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THE ECONOMICS OF NATIONAL SECURITY

Dr. Louis Hunter

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Reviewed by: Colonel Tom W. Sills, USA

Date: 29 September 1959

INDUSTRIAL COLLEGE OF THE ARMED FORCES
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THE ECONOMICS OF NATIONAL SECURITY

25 August 1959

CONTENTS

Page

SPEAKER--Dr. Louis Hunter, Member of the Faculty, ICAF . . . 1

GENERAL DISCUSSION. 31

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Reviewed by Colonel Tom W. Sills, USA, 29 September 1959.

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THE ECONOMICS OF NATIONAL SECURITY

25 August 1959

DR. HUNTER: General Mundy, General Houseman, Admiral Patrick, Gentlemen: My subject this morning, as the chart indicates, is "The Economics of National Security." This rather forbidding title was chosen because it comes about as close to describing the overall content of this course as any single phrase can. It is not economics, pure and simple, for of courses there is no such thing. It is economics combined with politics and administration, with geography and psychology, and with many other related matters.

My purpose this morning is a relatively simple one. I want to give you some further idea of what our course of study involves and particularly to indicate why it is important that the military--and not only the military, but all civilians in all agencies concerned with national security--understand the subject with which this course of study deals.

Let's start, then, with the first topic in our outline: Definitions. The art and science of war breakdown into the three familiar divisions of strategy, tactics, and logistics. As a baseline for our discussion, let's take a look at the conventional definitions of these terms as provided by Webster:

"Strategy: The science and art of employing the armed strength of a belligerent to secure the objects of war." Strategy, of course, determines the overall plan for the conduct of defense or war. It defines the larger military objectives and outlines the means for attaining them. It supports the political objectives or goals of the Nation.

"Tactics: The science and art of disposing and maneuvering troops or ships in action or in the presence of the enemy." In short, tactics is concerned with the conduct of military operations, combat operations, in order to attain strategic objectives in support of national goals.

"Logistics: That branch of the military art which embraces the details of the transport, quartering and supply of troops." It is, in other words, the job of logistics to provide the ammunition, the food, the clothing, and all the equipment essential to place military forces in the field and to support them in combat operations.

All this is, of course, very commonplace. The thing I want to stress here is that two, at least, of these basic military concepts have taken on new content and new meaning during the past generation, especially as the result of the experience during and since World War II. Like so much of our military inheritance, these concepts have been overtaken by obsolescence and are out of touch with the times.

Strategy, as conceived today, goes well beyond the traditional meaning of the term as defined by Webster. His definition, as you will note, centers on using the armed strength to secure the objects of war. Let us take a look at the current definition as given in the "Dictionary of United States Military Terms for Joint Usage."

"Strategy--The art and acience of developing and using the political, economic, psychological, and military forces of a nation, during peace and during war, to afford the maximum support to national policies in order to increase the probabilities and favorable consequences of victory and to lessen the chances of defeat." Let me repeat the first part of this statement: Strategy is the art and science of developing and using the political, economic, psychological, and military forces of a nation during peace and during war to afford the maximum support to national policies.

Logistics, too, has taken on a new and a far broader meaning than in the past. In the traditional concept, as defined by Webster, the production and procurement of military supplies are not mentioned. These vital functions of supply are either ignored or taken for granted. Under the traditional concept, as you will recall, logistics was largely limited to supply operations in the field. Now, as a result of experience in the two world wars, logistics is commonly considered to include not only supply in the traditional sense but the procurement, production, and

distribution of all military supplies and equipment as well. In fact some thinkers and writers in this field include under logistics the entire industrial and economic base of military operations--in short, the national economy. I shall not take time here to quote the "Dictionary of United States Military Terms for Joint Usage" definition of logistics. It runs to eight full lines. Look it up at your leisure.

Now that we have seen what recent experience has done to strategy and logistics, let's take a look at what I've called the economics of national security, the term which, as I suggested earlier, pretty largely covers the substance of our course. At first thought, the definition seems to present no very great problem. In general scope, at least, economics today is pretty much what it was back in the time of Adam Smith. It is the science of society concerned with the production, distribution, and consumption of wealth.

But, what is national security? Neither Webster nor the Dictionary of U. S. Military Terms will give us help on this one--or very much help. Perhaps the best way to handle this definition is to describe national security in terms of postwar usage. Let's see who is responsible for national security as of the past 15 years. Prior to World War II, national security was conceived almost wholly in military terms. The protection of the Nation was thought of almost exclusively in terms of military defense, and this, of course, was the

business of the War and Navy Departments. Specialists in foreign relations and members of the Foreign Service would insist--and quite rightly--that foreign policy, the conduct of foreign relations, and the State Department have always played important roles in national security. Yet I think it is fair to say that most Americans prior to 1941, most of the time, thought of national security almost wholly in terms of military defense by armed forces.

