AMERICAN EXPERIENCE IN ECONOMIC MOBILIZATION

24 August 1955

CONTENTS

	Page
SPEAKER--Dr. L. C. Hunter, Member of the Faculty, Industrial College of the Armed Forces	1
GENERAL DISCUSSION	20

NOTICE: This transcript of material presented to the resident students at the Industrial College of the Armed Forces is furnished for official use only. Members of the College may quote it only in student reports or publications for use within the College. It may not be released to other persons, quoted or extracted for publication or otherwise copied or distributed, without specific permission from the author and the commandant, ICAF, in each case.

Publication No. L56-4

INDUSTRIAL COLLEGE OF THE ARMED FORCES

Washington, D. C.

AMERICAN EXPERIENCE IN ECONOMIC MOBILIZATION

24 August 1955

DR. HUNTER: Captain McCaffree, gentlemen: This morning I'm going to take you on a brief, but, I hope, not unprofitable, historical tour among the monuments of American mobilization experience. We are not going to be able to give you the full story, because we have a hundred years to cover. But, if you will bear with me, we will get through in not much over the usual time.

I'm going to begin this tour with a brief excursion into the ways and means of mutual extermination which is referred to South of the Pentagon as the War Between the States. Now, I was brought up in a part of the country which thinks it is letting the South off lightly by applying the term "Civil War" to this conflict. Actually, of course, the legal and official title of the War Between the States is the War of the Rebellion. But it is not my intent here to rub salt into old wounds.

I wasn't quite old enough to make the War Between the States, but I can cite an incident from the experience of my Virginian forebears. The Hunters in Western Virginia were a respectable but not a very distinguished lot. In time of war they were at times more inclined to discretion than to valor. At any rate, the story is told of how one of them met the supreme test of battle.

Those were the days when virile men drew courage as well as nourishment from tobacco in plug form. Now, this ancestor of mine, on the evening before battle, was wont to engage, not in doleful hymns about home and mother about the campfire, nor even in prayer. Instead, he was careful to take a fresh and extra large chew of tobacco, get it well worked up, and then proceed to swallow it. The results were prompt and they were thorough, and he would go on the sick list for several days, thereby saving himself intact for the next engagement.

Seriously, though, the Civil War has a great deal of interest for the study of economic mobilization. In fact, the experience of the Confederacy in some respects can throw more light on the possible future problems of warfare in this country than anything to be found in our experience during two world wars. Keep in mind, too, that

the Civil War was the first really large-scale war in history in which the railroads, machine production, and steam power played an important role.

Now, so far as the economic and industrial back-up of the Armed Forces was concerned, the two belligerents were far from equal. During the half century before the war, industrialization had made steady progress in the United States. But, with minor exceptions, this industrialization was concentrated in the Northern States. At the beginning of the 19th century, the Northern and Southern States were not too far apart in economic resources and development, but by 1860 the North was well out ahead. It had two-thirds of the national wealth, two-thirds of the Nation's population, and two-thirds of the improved land of the country.

And this wasn't all. The North was even farther ahead in even more fundamental matters--in transportation facilities and services--rail and river, ocean and land. The shipping and foreign trade facilities of the United States were concentrated in the North. Most important of all, the North was way ahead in industrial facilities and capacity. Nine-tenths of the manufactures of the Nation were produced in the North, and an even higher percentage of heavy industry was concentrated there.

So great were the economic, financial, and industrial resources of the North that, with minor exceptions, the supply requirements of the Armed Forces were met by the traditional or ordinary measures I referred to yesterday morning for raising troops and money and for procuring military supplies and equipment.

Now, in handling these ordinary measures there was at first almost endless confusion and much bungling and waste in the North. But, nevertheless, it was unnecessary for the Federal Government to resort to those extraordinary measures of economic direction and control which are the distinctive characteristics of economic mobilization. In effect, the North was able to fight the war, with minor exceptions, on a business-as-usual basis. Life in the North went on to an extraordinary degree without interruption or material change.

