our military forces need.

There are only two other possibilities. One is to forget about trying to defend the US, stop all weapons production and put our trust in the peaceful intentions of the Russians, the Chinese and any other potential aggressors.

That I don't believe we are prepared to do.

The second possibility is to let the government produce all the equipment the military services need, in federally owned plants and arsenals. That would turn the clock back a century or more, to a system that couldn't cope with today's demands.

No rational alternative to the military industrial complex has been identified and the "complex" has proven to be a relationship compatible with the political, economic and social system of our nation. But what

are the effects of such a relationship between the military and industry? Can or does this relationship breed waste, corruption and assume an importance out of proportion to the US political-economic system?

Chapter III will deal with these questions.

CHAPTER III

THE MILITARY INDUSTRIAL COMPLEX: GOOD OR EVIL

The evolution of the Military Industrial Complex presented us with a unique relationship between the military and industrial sector of our society, as the means for our nation to provide for its security needs. The issue now to be addressed is the efficacy of this relationship--has it become the "unwarranted influence" Eisenhower spoke of? Is it the corrupt entity critics charge it to be? These are complex issues and there are many more complexities surrounding this "complex" than usually acknowledged. The following issues will be addressed:

1. Unwarranted influence of the complex.
2. Profiteering.
3. Wastefulness.
4. Demands on the nations resources.

However, prior to addressing these issues let me briefly summarize what Charles Wolf, Jr. described as some of the characteristics of the "complex" which tend to confuse people when they try to understand or compare the Military Industrial Complex to other industrial complexes.²⁷

1. Secrecy - unavailability of information impedes judgement as to the gravity and uncertainties of the threat. Further, the need for secrecy prevents the comparison of the returns from defense with this from other public sector activities.

2. The complexity of weapons systems makes it difficult for an outsider to judge whether a system is being produced or employed efficiently, or whether a proposed system is needed at all.

UNWARRANTED INFLUENCE

Senator William Proxmire (D-Wis) has stated he feels the unwarranted influence, whether sought or unsought, by the Military Industrial Complex exists. He feels it has resulted in excessive costs, burdening military budgets and scandalous performance. Additionally, Senator Proxmire feels that the complex has grown out of all proportion in our society.²⁸

Senator Proxmire, as "spokesman" for the "anti-complex movement" has stated that the complex breeds profiteering and the Pentagon's policy of the use of negotiated contracts is not truly competitive and increases the cost of procurement. The negotiated type contract, generally accounts for 85-90% of the dollar value of all defense work.²⁹

The General Accounting Office, at Congress' direction, looked into the profit levels of negotiated contracts. The GAO report stated that defense work is less profitable than commercial work (Charts I & II). However, GAO argued the defense contractor realizes some profitable extras for defense work, for example:³⁰

1. "The government generally pays for R&D costs for defense work while a contractor may invest a substantial amount in developing a commercial product that does not sell."
2. "The defense work may result in substantial benefits for the contractor in commercial application."
3. "Overhead costs are absorbed by defense work, particularly independent R&D costs."

Chart I

GAO Draft Report on Profit Levels of Government
Negotiated Contracts as Compared With
Commercial Profit Levels

Sampling Method: I

Examination of 146 contracts recently completed by some 30 companies. These contracts represented 4.3 billion in expenditures for such items as aircraft, missiles, space equipment, weapons, ammunition and electronics gear:

Profit as a % of sales	6.5
Profit as a percentage of return on capital investment	28.3
Profit as a % of return on equity capital	56.1

Sampling Method: II

GAO circulated a questionnaire to approximately 150 contractors and developed annual profit rates for their total defense business for 1966 through 1969. The volume of contracts covered in this sampling (which GAO itself spot checked) range from \$10.4 billion in 1966 to 13.6 billion in 69:

Profit as a % sales	3.9-5.4
Profit as a percentage of return on capital investment	10.2-14.7
Profits as a percentage of return on equity capital	19.8-28.9

Source: "Profit Puzzle in Procurement," Business Week, pp. 44-48, 6 March 1971.

Chart II

Comparison of Results of I and II above with Commercial Profits for the Four Year Period 1966-1969

	I	II	Commercial
Profits as % of sales	6.5	3.9-5.4	7.9-11.6
Profits as % of return on capital investment	28.3	10.2-14.7	11.1-17.4
Profits as a % of return on equity capital investment	15.1	19.8-28.4	17.2-28.6

Source: "Profit Puzzle in Procurement," Business Week, pp. 44-48, March 6, 1971.