In a later lecture I shall give more detailed attention to this matter. Here I simply wish to make the point that since 1945 national security has been conceived in far broader terms than military defense. Within the executive branch since the passage of the National Security Act of 1947, responsibility for national security has been shared in a direct and active way by one-half dozen major agencies. In addition to a vastly expanded peacetime military establishment and the Department of State there are:

the National Security Council

the Central Intelligence Agency

the Office of Civil and Defense Mobilization, and

the Atomic Energy Commission.

In the Federal budget today, we will find the expenditures of all these agencies (and of some lesser ones) grouped together under the heading "National Security Expenditures."

Of course, personnelwise and dollarwise, the Department of Defense is by far the largest of the agencies concerned with national security, but responsibility and influence in this area are distributed much more evenly among the agencies I have named than this would indicate.

Perhaps the simplest way to grasp the meaning of the economics of national security is to translate it into a basic economic symbol that we can all understand--the dollar.

This brings us, then, to the second topic in the outline: The Dollar Dimensions of National Security. What does national security add up to dollarwise? What does it cost? As a baseline for comparison, let's take our military expenditures in a relatively normal more or less peacetime period--the 1930's. In the 1930's, of course, there was no such thing as foreign aid; there was no atomic energy to pay for; no civil defense. Military expenditures, therefore, were pretty close to total national security expenditures.

CHART

As the chart shows, the average annual expenditures for the military establishment, 1930-1939, were just under $1 billion, or approximately one-seventh--say 15 percent--of the total Federal budget in these years. Now, you will recall that by the end of 1946 the wartime military establishment was pretty well deflated, yet the

entire Federal budget, which averaged $6.6 billion in the 1930's, rose to an average of $38 billion for the four years 1947-1950. Even allowing for price changes--wholesale prices doubled in the meantime--this represents a threefold increase over Federal expenditures in the 1930's.

Now notice what happened to military expenditures in these same years. From a $1 billion average in the 1930's, they are up to an average of $12.4 billion for 1947-1950--but note this figure isn't on the chart. Allowing for the doubling of prices, this gives us a sixfold increase in military expenditures since the prewar period; and these expenditures have risen from 15 percent of the total Federal budget in the thirties to 32 percent in the late forties. And, if we add to strictly military expenditures the new items of foreign aid, atomic energy, defense mobilization, and all the other related items, the total for national security reached the annual average, 1947-1950, of $18 billion--nearly one-half of the total Federal budget--to be precise, 47 percent.

Moving on, let's skip the Korean War, with its abnormally high expenditures, and see what we have for the fiscal years 1954-1958. Here again the chart shows, annual average expenditures for military and other national security expenditures rose to $42.5 billion, a threefold increase over 1947-1950, and national security now takes a bite of 63 percent out of the Federal budget.

Let us take one more step in getting military and other national security expenditures into perspective. How big of a load do these

many billions spent annually for national security place on the national economy? How big a bite do they take out of the total production output of this Nation? The term used in measuring this, as doubtless most of you know, is gross national product, abbreviated, usually, GNP. The gross national product is simply the total value of all the goods and services produced in the Nation during the year. It is, in other words, a quantitative measure of the output of the Nation's economy.

CHART

In the 1930's, as this chart shows, national security expenditures, which, as you will recall, were then virtually the same as military expenditures, accounted for only 1.3 percent of the gross national product. Between World War II and the Korean War, they rose to approximately 7 percent and the fiscal years 1954-1958 they climbed to the higher figure of 10.5 percent. Incidentally, the comparable figure for the USSR today is about 20 percent.

Whether you regard these postwar years as a period of peace, of cold war, or of competitive coexistence, this is a really terrific statistic. Fully one-tenth of all the goods and services produced in the richest, most productive economy in the world is devoted to national security in a period of nonwar.

Two further points and we'll have done with the dollar dimensions of national security. So far, I have been talking simply of expenditures

in a nonwar period--the years before and since World War II. In wartime the expenditures are, of course, tremendously greater. From 1941-1945 our war expenditures averaged, in round figures, $70 billion annually, amounting to over 40 percent of our gross national product of that period, a gross national product, too, which rose during those five years 50 percent.

The nations most fully committed in the war against the Axis, Britain and the USSR, devoted each approximately one-half of their gross national product to the prosecution of the war.

Finally, as of 1955, the Federal Government--all agencies--held property having an estimated cost of $155 billion, a sum equivalent to three-fourths of the current assets of all the nonfinancial corporations of the United States--and approximately three-fourths of this tremendous federal property is held by the armed services.

Dollarwise, then, it is very plain that the economics of national security represents not only literally colossal annual expenditures but correspondingly vast business operations and property holdings by the several departments of the Department of Defense.

Throughout the 10 months of this course, the vital relationship between national security and the national economy will be continually stressed. It is not simply that the national economy, with its vast and intricate productive resources, is vital for the Nation's security. The

great expenditures for that security have hardly less vital implications for the healthy, effective operation of our economic system, implications which go far deeper than the issue of balancing the budget.