Now, the economic position of the Confederacy, as you can imagine, was radically different than that of the North. Owing largely to the development of the plantation system, with its peculiar mode of labor,

the Southern economy failed to develop the kind of diversified economy we find in the North. While the North was becoming industrialized, the South continued to be overwhelmingly agricultural, with most of its population engaged, not in the production of staple crops, but in small-scale farming not much above the subsistence level. The plantation segment of the Southern economy produced a few staple crops of importance, chiefly cotton; and it depended largely, as you may recall, upon foreign markets.

Now, when the South seceded, it was expected that King Cotton would be a major source of economic strength. Britain and the Continental countries, it was believed, couldn't do without Southern staples of cotton, and would somehow manage to continue importing it. But the Northern blockade, combined with Northern diplomacy, kept all but a very small amount of cotton from reaching the European markets. What was expected to be a bulwark of Confederate finance, and a means of paying for indispensable imports, turned out instead actually to be a drag on the war effort of the South.

The South had long been dependent for manufactured goods of nearly all kinds upon imports from the North and from Great Britain. These were almost completely cut off by the Northern naval blockade, leaving the South seriously deficient in the industries essential to supply her basic requirements of manufactures. She had almost no heavy industry--almost no foundries and machine shops for making machinery such as steam engines, millwork, locomotives, and other machinery. She had almost nothing in the way of shipyards. And she had at the beginning of the war no munitions industry, no munitions plants.

More than this, the Confederacy was lacking, or very deficient, even in some commonplace items, such as textiles and clothing, shoes and other leather goods, such as harness, and so on, in hardware items, such as edged tools and kitchen utensils and bolts and nails. Nails seemed to be almost as scarce as gold in the South in the latter part of the war. And the scarcity of horseshoes became such that stripping shoes from dead and wounded horses on the battlefields became SOP.

Some of the Confederacy's supply deficiencies were made up by establishing Government-owned factories and by running the blockade. Small arms and ammunition were to a large extent taken care of in this way. Throughout the war the Confederate armies were handicapped

by various deficiencies in munitions, but on the whole these shortages did not vitally weaken the Confederacy's military effort.

The most serious shortages were not so much in munitions as in such commonplace civilian items as railroad supplies and equipment, from rails to rolling stock, medicines and coffee and salt, and all kinds of clothing. One of the most serious shortages in the latter part of the war was in horses, of which large numbers were required, for military transport as well as for cavalry.

So far as the overall economic situation in the Confederacy was concerned, three shortages were particularly serious. The first was a lack of replacements for rails, rolling stock, and locomotives. The result was a steady deterioration of the transportation situation. The Confederacy found it increasingly difficult both to move and supply her armies in the field, and to transport food and other supplies from regions where produced both to meet military requirements and to supply essential civilian needs.

The second serious shortage in the Confederacy was in manpower. Substantially the entire white male population of military age, not exempted by law, served in the army.

The third serious shortage was money. The financial resources of the Confederacy were so limited that they were compelled to resort to the unhappy expedient of printing paper money from the beginning. The result, combined with other difficulties, was a steady depreciation in the value of the Confederate dollar. By December 1863, with the war only half over, the Confederate dollar was worth only five cents, and in the closing months of the war it was down to two cents. This depreciation of the currency was paralleled, of course, by a steady inflation of prices, with all the demoralizing consequences of such inflation.

The outcome of the war, obviously, was not determined solely by economic factors; but, to the extent that it was, one thing seems fairly clear. Because of her limited resources, the South could hope to win only by using these resources with maximum effectiveness. As we see it today, with the advantage of later experience and of hindsight, the situation really called for a systematic and effective mobilization of these limited resources by the Confederate Government, using the whole battery of economic controls.

Under the pressure of events and in spite of many obstacles, the Confederate Government actually moved pretty far toward what we latter came to call economic mobilization. But they did this under the compulsion of urgent need, and very slowly, and on a piecemeal and improvised basis. A wide variety of emergency actions were taken which collectively represent the beginnings of a controlled war economy.