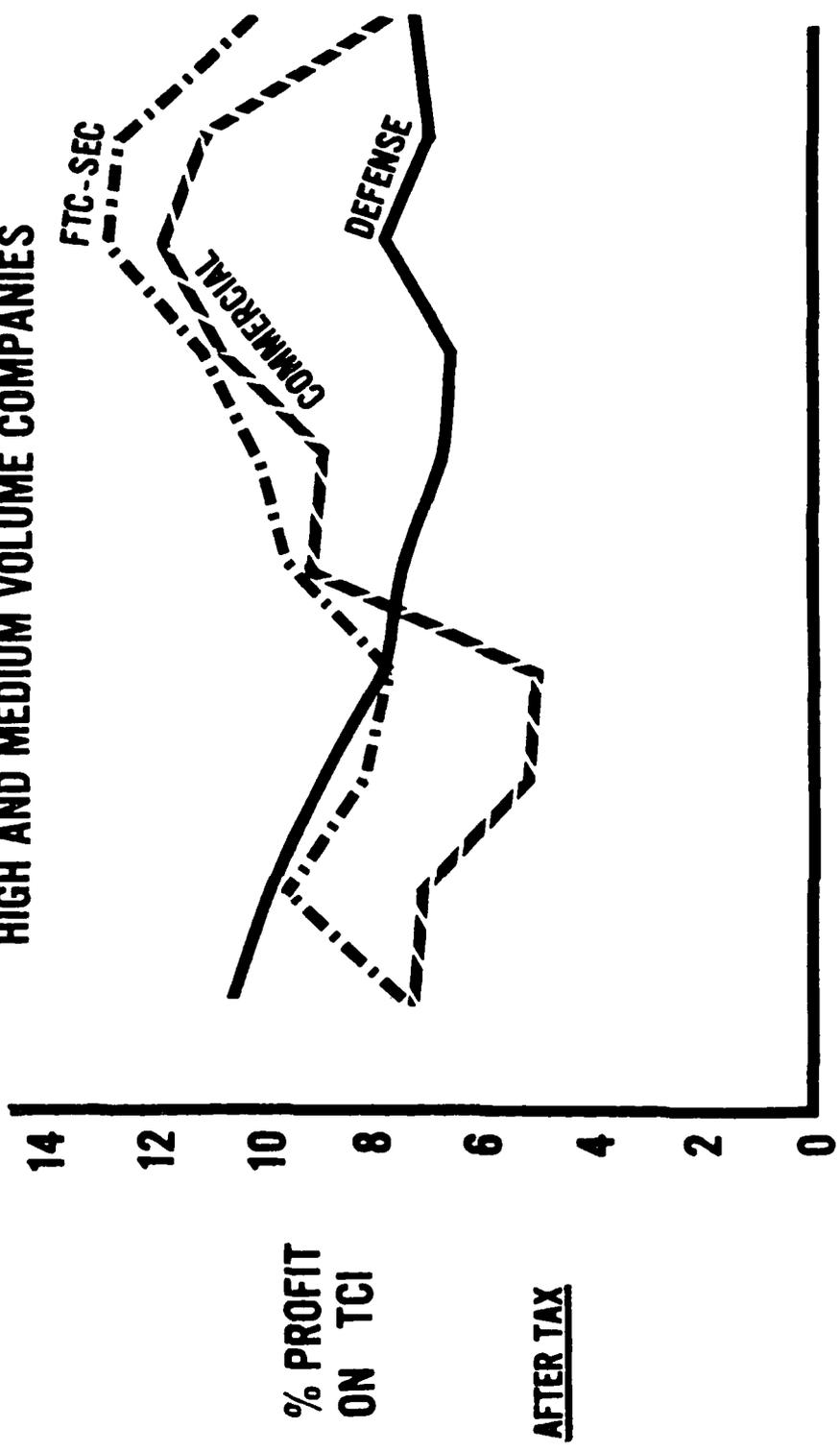
Another study, conducted by the Logistics Management Institute also found defense profitability to be less than commercial or other Federal Trade Commission - Security Exchange Commission Companies (FTC-SEC).³¹ Chart III shows that during the study years profit for defense companies, expressed as a percentage of total capital investment, was significantly less than the profit earned by commercial or FTC-SEC companies after 1961. As for profit on sales (Chart IV) the data reveals that defense companies were not making huge profits. On the contrary, from 1960-67 commercial firms profit rates rose to levels at times double that of defense and FTC-SEC companies consistently earned higher profits. Using a three year running average technique Chart V again points out the incorrectness of anti-complex criticism of defense earnings--the chart graphically demonstrates commercial and FTC-SEC companies showed significant profit growth whereas defense rates remained fairly constant and at all times below the commercial/FTC-SEC profit line.

The question of sales profit ratios of prime defense contractors versus sub-contractors has been raised--Chart VI responds. The data reveals that with minor variations the rates were not significantly different, and defense sub-contractors at times showed both higher and lower profitability rates than the prime contractors.

More recent studies cited by Jacques S. Gansler come to the same conclusion:³²

According to a number of studies, return on sales for defense firms is far less than that for comparable civil business; return-on-investment appears about comparable for the large defense firms, and much worse for the small defense firms. Certainly there are cases of high return-on-investment, especially when the firm is using an extensive amount of government plant and equipment, but these are the exceptions. In fact, there are an equally large number of examples--consider the ship builder--where the return-on-investment is far too low. Indeed a recent (1976) study of the US investment community by the Conference Board concluded overwhelmingly that the community did not want to invest in the defense industry because of the high risk and low profit.