This means, then, that the military departments have economic responsibilities of the first order. It means, also, that a new dimension has been given to the art and science of warfare. The mastery of the military profession in our times requires at least a general familiarity with and an understanding of the economic system and its working, for the economy is a major source and an indispensable foundation of military strength and national power.

Now, in the first two topics I have been dealing with relatively straightforward, factual material about which there will be no great argument, I suppose. But in the remaining three we get into somewhat deeper water. Here we will be dealing with matters which, in some important respects at least, are very speculative and highly controversial.

Our next topic is: The War Economy. I shall give attention chiefly to industrial and economic mobilization, for these are the processes by which the economy is placed on a war footing.

In considering economic mobilization, we are on reasonably safe ground in dealing with the past, safe in the sense that we have a fairly reliable picture of what happened in two World Wars and in Korea, both

as regards economic mobilization and the operation of the war economy. But we can have no great assurance of the validity of this experience in these earlier wars as it applies to the future and the conditions which lie ahead of us.

Whatever the role of economic mobilization in the future, an understanding of its major problems and conditions is indispensable to an understanding of the relationships between the economic factors and warfare in our generation. The concept of economic mobilization is in essence a relatively simple one. It is an adaptation of a 19th century military term. To mobilize is to place in movement, and, in the traditional military sense, to mobilize is to assemble and place in a state of readiness for active military service.

Prior to 1914 military mobilization was a relatively simple matter. When a war crisis developed and the avoidance of war seemed unlikely, mobilization notices were posted or sent out. The reservists put on their uniforms, took their arms from the closet or from over the fireplace, and hurried to their assembly points. The assembled units then moved to designated points of duty in the field--and the war was usually under way, because, once mobilization had been ordered, it was very difficult to reverse.

Now, because of the limited duration and intensity of the fighting, and because of the simplicity of the weapons used in 19th century and

earlier warfare, the role of industry was important, but it was often critical. The relatively slow tempo of warfare enabled supply to keep up with demand without resort to extraordinary and unusual economic arrangements.

World War I changed all this, and it is not difficult to understand why. In the generation before 1914, the ground was prepared for the mechanization of combat and supply, and this mechanization was based on the mass production of weapons. I need only mention the machine gun, the breech-loading field gun, the automotive field transport, the first aircraft and tanks, and, of course, analogous weapons and equipment on the naval side, of which perhaps the most significant innovation was the submarine. Supplied with these new weapons and equipment, as you will doubtless recall, armies measured in millions of men were mobilized and placed in the field on battlefronts hundreds of miles long.

Under the conditions of the new mechanized warfare, the consumption of munitions and other supplies of all kinds was simply incredible. It was completely unexpected, and there were no plans and no preparations for coping with or for dealing with such colossal requirements among the belligerent powers. Before the war was many months old, the belligerent powers were faced with supply crises which increased in number and seriousness, and it soon became evident that the outcome of the war might be determined largely by the ability to out-produce the

enemy in munitions and other critical war materiel. Production then assumed an urgency never before known in wartime, and industry became a critical and a major component of the war effort.

It was as a result of this exhausting experience that the practice and the concept of industrial mobilization were born. To realize how exhausting this experience was, you have only to read the books dealing with the matter written on the First World War. Remember that to mobilize is to place in movement to a state of readiness for war. With industry, the movement is from a condition of producing civilian goods of peacetime to one of capability for turning out military supplies, equipment, and munitions of all kinds. This changeover of production from civilian to military goods is tremendously difficult. It is very painful; it is very time-consuming; and it very costly. Many months of leadtime are required to ready a plant for war production, and many more months, usually, to get it into full production. In both World Wars I and II, it required nearly two years fully to mobilize the American economy for war. Indeed, in the First World War, the full shift to a war economy had hardly been completed when the war came to an end.

Of course, it is obvious that industrial mobilization doesn't stop with plant conversion from civilian to military production. Production of military end items has to be supported by expanded production of a wide range of goods: raw materials--steel, copper, aluminum, rubber,

and all the rest; new equipment--machine tools and all kinds of other machinery and industrial equipment; components--such as antifriction bearings, fractional horsepower motors, valves, and so on. No need to call the roll further. Everything needed in peacetime is required in vastly greater quantities in wartime to support war production. This includes especially new capacity, more plant facilities, more manpower. Shortages quickly develop and create bottlenecks, and these multiply and slow down the expansion of production and output.

Now, these problems of shortages, expansion, bottlenecks, and so forth are not limited to the manufacturing industry. They quickly spread to other areas--to transportation, shipping, power, public transit, banking, retail and wholesale distribution, and the service trades and all the rest. In short, the entire economic system quickly becomes involved in the defense or war effort. Not manufacturing alone but all the productive resources of the Nation have to be mobilized in support of the Armed Forces and the military effort. Industrial mobilization to be effective, in other words, has to have the backup of economic mobilization.