In addition to establishing many Government plants for the production of a wide variety of military and essential civilian supplies, the Confederate Government established certain crude controls over materials and over manpower. They established limited controls over transportation, based on a kind of priorities. Certain controls were established over foreign trade, especially over imports.

The State governments also attempted to deal with the economic crisis which developed. Efforts were made to control prices by various types of laws. Restrictions were placed on cotton and tobacco production, and on liquor distilling.

So far as the number and variety of economic measures attempted are concerned, the record of the Confederacy is a very impressive one. But in results, the almost desperate effort to mobilize their limited economic resources was a failure. The effort failed and the economy in the last year of the war almost literally broke down.

The cause of this failure seems not to have been due directly to actual shortages. Those scholars who have studied Confederate wartime experience most thoroughly are convinced that the war effort eventually collapsed primarily because of low morale and the lack of a will in the South to continue the struggle.

This low morale was only in part owing to the direct hardship, poverty, and actual suffering among the civilian population caused by such scarcities as I have referred to--essential food, clothing, medicine, and the like--with respect to the civilian population. It was equally a product of the inability of the Government to prevent the depreciation of the currency and price inflation, the inability to prevent speculation and profiteering, and the unequal burdens of the war upon different classes. It was the poorer families, both in town and country, who suffered the most from these conditions, especially the families of soldiers. Discontent and low morale spread quickly from

civilians to the armies, and the result was shown in a very high desertion rate.

Now, why have I given so much attention to experience which in so many ways seems so remote from the present? Well, the reasons are fairly obvious, I think, from what I have said; but let me make several points by way of comment.

This was this country's first experience with a war economy and with economic mobilization. But, limited as it was, this experience was largely ignored, owing, I think, to the circumstance the South lost the war and the Confederacy ceased to exist, and its war effort was discredited.

Secondly, this is the only example of military defeat which history offers in the United States; it is the only war in which the American people suffered defeat and the lessons of defeat are at least as important as the lessons of victory and should not be overlooked.

Thirdly, it offers the only example in our history of a civilian population, the people of the Confederacy, undergoing what were for large numbers extreme hardship and deprivation in wartime. With its limited resources, the South was not only tightly blockaded, but it was overrun by armies and subjected to physical devastation in certain parts. This was an experience which the United States as a whole has yet to undergo.

This brings us then to point 2 in the outline--"Industrial and technical foundations of World War I."

The fifty years between the fall of the Confederacy and the outbreak of World War I were years of great significance for the art and science of war, not so much for what took place in warfare during this period, but for what was in preparation.

This topic will have to be disposed of very briefly here. It could be elaborated upon at great length, with profit, if there were time.

During the years between 1865 and 1914 economic developments of great importance for the conduct of war took place, not only in this country, but in the whole Western World. These developments can be summed up in a single word: industrialization. The old system of

handicraft production in small shops, with hand tools and muscle power, was in steady retreat. Machine production, with steam power, advanced in one sector of industry after another. Large-scale organization and mass production in factories came more and more widely into use. The revolution in transportation, started earlier by railroad, steamboat, and steamship, was completed.

A new revolution got under way at the turn of the century with the introduction of the internal combustion engine and the automobile. The coming of electric power about the same time had equally significant results productionwise. Many new industries of vital importance for warfare came into existence during this half century--steel, rubber, aluminum, petroleum, and the electrical industries, including radio communications. Important new chemical industries came into the picture, with important developments in explosives.

All these developments added up to extraordinary increases in productive capacity and war potential. The national income increased six times between 1860 and 1910.

Now, the most spectacular military result of industrialization was, of course, in the field of new weapons and new materiel--the breach-loading rifle and the metallic cartridge, the machine gun and the rapid-fire field gun, the new types of explosives, and so on. Many of these new weapons had been invented and introduced many years before; but now, for the first time, with the new production methods, they could be turned out in large quantities.

Another important development of mechanization in the field of supply came about through the introduction of the automobile truck.

Similar advances were made in naval weapons and equipment. Especially important were the shift from sail to steam, and from wooden to armored vessels. The introduction of the submarine had major consequences for both naval and economic warfare. Rapid advances were made in many other areas.