PROFIT ON TOTAL CAPITAL INVESTMENT HIGH AND MEDIUM VOLUME COMPANIES



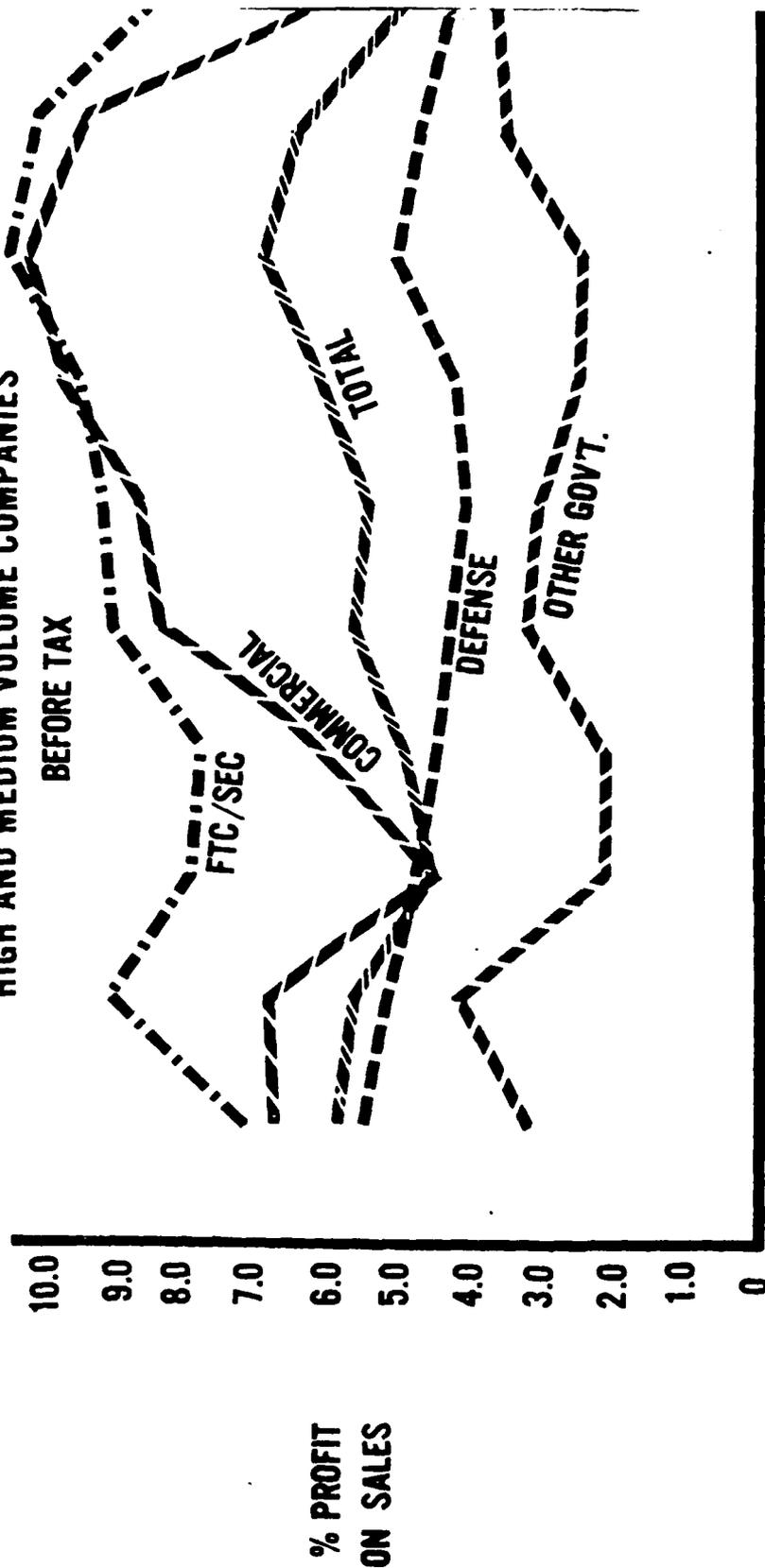
	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
DEFENSE % PROFIT ON TCI	10.1	9.5	8.7	7.5	7.4	6.5	6.3	7.6	7.0	7.3
COMMERCIAL % PROFIT ON TCI	7.0	6.8	4.8	4.7	9.0	8.7	10.9	11.6	10.8	7.4
FTC-SEC % PROFIT ON TCI	7.1	9.3	7.8	7.4	9.3	9.8	10.8	12.6	12.4	10.1