This, then, was the vastly broadened and deepened kind of warfare introduced and practiced first in World War I.

Now I want to take a closer look at this war economy, mobilized in support of war industry. To understand the war economy, we must

start with the normal or nonwar economy, which in this country we call the free-enterprise system--more precisely, the private-enterprise economy. Let me call your attention to several of the more distinctive features of this private-enterprise system so that we can see the extent to which they are changed in a war economy. In the first place, in this system property is privately owned--in contrast with those economies in which a large part, if not all, of the property is owned by government. Second, the private-enterprise system is one in which the main driving forces are self-interest and profit seeking. The profit motive provides the dynamics of our system of production. Thirdly, our system is one in which the basic decisions are made by private individuals and by private business organizations, and not by government officials and government agencies, except in certain limited areas. These basic decisions have to do with what goods and services shall be produced and, of course, consumed; in what amounts and with what characteristics and qualities; how much horsepower; how much chrome; at what prices these goods and services shall be bought and sold, and on what terms. All these and many other related decisions are being made daily, literally billions of decisions; and they are being made by all of us, whether as producers or as consumers or as middlemen of one sort or another. Fourth, in this private-enterprise economy of ours, coordination--that is, the balancing of supply and demand for literally millions of

different kinds of goods and services--is provided by the more or less automatic operation of the market, and upon it depends the stability of the economy. What we call the market--and of course there are a thousand-and-one markets, all interrelated--provides the balance and the essential stability so essential to the efficiency and to the healthy functioning of this kind of an economic system.

I give this thumbnail sketch simply to show in the very broadest of terms how the war economy, brought into operation by the process of industrial and economic mobilization, differs from the free-enterprise economy in its normal functioning. In some important respects the economy remains unchanged. Private property continues to remain privately owned and controlled; but the freedom of the owner to use his property is restricted in a number of ways. Likewise, self-interest and profit-seeking continue as the main driving force in the economy, subject, it is true, to an increasingly wide variety of controls. But, while we keep private property private, with some qualifications, and while the profit motive is not only kept but given considerable elbow room, in two other respects radical changes are introduced.

First, in the war economy, the basic decisions are not made by private individuals and by private business organizations. They are made by governmental officials and by governmental bodies. These determine what shall be produced and what not produced, and how much,

and in what order of priority, and, of course, for whom. Government officials and agencies determine what prices shall be charged and paid. They fix the level of rents, of profits, of salaries and wages. They make decisions in one-hundred-and-one related matters. In short, not businessmen, not wage earners, not consumers, not property owners, but Government is in the driving seat of the economic system. Businessmen and business organizations, workers and consumers still make decisions, important decisions, it is true, but these decisions are made within the framework of policies established and administered by the Government.

There is a second major economic difference between the war economy and the normal functioning of the private-enterprise system. In the war economy the Government assumes responsibility for stabilization, for giving the economy the stability so essential for its effective operation--for example, by countering the powerful inflationary forces inherent in a wartime situation. Normally, the market--as I have indicated--serves as a kind of automatic stabilizer, keeping the system in a condition of equilibrium. That is, through the market, supply and demand throughout the economy are kept in fair balance most of the time.

Now, in a war or defense emergency, this automatic stabilizer breaks down. The economic machine, so to speak, loses its balance

wheel and governor, and is in danger of running wild. It breaks down simply because with virtually unlimited demand and with very limited supplies the market simply can't bring the two together; it can't bring about a balance between them. So government has to step in and provide artificially, by a variety of means, the stability that under emergency conditions the system itself can no longer provide. And you will recall well enough from World War II and the Korean experience the varied devices employed by the Government for this purpose--price controls, wage and rent controls, monetary and fiscal controls, materials and manpower controls.

What I have been saying the last 10 minutes about the war economy adds up to this central, major fact: It is a planned economy; it is a controlled economy; it is a centrally directed and managed economy with the Government in charge.

This brings us to our fourth heading: The Impact of Nuclear War. Here we leave the fairly sure but more or less obsolescent experience of recent wars and take a quick look into the future. Note that I say "more or less obsolescent experience." Just here is the catch; we simply don't know how useful or how useless this experience may prove to be. We start, of course, with The Bomb. The bomb introduced uncertainty and confusion into every phase of national security planning, in the economic hardly less than in the political field. Our difficulties

didn't really begin until the USSR obtained atomic weapons--their first in 1949, followed by a hydrogen device in 1953.

So we have had less than 10 years to grasp the implications for warfare of this most revolutionary of weapons developments. To explore these implications and to make adjustments to them in foreign policy, strategy, tactics, and logistics alike is, we have discovered, a very slow, very uncertain, and very painful process.