So much, then, for topic 2. We get now to the third topic: "Industrial mobilization in the First World War."

By 1914, as a result of these developments, the ground had been prepared for the conduct of warfare on a scale and with an intensity

that were unprecedented. Huge conscript armies of millions of men were mobilized and put in the field. The early attempts of Germany to force a quick decision were followed by the long stalemate of trench warfare on fronts hundreds of miles long, interrupted from time to time by tremendous offensives from one side or the other.

The large numbers engaged, the long-sustained actions, and the high rates of fire resulted in enormous expenditures of ammunition and other supplies. The scale of the supply problem was far greater than anything that had been anticipated by any of the belligerent powers. The struggle soon settled down into an endurance contest in which the outcome, it became clear, would depend largely upon the ability of the belligerents to meet the heavy drain upon their productive resources.

Of course, the main burden of the war of attrition fell upon the industries supplying the munitions requirements. But scarcities of raw materials, supporting industrial capacity, and manpower soon appeared. Supply crises in one form or another developed within all the belligerent powers, and threatened the success of military operations; threatened, in fact, a breakdown of those operations in the face of mounting supply difficulties.

Under the compulsion of these conditions, governments came to intervene directly in the conduct of industry, transportation, and agriculture, and, before long, in every other phase of economic life. In the process, businessmen lost much of their freedom to run their own businesses--to buy, to sell, to manufacture what they pleased. Private property lost much of its privacy. For the first time, industry learned the meaning of the word "controls"--the economic controls I referred to yesterday--controls over raw materials, foodstuffs, over prices, profits, and credit.

All these Government controls were found essential to divert materials, manpower, and industrial capacity to meet the urgent demands of military requirements. They changed radically, as we have seen, the functioning of the private enterprise economy. In this manner the war economy was born.

The United States on entering the war brought to its allies the greatest industrial capacity of any nation in the world. But this capacity was geared to the production of civilian-type goods to meet civilian needs. The first and most critical problem was to convert this

industrial power into military power, and to do it fast, for the military position of the Allies in the spring of 1917 was critical. Yet--and this is very important--with all our production skill, and with a full awareness of the urgency of speed, it took from 12 to 20 months to get into production on the more critical munitions items, such as artillery, machine guns, and planes.

Another major problem that appeared at an early stage was raw material scarcities in the basic metals, especially steel and copper; in fuels; in heavy chemicals, and in lumber and foodstuffs. Production capacity could be increased only slowly. So priorities systems had to be devised and put into operation for channeling scarce materials where most needed in the war production program. To accomplish this proved to be a very difficult job. In many respects priorities was the central concept in industrial mobilization in the First World War.

Another major mobilization problem developed early in the field of transportation. The stepping up of production in all fields greatly increased domestic transport requirements. On top of this was added the huge job of transporting an army of two million men to Europe, and keeping them supplied. In addition there were the heavy shipments of supplies to our allies. And there was the heavy toll of shipping and supplies caused by submarine action.

We had to expand our merchant marine tonnage on a tremendous scale, and we had to do it quickly. Under the strain of unprecedented conditions and requirements, rail transport threatened to break down. So the Federal Government took over the railroads and ran them for the rest of the war.

These are only a few examples of the many problems with which the Federal Government had to cope back in 1917 and 1918. An elaborate system of war agencies was established to handle the problems in the various fields. In fact, several score of them were created. The most important of the lot was, as you may recall, the War Industries Board, headed up by Bernard Baruch, who in this role made his national reputation.

Under Baruch, this Board served as a kind of industrial general staff to direct and control operations on the economic front of the war. Baruch's main job was the conversion and expansion of industrial capacity to meet the enormous requirements of the military machine. But

there were the closely related problems of developing and operating systems of priorities, establishing control over prices, and coordinating the activities of a score or more major war agencies dealing with fuel, food, shipping, the railroads, labor, communications, and so on.