Source: LMI Task 69-1, "Defense Industry Profit Review," p. 14

CHART IV

PROFIT ON SALES

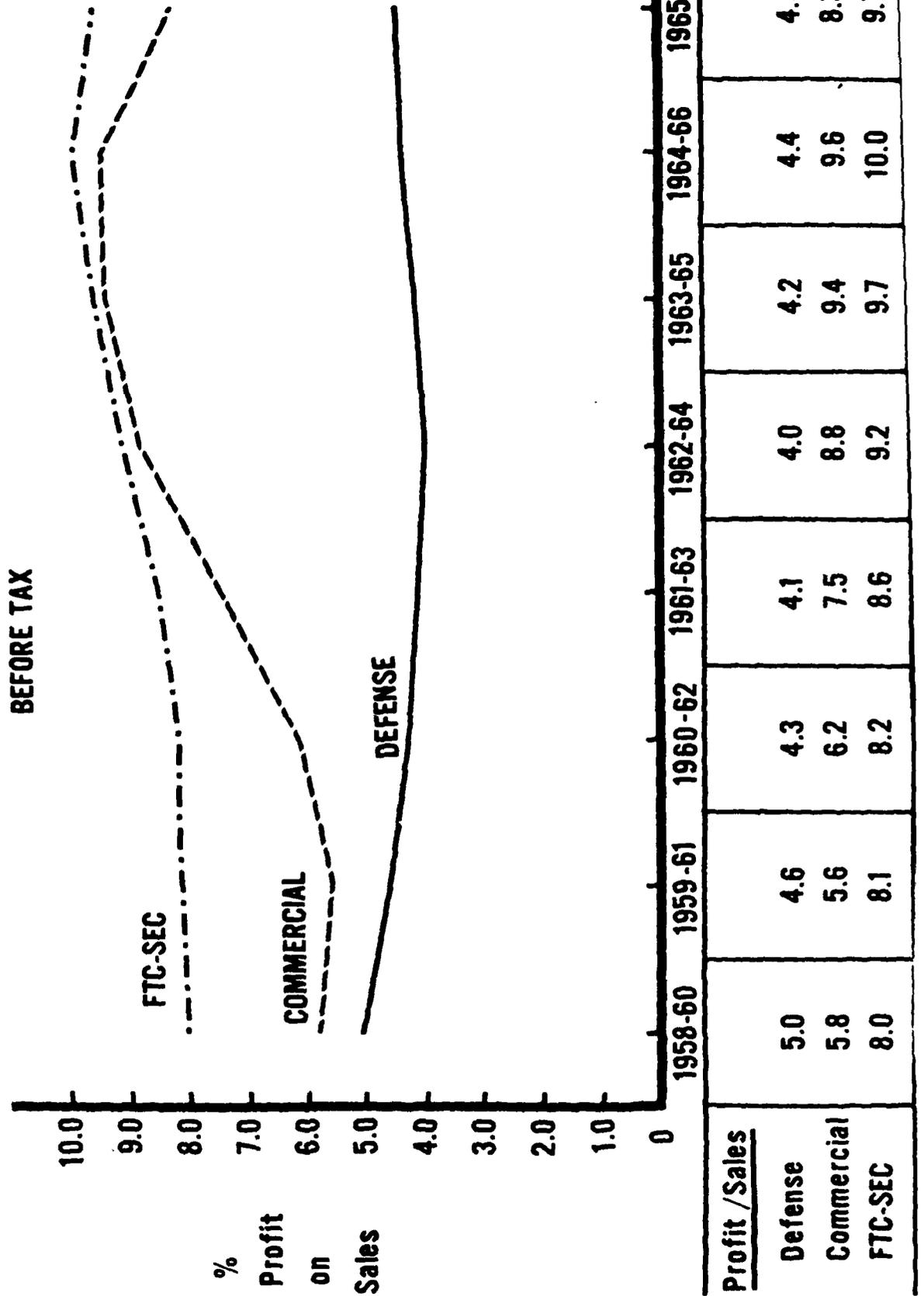
HIGH AND MEDIUM VOLUME COMPANIES
BEFORE TAX



	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967
TOTAL SALES	19,124	20,791	22,042	23,045	25,080	25,705	26,446	28,000	32,339	38,792
% PROFIT TO SALES	5.8	5.6	4.4	4.8	5.6	5.4	6.0	6.8	6.4	5.2
DEFENSE SALES	12,706	13,372	13,281	14,212	15,380	14,882	13,500	12,759	14,738	17,895
% PROFIT TO SALES	5.4	5.1	4.5	4.3	4.2	3.9	4.0	4.8	4.5	4.2
OTHER GOVT. SALES	374	448	568	718	1,249	2,320	3,239	3,906	4,064	3,266
% PROFIT TO SALES	3.1	4.1	2.0	2.0	3.1	2.9	2.4	2.4	3.4	3.7
COMMERCIAL SALES	6,044	6,971	8,193	8,116	8,452	8,504	9,707	11,334	13,537	17,631
% PROFIT TO SALES	6.6	6.7	4.3	5.9	8.2	8.4	9.6	10.1	9.2	6.4
FTC/SEC	107,579	121,387	126,982	128,897	145,064	155,038	167,032	191,539	220,062	230,418
% PROFIT TO SALES	7.1	8.9	7.8	7.7	8.9	9.1	9.5	10.4	10.0	8.7