This morning I can refer only very briefly to some of the implications of nuclear warfare for the economic aspects of national security. At the present time, we are told, the United States and the USSR each have enough nuclear weapons to wipe out, if successfully delivered, the major population and industrial centers and the military installations of the other power. The prospect clearly is one of incredible mass destruction, loss of life, and suffering; of the disruption of our productive resources on a tremendous scale; of disorder and confusion, even chaos, in our society on every level. To illustrate, take the estimates of overall damage and casualties in an all-out nuclear strike on the United States as estimated in Operation Alert of 1956--and I take that estimate because it is in the clear. This was an unclassified exercise of the then Federal Civil Defense Administration. In this problem some 2500 megatons of nuclear weapon capacity were detonated on the cities of the continental United States. Estimated casualties:

82 million dead, 24 million surviving injured; industrial production brought virtually to a halt; at D plus 12 months, production still less than one-third of preattack capacity.

Here then, we have the possible scale of a nuclear war. What meaning does it have for economic mobilization and the war economy? One widely held view in this controversial area holds that nuclear weapons have for all practical purposes eliminated industrial and economic mobilization as methods of placing the military resources of the Nation in a state of readiness. In their traditional forms, you will recall, industrial and economic mobilizations take time, many months of time. Yet a sudden massive nuclear attack upon the major population, industrial, and business centers of this country may wipe out the greater part of our productive capacity in a matter of days, if not hours; and the active military phase of the war may be over in a matter of weeks, if not days.

Under such conditions, obviously, industrial and economic mobilization as we have known them can have little, if, indeed, any, effect upon the outcome of the war. It follows, therefore, that a full nuclear war will have to be waged in the main, perhaps entirely, with the forces and weapons in being--which means primarily SAC and its naval counterparts, the Air Defense Commands, and so on.

I need not discuss here the impact of this drastically changed strategic situation on the various aspects of national security planning--the repercussions in the various sectors of the defense programs. You are all more or less aware of them in some degree, at least, and you will hear a great deal more about them during this course.

During the past several years there have been many persons--some in high official positions--who, as I say, have taken a rather dim view of the future usefulness of economic and industrial mobilization in dealing with major emergencies. Of course this view may turn out to be a mistaken one, and it is not so widely or firmly held today, it seems to me, as it was several years back. See, for example, the article, "Tomorrow's Strategy," in the London Economist of 8 August, this year. Conceivably--just conceivably--there can be another war which in magnitude and major characteristics will be very similar to World War II. In such event, or in case we have a major minor war of the Korean type, our experience in economic mobilization should be in many respects applicable.

Let us suppose, however, that the all-out nuclear war that has been uppermost in our minds actually occurs. We will undoubtedly have to mobilize, but it will be a post-attack mobilization, and what we will mobilize will not be the war economy, as I described it earlier, so much as a disaster economy. This disaster economy will be, inescapably

(unless we revert to primitive savagery) an economy planned, controlled, and directed by the Government. And the mobilization and management of a disaster economy will be undoubtedly far more drastic and sweeping and far more complete than any economic mobilization the world has known to date. The interest of the military, the role of the military (and indeed of all agencies concerned with national security) I leave to your imagination. Their role clearly will be a major one, if not the central one.

This brings us, then, to the fifth and last point in our outline--the Economics of Competitive Coexistence. This is an aspect of the cold war which has come increasingly to the fore, as you know, during the past several years. Much of Mr. Dillon's lecture of yesterday bore directly or indirectly on this aspect. Here we have to deal with the whole broad field of economic foreign relations and economic foreign policy. Here we are concerned, although somewhat unwillingly, from the taxpayers' viewpoint, with the economic problems, conditions, hopes, and plans of many other parts of the world. We are concerned here with nations ranging at one of the scale from Communist China and Republican India, with their tremendous development programs, to the large number of economically backward and underdeveloped countries and peoples of Asia, Africa, the Middle East, and Latin America.

In this area of competitive coexistence, too, we are deeply concerned with the problems, hopes, and plans of our Allies in this field, as well as with neutrals, in Europe, with the impressive advance of the European Economic Community, with the related Coal and Steel Community, Euratom, and the Common Market, with the recent formation of the European Free Trade Association--or the Outer Seven--with problems and programs of economic rationalization and growth in nearly every country in Europe.

Now, the reasons for this widening interest in economic developments elsewhere are fairly clear. Economic development has become a major area of conflict. Many believe that it is the major area of conflict in the cold war during the years immediately ahead. With the prospect of continued nuclear parity or stalemate, whichever phrase you may prefer, the contest for the uncommitted nations and peoples of the world may well be resolved not so much on the military and technological levels as on the economic and related institutional levels. Many have remarked, for example, upon the peculiar attraction and appeal for underdeveloped peoples of the Soviet method and plan for economic development, an attraction based evidently in considerable part on the similarity of economic conditions and problems and the similarity of political and cultural backgrounds. Similarly, the institutions of private capitalism, along with civil liberties and democratic government, often have little meaning or appeal for these same peoples.