Now, in carrying out this vast mobilization, we moved very slowly. This wasn't perhaps too surprising as we look back on it, in view of the tremendous size and complexity of the job of running the national economy, and in view of our complete lack of experience and our lack of planning in this field. We had been at war nearly a year before our industrial mobilization began to make real headway. Not until thirteen months after we entered the war in the spring of 1917 was the War Industries Board given the priorities power essential to make its decisions stick.

There was strong public resistance and strong industry resistance to wartime economic controls. For example, the auto industry succeeded in opposing all efforts to restrict automobile production until the spring of 1918, and one could tell many similar tales. Again, there was the leading automobile manufacturer who refused to play the game at all and was only brought to terms when the Government threatened to cut off his supplies of coal and of cars for shipping his product. Keep this in mind: The sheer size and complexity of the administrative job of setting up and running the industrial war machine made the process of mobilization a slow and fumbling one.

Of course, as you will recall, we did win the war; and the mobilization of our economy was in many respects a very great achievement. With only a small headstart from Allied orders, we built a war production system of tremendous capacity. We supplied our allies with great quantities of food, raw materials, and manufactures. We recruited, trained, equipped, and transported to France an army of over two million men. We moved from an economy without controls to one which in many respects was managed and controlled by the Federal Government.

But against these accomplishments must be balanced serious shortcomings. Our slowness in establishing central direction and controls over war procurement and production caused great delays and great losses in manpower and materials. Another serious weakness was in failure to restrict sharply nonessential production, as in the

case of automobiles, in order to force industrial conversion to war production. There were mistakes and delays in determining military requirements and in setting production goals. Too large a share of labor, facilities, and materials was absorbed in simply tooling up for production. In fact, war production was just getting into high gear when the war came to its end. In major items of materiel (airplanes, shells, artillery) our expeditionary force was supplied chiefly by our allies.

So much for World War I.

The next topic on our outline is "Mobilization planning between the wars." With this I shall deal very briefly.

Our experience in World War I drove home two very important lessons to the military and to the American people. One was the vital and fundamental role of mobilizing the productive resources of the Nation in modern war. The second was the urgency of peacetime planning for the possibility of war--not only strategic planning, but, of equal importance, planning for the logistical support of military operations, that is, for industrial, or, as we now call it, economic, mobilization.

Our not too happy experience with mobilization operations in World War I and with our military forces as well led to the reorganization of the Military Establishment in the Defense Act of 1920. One clause in this elaborate defense act assigned to the Assistant Secretary of War responsibility for: "the assurance of adequate provision of material and industrial organizations essential to wartime needs."

This rather clumsily phrased clause provided the basis for nearly twenty years of what was called industrial mobilization planning--planning not only for the War Department, but for the Military Establishment as a whole and for the Nation.

Three agencies were set up to carry on economic planning activities under this act. (1) In 1921, the Planning Branch was established in the Office of the Assistant Secretary of War. This Branch carried the main planning load. It was never a large outfit, operating most of the time with some twenty-five to thirty officers. (2) In 1922 the Army and Navy Munitions Board was set up to coordinate procurement planning between the two services. (3) And in 1924 the Army Industrial College was

established to train Army, Navy, and Marine officers in problems of procurement planning, and industrial mobilization planning.

Industrial mobilization planning, as carried on during the 1920's and 30's, was conducted under two main categories. The first of these was procurement planning, and was concerned with the specific responsibilities of the armed services for procuring all their equipment and supplies in an emergency, as well as in peacetime. Procurement planning covered such important matters as computation of requirements for essential items of equipment and supply; locating industrial sources of supply, and making plant surveys; and the allocation of industrial facilities as between the supply services and bureaus, in order to avoid competition for such facilities within the services, competition which had caused so much confusion during the First World War.

The second category of industrial mobilization had to do with mobilizing the industrial and other economic resources of the Nation in support of large-scale military procurement.

Under this category, a series of national mobilization plans were developed--the so-called Industrial Mobilization Plan. These plans did two principal things: They defined the various types of economic controls believed essential for making industrial mobilization effective. They outlined the organizational arrangements to be provided for administering these controls and performing other essential mobilization functions.