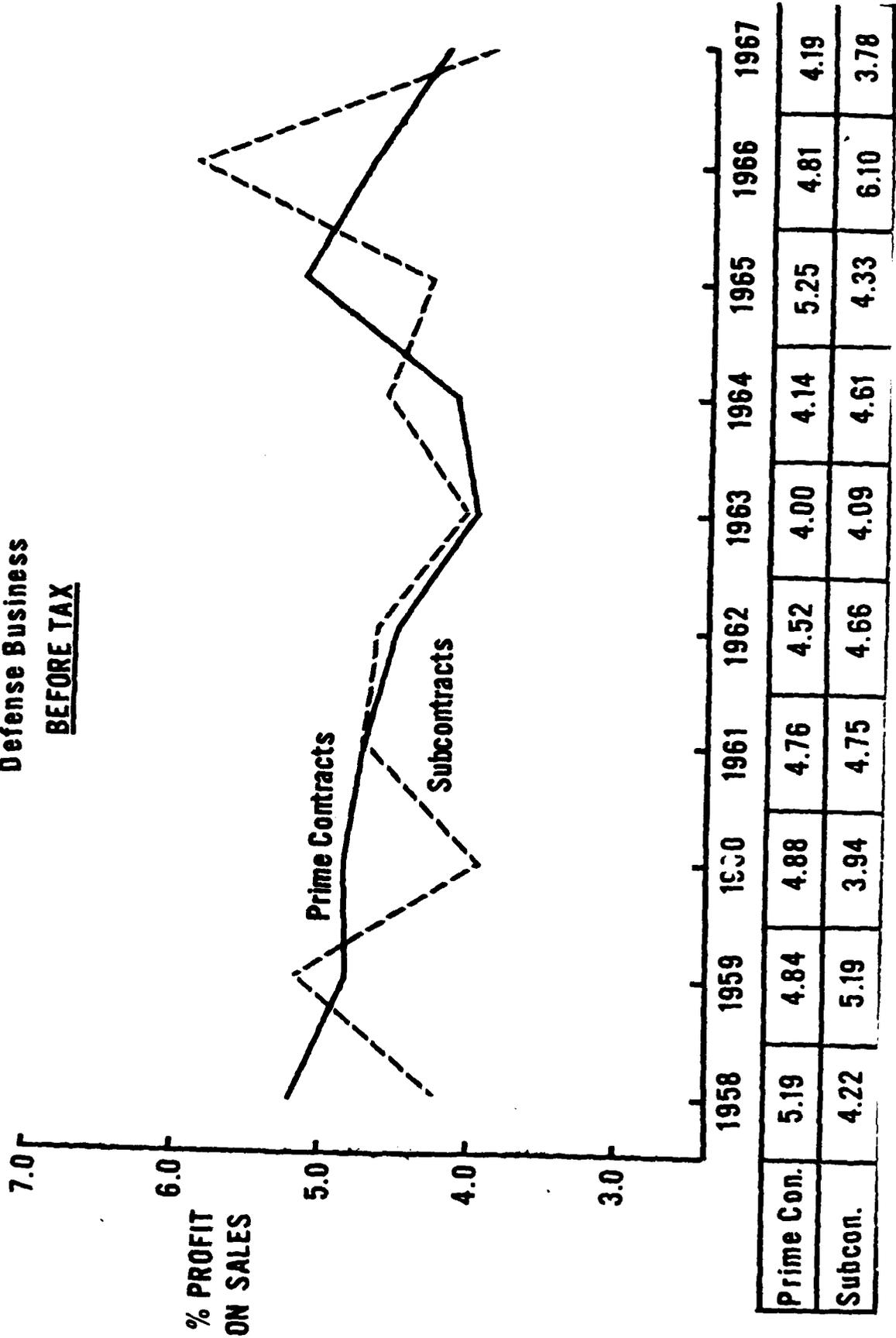
Source: LMI Task 69-1, "Defense Industry Profit Review," p. 76

CHART V
PROFIT ON SALES
 3 YEAR RUNNING AVERAGES
 HIGH AND MEDIUM VOLUME COMPANIES



Source: LMI Task 69-1, "Defense Industry Profit Review," p. 77

CHART VI
RATIO OF PROFIT TO SALES
PRIME CONTRACT VS. SUBCONTRACT
HIGH AND MEDIUM COMPANIES
Defense Business
BEFORE TAX



Source: LMI Task 69-1, "Defense Industry Profit Review," p. 80

Another criticism made of the "complex" is the high number of ex-military men who are in the employ of "favored" contractors. In 1959, 721 retired officers in the grade Army Colonel and Navy Captain or above were in the employ of the 100 leading contractors. In 1969 Senator Proxmire found the number had increased to 2,072--General Dynamics, the largest contractor, had 113 ex-officers, Lockheed, the number two contractor had 210, and Boeing had 167.³³ The charges made are that while not supposed to deal directly on contract terms with the military, it is almost certain that these officers exercise influence. Many of their military opposite numbers are their former colleagues and subordinates.

The rebuttal to this charge is that the migration of military officers to the defense industry and industry officials to the Pentagon is only a nominal traffic in talent that has been vastly exaggerated and is adequately controlled by conflict of interest laws. For example, a 1972 employment census, on the heels of the Proxmire criticism, indicated that job migration was much less than the critics had anticipated. (See Chart VII).

Chart VII

The Job Traffic Between the
Military and Its
Contractors

(July 1967 through December 1971)

From the military to contractors		From contractors to the Pentagon	
Company	Officers hired	Company	Civilians recruited
McDonnell Douglas-----	70	Martin Marietta-----	14
Boeing-----	60	General Electric-----	11

(July 1967 through December 1971)

From the military to contractors		From contractors to the Pentagon	
Company	Officers hired	Company	Civilians recruited
Computer Sciences-----	50	North American Rockwell-----	11
Lockheed Aircraft-----	48	Westinghouse Electric-----	10
Ling-Temco-Vought-----	43	Boeing-----	8
Litton Industries-----	39	Ling-Temco-Vought-----	7
Grumman-----	38	McDonnell Douglas-----	7
General Electric-----	37	Control Data-----	6
Hughes Aircraft-----	35	TRW-----	6
Westinghouse Electric-----	30	Aerojet-General-----	4

Listings include officers with rank of major or lieutenant commander and above and civilians at civil service rate of GS-13 or above.