In this area of the cold war, we as a people need to do some hard and, I'm afraid, rather painful thinking--for thinking usually is painful. At times we have shown no very great understanding of or, indeed, interest in the economic institutions, interests, attitudes, and needs of our Allies and of our friends among the uncommitted nations. Our national level of sophistication in economic matters is not a very high one. For the most part we recognize only one standard of validity--the American free-enterprise system. This is the yardstick by which we tend to measure the economic institutions and achievements of other countries. This is the goal toward which we seek to bend their efforts. This is the evangelical message which we urge unceasingly upon others. This is, in my view, a very naive and unrealistic, indeed a very uninformed way in which to view economic institutions and economic behavior. Economic institutions, unemotionally seen, are a means to an end; but we often tend to regard them as an end themselves toward which all right-thinking people should work. Because certain ways of doing things in the production and distribution of wealth have served us extraordinarily well, because they have brought us what we like to regard as the highest standard of living in the world, we have come widely to hold the conviction that our economic institutions will serve others equally well and both can and should be taken over by them, preferably without change. And we are very critical of other peoples for not adopting them.

Take, for example, what we like to describe, and condemn, as socialized medicine. Even very mild measures for providing medical care through government or community agencies in this country are widely denounced as a threat to the American way of life, as antidemocratic and as an unmitigated evil. Now, quite possibly, for us they are all of this. The issue is, of course, arguable. Yet mature judgment requires us to recognize that a number of advanced nations in other parts of the world do not find so-called socialized medicine incompatible with democracy. For example--the Scandinavian countries and Britain.

Let me cite another more comprehensive example. Consider the different ways in which several nations faced and met their postwar problems of economic recovery and adjustment. The American way, as you may possibly recall, was quickly to toss overboard the elaborate wartime machinery of economic controls over prices, materials, and all the rest. "Let's get back to the free-enterprise system" was the widespread demand--"let's get rid of Government controls." And we very quickly did.

At the other extreme was the USSR, with its tightly regimented control and direction of every segment of economic life, including the direction by government from Moscow of every important branch of industry.

In between these two extremes falls the experience of most other countries. For example, in the United Kingdom and in Norway, private ownership and management of business enterprise were kept, in the main, but combined with these were important measures of centralized government planning and direction of the national economy, together with stringent controls over major economic activities as a means of implementing the overall economic program.

Or take West Germany. At the end of the war it was assumed by most of the experts, including the U. S. occupation authorities, that the tightest of economic controls would be essential for the rebuilding and recovery of the West German economy. But the German Government, under the party in power, quickly threw off the greater part of the wartime controls. It greatly reduced, although by no means eliminated, the role of government. It gave private business a large measure of freedom of operation. In effect the reconstruction of the West German economy was placed in their hands.

Here, then, we have a variety of ways of dealing with a common problem--although, of course, conditions varied widely from one country to another. Now let's see what happened as measured by national income trends following the war.

CHART

On this chart I have arranged index numbers for national income in constant prices (to rule out the effect of price changes) with 1948 income for each country taken as 100. (These data are taken from the U. N. Statistical Papers.) It is unnecessary to go over these figures in detail and it is, of course, important to keep in mind that flat comparisons taken out of the context of conditions in each nation can be very misleading. But these data on their face do raise questions and pose problems. Why did the most rapid economic growth occur in the two continental nations of West Germany and the USSR, employing diametrically opposed methods?

This much, I think, it is fair to conclude from these data: There is no single, clear-cut formula for dealing with major economic problems, whether this is the formula or ideology of free enterprise or that of communism.

To sum up: If we are to understand and be successful in practicing the economics of competitive coexistence, we must rise above the popular level of economic thought which leans heavily on outworn cliches and threadbare slogans. Too, we must rise above the level of that theory which has slight relevance to current economic practice, however attractive it may be on the theoretical plane. We must avoid doctrinaire solutions to the problems which we and other nations face.

It is time now to wind up these remarks with a few concluding observations. To be quite honest, "few" means another five minutes before you get the cigarette break. I have covered a lot of ground in the past 45 minutes, and I shan't attempt a recap. The transcript will be available for consultation in the library within several days, in accordance with our usual practice.

We have been concerned here this morning with getting an overall view of national security, seen chiefly in its economic aspects. It has become increasingly evident since 1945 that national security has come to mean far more than military defense and military capabilities. It is clear, too, that the economics of national security comprises far more than economic mobilization and the industrial backup of the Armed Forces. National security is compounded of many elements, of which military capabilities, for their importance, are only one. Of special importance for most of you here, the responsibilities of the military profession clearly extend far beyond the traditional boundaries of military learning and skills.

The focus of our course of study is the economics of national security, considered primarily in its applied rather than its theoretical aspects. But the national economy does not function in isolation; it does not operate in a vacuum. It functions within American society, within the context of our total culture. Today especially, economics is closely

interwoven with and interdependent upon politics, administration, national morale, national idealisms, science, technology, and many other things.