To a very large extent these plans were based on the experience of World War I, both as to policies, and as to organizational arrangements, with such modifications as the experience of World War I indicated to be desirable.

Your essential reading for this unit considers this planning work in some detail. So I will move on from the planning to the fifth topic: "Mobilization of the American economy in World War II."

There were important similarities between World War II and World War I experience. In both wars, as you recall, we moved from peace into war by degrees--by a succession of small steps. And, as you will recall, in both instances we moved with considerable reluctance.

In both wars, our role for many months was to support the economic mobilization of our friends abroad, by providing materials, munitions, and financial aid.

In the Second World War we faced many of the same basic problems of economic mobilization as in the first one--tremendous military requirements, insufficient industrial capacity, and critical shortages of essential raw materials. We faced the same problem of accelerating the conversion of industry to war production; the same problem of determining requirements and of adjusting requirements and capacity; the same problem of upward spiraling prices and of economic stabilization through price control and related measures. There was the same problem of setting up and staffing the huge emergency agencies required to handle the various mobilization functions. And all these things were carried out with pretty much the same confusion, blundering, and public controversy that we had in Washington back in 1917 and 1918.

But there were important differences in the two wars, and it is these that I will particularly stress.

First, the scale of the mobilization effort was vastly bigger in World War II than in the first war. We fought in theaters all over the world, instead of chiefly in Europe, as in World War I. We were fully at war 44 months, compared with only 18 in the first war. The difference in scale can be summed up rather crudely with a statement of cost. The second war cost approximately ten times as much as the first war.

In the second place, the principal materiel requirements were for items that were not only much greater in number, but far more complicated and far more difficult to produce than the materiel items employed in the first war. Compare, for example, World War I aircraft and tanks with those of the second war. Or take the whole new field of electronics, which played so vital a role in the Second World War in such areas as radar, fire control, and communications.

In the third place, because of the far greater load on our productive resources, we were faced in the second war with a far tighter situation with respect to materials, facilities, and manpower. We had to develop much more elaborate and much tighter controls over these resources than was done in the first war.

And finally, economic stabilization presented a far more serious and difficult problem in the Second World War than in the First. The extraordinary expansion of production, the rise in the labor force, and the sharp upturn in take-home pay placed an enormous purchasing power in the hands of the public. This was done at the same time that production of consumer goods of many kinds was being cut down.

So much for generalities. Now let's turn to a brief review of the actual course of our economic mobilization from 1939 forward.

First, as to the Industrial Mobilization Plan: For reasons discussed in your reading, the Plan was not adopted, was not put into effect as a plan, either in 1939, 1940, or later.

The Plan provided for the setting up of a full complement of emergency agencies at the outset of the emergency--on M-day--and the economic controls for full and effective mobilization were to be promptly established. No half measures, no compromises, no soft-pedaling. "Here's the job to be done. Here's how it must be done. Get on with the job."

In the end we got a rather complete and effective system of mobilization agencies, in many respects not unlike those specified in the Plan. But the actual structure of the emergency agencies wasn't completed until mid-1942, and many finishing touches to the organizational structure were not given until 1943 and 1944.

Here we have the first important fact about our economic mobilization in World War II. It was not a sudden creation, a balanced whole put into effect at the beginning of the emergency. It was a product of gradual evolution, hammered out during a period of several years. Agencies were set up. They operated for a time. They were replaced by or absorbed in other agencies. These agencies in turn gave way to still other agencies.

The personalities and the powers and authority of the emergency agencies similarly underwent change. This was true of production control, of price control, of manpower control, and of information control. Let's take a couple of examples and take a brief look at them--war production and price control.

Every student at the old Army Industrial College, every military industrial mobilization planner in the prewar period, knew the answer to the war production problem. It was an agency modelled upon Bernard Baruch's famous War Industries Board of 1917-1918. The World War II counterpart of the War Industries Board was the War Production Board (WPB), operating first under Donald Nelson. But WPB wasn't set up until a month after Pearl Harbor.