Source: Business Week, January 15, 1972 p. 51

Additionally, Charles Wolfe, Jr. found the "job migration phenomena not unique to the complex."³⁴

Concerning conflict of interest problems within the MIC (for example, in connection with the 2,000 retired officers who are employed in executive positions in defense industry), one should note the existence of a similar problem in the health-care industry. For example, the National Institutes of Health have often been hard-pressed to find panel members to decide on research allocations in a particular field who would not themselves be in a position to benefit, from such allocations.

Another rebuttal to the military job migration charge is generally as follows:

Is it not reasonable for a company dealing with the government to hire personnel best suited to deal with this type of work, and who have comprehensive knowledge of the laws and regulations that apply? Furthermore, when a firm hires an executive what skills is it seeking? The Riegel List of Executive Skills states an executive must:³⁵

1. Have the ability to perform the work of immediate subordinates (at least, ability to understand their work).
2. Understand the conditions and trends which affect the work of the unit and govern the services it should render.
3. Be able to plan operations, delegate duties to subordinates, and co-ordinate their work: (a) day to day planning; (b) long range planning.
4. Be able to select personnel for specific assignments.
5. Be able to train subordinates.

Are these the skills commonly attributable to an officer? Are they not those traits constantly evaluated of an officer throughout his/her military career? And wouldn't it be logical to assume that a high ranking ex-military officer would possess these skills to a high degree and therefore be sought after by large companies? Additionally, since officers are barred by conflict-of-interest laws from taking most jobs in the federal government, would they not seek civilian jobs relating to military acquisition/procurement in which they have been trained for 20-30 years?

Robert W. Brooksbank, an executive with Mobile Oil Corporation, expressed this point of view as follows:³⁶

These men (military officers) have a good threshold, particularly in sales jobs. . . . They have good command presence and they come through strong as solid citizens with whom a person can identify.

Furthermore, dual military-business careers are not unique in contemporary society. A University of Texas graduate student writing on the subject found considerable historical precedence for what he referred to as the "current phenomenon." He also observed that the military man's leadership, management and organization abilities were his greatest contribution to business enterprise.³⁷

Conflict of interest does occur, but it is the exception not the rule. There exists adequate checks and balances on the components of the "complex", with a majority oriented toward defense contracting, such as:³⁸

1. Defense Contract Audit Agency
 2. Deputy Comptroller for Internal Audit in the Office of the Assistant SECDEF (Comptroller)
 3. The Directorate for Inspection Services
 4. The Internal Audit Agencies of the Military Services and the Defense Supply Agency
 5. The Inspector General activities of the Military Services.
- Additionally, there is an almost infinite number of laws, rules, and regulations by which members of the MIC must abide, such as:
- a. Federal statutes relating to claims against the government, bribery, graft, undue influence, receipt of retired pay, etc.
 - b. Renegotiation Act
 - c. Conflict of Interest Laws
 - d. Dual Compensation Laws
 - e. Defense Production Act. of 1950

- f. Armed Services Procurement Act of 1947
- g. Armed Services Acquisition Regulations
- h. Armed Services Board of Contract Appeals

Roger Lewis, President of General Dynamics Corporation, which employed 113 retired officers in 1969--about one tenth of one percent of its total employees--stated he personally kept a "careful eye" on the placement and activities of retired officers in his company. He further stated: "We realize that we must be above suspicion. We use common sense in selecting our employees, and good administration in using them."³⁹

This attitude makes sense, for each defense contractor must maintain accurate records on the numbers of ex-military personnel it employs.

Thus, the relationship of retired officers to defense industries has not been shown to constitute a significant role in our society, nor to expand the import of the "complex" on society. Statistical evidence, typified in Chart VII shows the military job migration to industry to be less than even the critics anticipated.

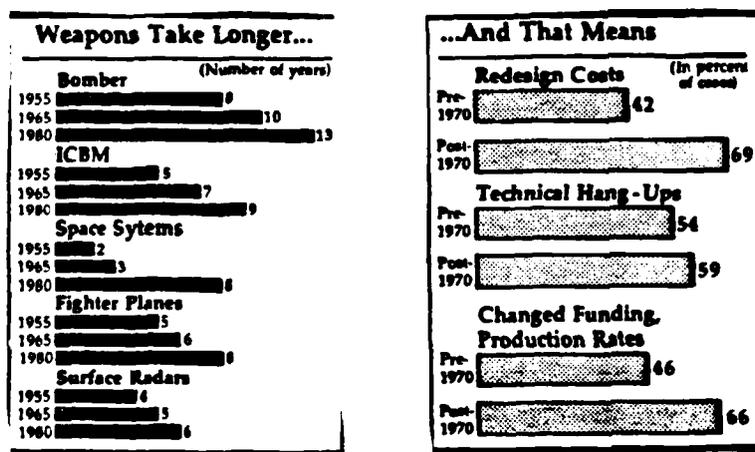
WASTEFULNESS OF THE "COMPLEX"?

We now shall approach the question of the "wastefulness" of the Military Industrial Complex. Certainly, mistakes have been made, from the C-5A to the F-111--however they were exceptions, costly yes, but ones from which we also learned valuable lessons. On large, complex, high-technology programs such as these the risks are high, and so is the visibility.