It is very trite but no less important for all to remind ourselves, too, that the economics of national security extends far beyond the boundaries of the United States. The American economy functions within the framework of the world economy and can be understood only in relation to the functioning of that world economy, quite apart from the economics of competitive coexistence, recently preoccupying us so much. This year the Overseas Trip Program will give new meaning and emphasis to the international economic elements bearing upon our national security.

It is hardly necessary, perhaps, to point up further the importance of an understanding of the economic facts of life for all concerned with national security, but especially for the military. The facts themselves have provided almost daily headlines for 20 years. I say "especially for the military profession" because military cognizance and responsibilities in this area are quite recent--from a peacetime viewpoint one might almost say since 1945.

Prior to World War I, the peacetime role of the military in national affairs was, with some minor exceptions, negligible. Living in their little isolated worlds of scattered army posts and naval stations, they

were largely ignored or regarded with indifference by the bulk of the population. Their relation to both the political life and the economic affairs of the Nation was slight, the impact of the military budget upon the national economy unimportant. If the military profession of that day was in the main ignorant, indeed, illiterate, in economic and related affairs it did not greatly matter, perhaps.

All this has changed, and changed drastically, since our involvement in World War II. The economic operations and responsibilities of the Department of Defense, as the figures indicate, are literally tremendous. More than this, the one time fairly clean-cut separation of war and peace no longer exists, and it has probably gone forever. Hot war and cold war merge imperceptibly into each other. We have no assurance when we take up the morning paper that some new incident of aggression will not have been brought to an international boil. War is waged as aggressively, too, on the economic and propaganda fronts as on the traditional military ones. Clearly the day has passed when the major peacetime preoccupation of the military was with the preparation of color plans and the study of historic campaigns.

Whether you like it or not, in the course of your official duties you are all compelled to act as economists, as political scientists--believe it or not, to act as cultural anthropologists and demographers. The question is simply this: When faced with situations calling for some

knowledge and understanding in these areas, will you be guided by folklore, mythology, by quaint period pieces of obsolete ideas and erroneous facts? Or will you at least be knowledgeable enough to be aware that a problem exists and discerning enough to bring the best professional talent and knowledge to bear upon its solution?

Many of you bring to this school a considerable body of knowledge and understanding of at least some aspects of the economics of national security, and some of you undoubtedly have important experience gained in operations in this field. But unless you have been grossly misassigned, you have a great deal to learn and a great opportunity for learning. It is probable that many of you bring with you not only some knowledge and understanding but a considerable body also of obsolete, shelfworn, and more or less irrelevant facts and ideas concerned with economic matters, facts and ideas that have little meaning today, even if not positively erroneous. You will be faced with the common hazard, the practice of which we are all guilty in greater or less degree, of accepting and filing away in our minds the things which confirm and support presently held beliefs and opinions and of rejecting--consciously or unconsciously--the rest. This manifestly would be most unfortunate, for your work for the next 10 months is education, and education is a process which, by and large, leads us to change our minds--not to harden and fix our thinking in existing grooves.

The broad field of the social sciences, within which our course of study largely falls, is one filled with difficulties and frustrations. It is not an area of exact knowledge where truth and falsity, right and wrong are readily distinguishable, even with hard working and clear thinking. The firm conclusion reached only too often is that there is no firm conclusion. And with this plaguing uncertainty you must learn to live. But if firm knowledge and definite conclusions are often not to be had, understanding of the problems--some understanding--conditions and issues and of the limits of precise knowledge is open to all; but, of course, not without considerable effort on our part, for the difficulties to be overcome are great. Not only are the experts not in agreement in fields which are filled often with much controversy, but every one of us is equipped with a wide and varied stock of ideas and concepts which collectively in each area comprise a bias which often provides a very effective barrier to new ideas. With most of us, in the areas outside our specialization, facts, ideas, concepts, and theories are absorbed over the years on the whole in a very hit-or-miss, accidental fashion. In their collection we have probably given no great amount of systematic, careful thought, but these ideas have become part of us and often we defend them to the death, however obsolete they may be.

If during the coming 10 months you can determine and identify your biases in the field of our interests and have the courage to examine

them critically and, where necessary, modify them, if you advance your ability to distinguish between fact and opinion, to protect yourselves against the influence of your own prejudices and preconceptions--in short, to advance or acquire the habits of a fair measure of objectivity or detachment in your thinking--this may well have more future meaning and value for you than all the varied store of information and ideas which you will inescapably accumulate during these next 10 months.

Thank you.

COLONEL SILLS: Gentlemen, Dr. Hunter is ready for your questions.

QUESTION: Sir, in the discussion of war economy you were discussing mainly the restraints on management. I wonder if you would discuss the restraints on labor and your assessment of their effectiveness in World War II, and why we tolerated a strike situation at all.