WPB had three predecessor agencies: The National Defense Advisory Commission (NDAC) established May, 1940, with almost no authority except to advise the President. NDAC was superseded largely by Office of Production Management (OPM) in January, 1941. The Supply, Priorities, and Allocations Board (SPAB) was imposed over OPM in August, 1941. Finally, in January, 1942, WPB absorbed both OPM and SPAB, with greatly beefed-up authority.

Let's take a second example--the vital mobilization function of price control. Here again the planners knew the answer. The classic Baruch formula for stopping inflation before it got started was a simple one: Freeze prices at the very outset of the emergency. Then, as time permits, make whatever adjustments are necessary to provide a fair and equitable system of control.

Here again we have the step-by-step easing into the job. A beginning was made in May, 1940, by providing a Price Division in the Advisory Commission, NDAC. This was headed by an administrator, a very dynamic fellow named Leon Henderson, whom some of you may recall. But he could work only through advice and persuasion, for he had no power to control prices.

A year later, in April, 1941, Henderson was given an Office of Price Administration (OPA). Well, now at least he had an organization. This organization was very useful for gathering information and working out the machinery essential for price control. But it was without authority to control prices for many months.

Henderson continued to rely chiefly on industry cooperation, and on what he called the "jawbone method," for influencing prices. Needless to say, in a free enterprise economy, prices continued to rise--at the rate of about one percent a month in the cost of living index through 1941. Not until six weeks after Pearl Harbor did the passage of the Emergency Price Control Act give OPA the power to establish maximum prices.

Yet the achievement of effective price control was hardly more than begun with the passage of this act. Agricultural prices were yet to be brought under some measure of control. And there was the problem of bringing wages into some kind of balance with prices.

In virtually every major phase of economic mobilization we find this same pattern of slow evolution of both the organization and the authority for dealing with a given mobilization problem, whether it is in production or prices, manpower, or what-have-you.

Why was it that the facts of life turned out to be so different from the ideas of the planners, as set down in the Industrial Mobilization Plan? The answer seems plain enough: The Administration had to face the facts of political life. The planners, operating within an executive agency, had to avoid political considerations. They were concerned with what needed to be done and not with how these things could be accomplished politically.

Throughout the defense period the President was faced with strong and widespread public opposition to any involvement in the European War. More concretely, the Administration was faced with a powerful isolationist bloc in Congress, which was intent upon opposing the Administration's program for foreign aid and the Administration's defense program.

The Administration, rightly or wrongly, believed it must move slowly and cautiously, in order to give public opinion time to move around to the Administration's view of the growing threat to United States security resulting from Hitler's advances in Europe, and to give the isolationist bloc in Congress as few opportunities as possible for obstructing the defense program.

Roosevelt's first objective when the emergency came was the repeal of certain key provisions in the Neutrality Laws, passed as recently as 1935 and 1936. These provisions prohibited the export of munitions to nations at war; and, as you can see, would seriously have handicapped the nations threatened by Hitler.

The first effort at repeal was defeated in the spring of 1939. But in special session in the fall of 1939 the President got the changes he wanted. This cleared the way for Britain and her allies to place large orders here for munitions on a cash-and-carry basis.

To show how cool the public and Congress were to the idea even of preparedness, let me cite just one example. In revising the Military Appropriation Bill, the House in January, 1940, reduced the Administration's request for 496 new planes to 57 planes; and entirely eliminated a 12 million dollar item for an air base in Alaska.

If we shift our attention from mobilization organization and controls to production, which, after all, is the heart and core, the substance, of economic mobilization, the placing of large Allied orders for munitions, which the amendment of the Neutrality Laws made possible, marked the actual beginning of the mobilization of American industry for the war which was ahead.

The second major step in the actual mobilization of American industry resulted from the passage of Lend-Lease in March, 1941. The exhaustion of British funds for paying for munitions on a cash-and-carry basis, required by the Neutrality Laws, made some such action essential. Lend-Lease provided the basis, as you will recall, for all-out aid short of war. Lend-Lease not only made us in fact the Arsenal of Democracy, but it greatly accelerated, productionwise, our transition to a war economy.