The story of the C-5A cost overruns is familiar to most of us. The C-5A expanded in cost from \$3.4 to \$5.2 billion and eventually

brought Lockheed to the brink of bankruptcy, to be saved only by governmental financial assistance. Senator Proxmire and his followers cited the C-5A as a prime example of the "evils" of the complex. The saving of Lockheed by the government brought cries from many additional sources as well. The military, in their part pointed out there was bound to be some waste in a system as complex and as variable as weapons procurement. Charges in technology or political atmosphere bring resultant changes in requirements for weapons. Further, it takes more time to build weapons now than it did in the 50's and 60's--50%-100% longer--and complex systems are worse.⁴⁰ (See Chart VIII)

Chart VIII



Source: Wall Street Journal, March 1, 1983

As for "bailing out" a partner in trouble, the Federal government pointed out as a matter of policy it had financed losses incurred by defense contractors in the past. For example, at the time of Lockheed's financial assistance, the government had approved 2,553 similar requests for financial aid totalling \$55 million during the period 1960-1968.⁴¹

Let's take a closer look at Lockheed and the Pentagon. Lockheed's disputes with the Pentagon were as follows:⁴²

1. C-5A--Lockheed expected to sell 120 airplanes thereby making up for loss sustained on the first 58 planes, under a repricing formula; the Air Force decided to buy only 81 planes, wherein Lockheed asked for \$435-500 million in relief.

2. Cheyenne helicopter program--cancelled by the Army in 1969--Lockheed claimed \$110 million was owed, and asked for \$45 million in relief.

3. Destroyer escorts and amphibious floating docks--company claimed Navy owed \$175 million--asked for \$85 million in relief.

4. Short Range Attack Missile (SRAM)--Lockheed was building the rocket motor, claimed \$50 million was owed, asked for \$25 million in relief.

Lockheed, announced 1 February 1971 that it would accept DOD's demand it take a \$200 million loss on the C-5A in return for financial assistance from the Federal government. In return for yielding to the governments demand Lockheed received an estimated \$781 million in federal funds as settlement for unresolved contracts. This settlement was estimated to have cost Lockheed \$480 million before taxes.⁴³

One additional comment concerning the "wastefulness" or more positively stated the effectiveness of the Military Industrial Complex. Jacques S. Gansler addressed this issue by comparing the complex: (1) to other US government programs; (2) to many high-technology civilian programs; (3) to the Soviet Union's equivalent programs and; (4) to our European allies' programs.⁴⁴ In each case US defense acquisition management measured very favorably.

In short, the record has shown instances of poor management--it does not depict a record of wastefulness, profiteering or corruption.

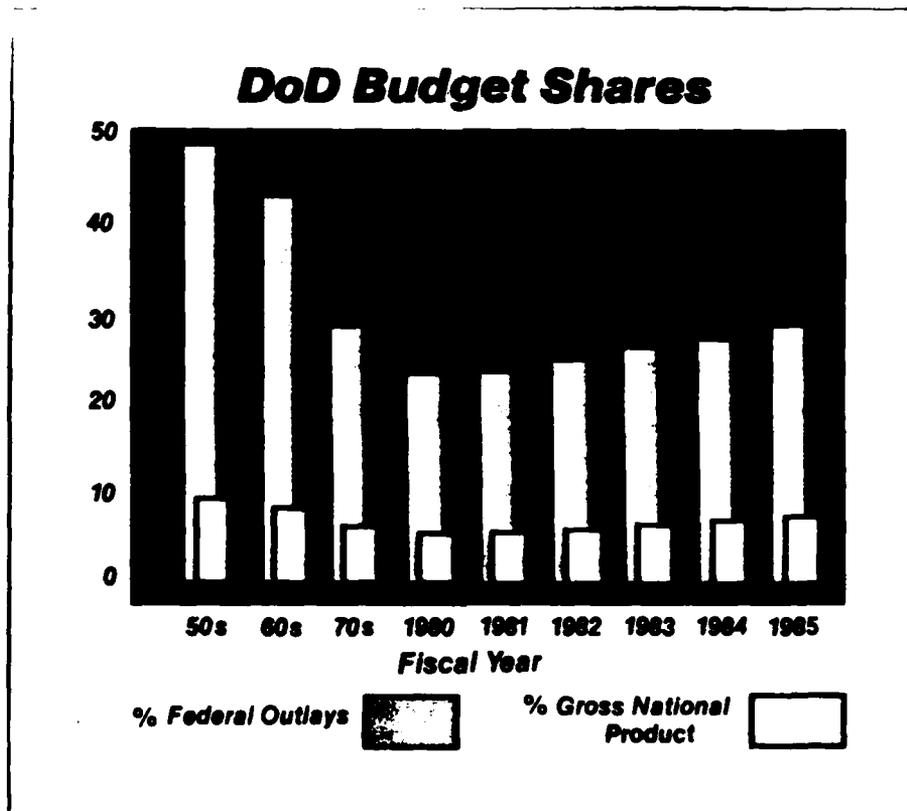
THE NATION'S RESOURCES AND THE "COMPLEX"

The final area to be discussed concerns the charge that the "complex" exerts too strong an influence on the nation's resources.