DR. HUNTER: That's a nice order. Is Sam Hill in the audience? I'd like to get Sam for this. He's avoiding these things. Well, this is one of the areas where it is difficult to escape from a viewpoint which each one of us has built up, doubtless, over many years. This area of labor-management relations is, I think, one of the most interesting and significant in our whole program. These problems will be dealt with

and you will have an opportunity to hear them discussed from the viewpoint of both management and labor.

Just to make a couple of points on a rather large subject, the principle on which we have operated in this country in both mobilizations, for World War I and World War II, is to maintain things as usual as far as possible. That at first sight seems to be a rather unhappy way of dealing with a national emergency in which the life of the Nation, or a great deal of its interests, at least, is at stake. But, for example, in the private-enterprise economy there have been many who have insisted that we must take the profits out of war. The American Legion and certain other groups during the 1930's agitated very strongly in a movement to eliminate profits of war. The movement was considered in Congress at great length and no action was taken, because it was recognized that to take the profits out of war would be to eliminate the driving dynamics of our system. Therefore, we keep the profit system.

Well, similarly, if we keep the profit system, if we allow businessmen, industry men, to pursue profits as usual, we similarly have to allow other groups in the social order to pursue their interests, and labor, of course, seeks to obtain higher wages, stimulated, of course, by the fact of the higher profits that business is making. And, of course, the only means labor has been able to evolve for enforcing its demands is the strike.

Organized labor, and all the methods by which it functions in its relations with business, is one of the basic components of American society. Therefore, in wartime it is necessary to keep in mind that, unless you want to risk very great upsets in the functioning of your production economy, you've got on the whole to maintain the prewar structure.

To come more specifically down to the point of strikes, I think if you will look up the record of time lost in terms of man days by strikes during World Wars I and II and Korea, you will find that in wartime there is a decided slump, that the curve of time lost through strikes goes very sharply down during the period of war.

I can refer to these things only just briefly, but a great deal of attention will be given to that subject. It will be explored in considerable detail.

COLONEL SILLS: I might add to that that the Commandant is working with Mr. Hayes, who is a top labor official in Washington and is also a member of the Board of Advisers of the College, to see that you get adequate coverage this year on the labor-management problem.

GENERAL HOUSEMAN: From the labor point of view.

COLONEL SILLS: Yes, Mr. Hayes will give the labor point of view. You'll get adequate coverage of that.

QUESTION: Under this last item, No. 5, on Competitive Coexistence, yesterday we were told that the population of South America would double, from 300 million to 600 million, in 1980. I understand that it takes about $10,000 of capital investment to provide one job. If the population increases by 300 million, there's about $300 billion of capital investment needed to provide jobs for all those South Americans. Where is all that money going to come from?

DR. HUNTER: You are raising one of the most basic issues that all of the underdeveloped, or undeveloped, or backward countries--or whatever you call them--are faced with. At a given level of development, such as we have in many parts of Latin America, in a predominantly agricultural society, the national production goes largely into consumption for keeping people just alive. So there is very little left over to plough back into production in the form of machinery, equipment, fertilizer, better methods, and the like. The big problem is to give the underdeveloped nation a start in getting out of the vicious circle of having to consume virtually everything they produce themselves. In that initial stage, a large amount of the capital must come from the outside, privately supplied or supplied by governmental organizations. Once the economic growth can be started, they can get beyond the point where they are consuming nearly everything they produce. Then they can begin to salt back into production.

The big problem is in the intermediate stage, which your question refers to, where the population increase zooms upward as a result of the improved medical and public health facilities and it looks as though the ability to produce to meet the needs of that group cannot possibly reach the upper group. That is a problem we are simply faced with, and I haven't read of anyone who sees any very clear answer to it.

QUESTION: Dr. Hunter, you showed the United Kingdom, Norway, and Germany in your index numbers on one chart. During that period of time, 1950 to 1954, the United Kingdom and Norway were receiving military aid, but Germany was not. Would you care to comment on the effect of the military aid and the cause of the rise on the part of Germany almost comparable to that of the United Kingdom and Norway?

DR. HUNTER: That's a very interesting point, Captain. I am afraid I can't help you on it. I am not an expert in the areas which I dealt with. I was simply interested in these developments and to note the diversity without being in a position to discuss, except in very general terms, some of the causes for these. As to the point you raised with reference to the difference in military aid, I don't know what the repercussions of that may or may not have been. I'm sorry.

QUESTION: Is a point of information or fact in order?

COLONEL SILLS: Yes.

COMMENT: Germany was receiving aid during that period also. It was subsequent to that time that Germany began buying goods. Germany got nearly a billion dollars in aid.

COLONEL SILLS: Gentlemen, we have a 10:30 lecture, so we'll have to break this up. Louie, you have certainly given us a fine outlook on what is ahead of us. I am sure that we all have a better idea of national security than we had.