"Complex" critics contend that spending for defense, as a result of the Military Industrial Complex, is grossly out of proportion with spending for domestic needs. This "over spending" allegedly fulfills the desires of industry by insuring continued high profits as well as purportedly satisfying the military in that they remain in control of a subgovernment.⁴⁵

Lets take a look at the magnitude of defense spending in the US over the post several years and see what the record shows:⁴⁶

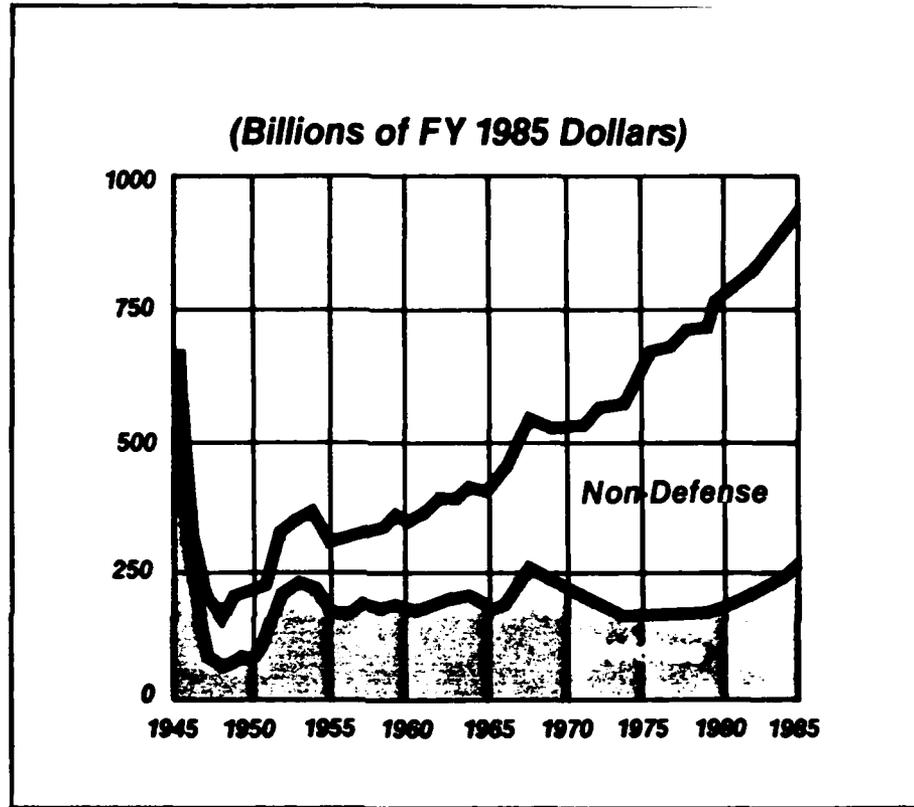
Chart IX



Source: Defense 84, March 1984, p. 17

Chart X

Outlays



Source: Defense 84, March 1984, p. 17

An analysis of the data reveals the following:

1. Defense share of federal outlays has dropped from an 48 percent in the 50's to less than 30 percent today.

2. Even with the recent build up, defense spending will for only 33 percent of the federal budget in FY 1989.

3. Non-Defense spending made up about 50 percent of total outlays in the 50's, now represents more than 70 percent of the

As for the argument that military spending is causing sky federal deficits the following administration rebuttal which a the LA Times responds:⁴⁷

Even with the Administrations planned buildup, the military share of the GNP will be only slightly more than, 7% by 1987. Administration analysis say down from the 8-9% share of GNP they say was typical in the 1950's and 1960's.

In their view, the tide of red ink in the federal budget is caused by the explosive growth in entitlement programs such as Social Security and Medicare-- 330% over the past two decades.

CHAPTER IV

A FINAL COMMENT

The Military Industrial Complex emerged as a relationship born of necessity. It continues to exist because it must exist in the real world of today's politics; there does not appear to be viable alternatives. The form of collective management evolved from the "complex" has made real contributions to the security of the nation. It is far from perfect, however, it has not been shown to be wasteful, corrupt or exercise too strong an influence on the nation's resources--John K. Galbraith once stated: "The root issue is not to make military power more efficient or more righteously honest. It is to get it under control."⁴⁸

The armed forces, who have borne the major portion of criticism against the "complex," must participate in the democratic process by voting and exercising their rights to individual expressions of opinion. We must participate in the decision making process by insuring that the duly elected representatives of the people, who are responsible for making decisions, are informed of the military implications inherent in the alternatives. By doing so and by living up to our "professional code of ethics" we can demonstrate the expenditure of public funds for the nation is being wisely and judiciously spent.

It is the responsibility of decision makers, military and civilian, to insure the "complex" will never erroneously shape national policy or spend a disproportionate share of the national product to defend against false threats. It is everyones responsibility--citizen, politician,

soldier, industrialist, scientist, newsmen, etc. to see to it the "unwar-
ranted influence" of the complex never becomes a reality and poor
management practices and cost overrides are not the rule, but the excep-
tion, and the exception few and far between. As Gansler commented:⁴⁹

George Washington warned against an overflowing
military establishment, yet he assured that we were
ready to fight for freedom. Dwight Eisenhower
warned against the potential dangers of the military
industrial complex, while advocating strength.
Today Senator Proxmire and others continue to advo-
cate improvement while recognizing the real need
for a strong defense posture.

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