Now let's see what were the practical results of this progress, so repugnant to the planners, of edging crabwise into economic mobilization. Where did we stand when M-day actually came to this country on 7 December 1941?

On the military side, we had at this date a total military establishment comprising something over two million men. At this date all major types of armament were in production. Plane production in December was at the rate of 25,000 a year. The total munitions output had reached a rate of one billion dollars a month at this time.

By December, 1941, the main organizational structure of the war agencies had been established. Despite the confusion, controversy, and conflict centering in these agencies, and despite the overlapping of functions and authority, and the absence of effective coordination, these agencies were set up. They were staffed. And, though still expanding, they were actually operating.

Finally, of course, the attack on Pearl Harbor brought about a unity of national purpose which did much to speed up economic mobilization in the months ahead.

Pearl Harbor, then, marks the beginning of the period of all-out economic mobilization. Within the next three or four months there was a general rounding out of the structure of war agencies. A number of the defense agencies were reorganized on a more effective basis and with increased powers, or were supplanted by new and more powerful agencies. A number of new war agencies were created to fill gaps in the existing mobilization structure.

Under the first War Powers Act of December, 1941, and the second War Powers Act of March, 1942, there was a general beefing up of the authority of the war agencies. Within six months of Pearl Harbor the mobilization of the economy was in full swing. In many respects we were further advanced by July, 1942, than we were in November, 1918.

Now, I've hardly more than gotten you well launched in the mobilization effort of the Second World War than I shall have to wind up the subject, and quickly. Actually you will hear throughout the year a great deal about this mobilization experience. Your researches and studies will take you into the extensive literature on the subject. (See the essential and collateral reading in the Curriculum Book.)

This brings us, then, to topic 6 in the outline--"Mobilization achievements: stabilization and production."

During the war years, when the struggle to get production and to stabilize the economy was under way, it seemed much of the time as though these programs had nothing but setbacks. Actually, viewed in some perspective, after the dust had settled and the confusion had quieted down, the accomplishments in both areas were very substantial.

Take price stabilization as an example. The consumers' price index was fairly steady during 1939 and 1940, at close to 100. Then it rose steadily to a plateau of about 125, which it held from the middle of 1943 to early 1944. Thereafter it mounted gradually to about 130 in late 1945. This was a far better achievement than in World War I, when the wholesale price level rose from 100 in July, 1914, to 206 in November, 1918, with three-fifths of this increase taking place after our entry into the war.

What did our controlled and directed war economy here accomplish productionwise? The military story is very familiar to most of you. I will just touch the highlights. Making allowance for price increases which took place, this is what happened.

Despite the fact that over ten million men were drawn into the Armed Forces, there were the following increases in production: The output between 1939 and the peak of the war in 1944 of raw materials as a group increased 60 percent. All manufactured products increased 150 percent. Munitions production was up, from a monthly rate of one-third billion dollars in late 1940 to a peak of over 5 billion dollars a month in early 1944.

The total output of specific items increased as follows: planes, nearly 300,000; tanks, 85,000; over 1,300 fighting ships; and 53 million tons of merchant shipping. At the same time, civilian consumption, in 1939 dollars, and despite restrictions on civilian goods, rose, as I pointed out yesterday, 15 percent.

In specific industrial fields, output increased many times, as for example, the extraordinary growth in the production of synthetic rubber and aluminum. Take the machine tool industry, to cite another example. From 1941 to 1945 this industry produced a total output greater than the aggregate production of machine tools in this country from 1900 to 1940. In the transportation field there were similar achievements, extraordinary compared to what had taken place before. And likewise in electric power output.

Considering not simply production but the overall functioning of the economy, two basic facts stand out: First, allowing for price increases, we increased our national income, that is, the total value of all goods and services in the Nation, over 50 percent in the four-year period. Second, of this unprecedentedly great income, 43 percent was diverted to the conduct of the war in each of the years 1943 and 1944.

All in all, the achievements of the American economy during the defense and war years were simply extraordinary. They were particularly astonishing in view of the sad record of the depression years which had preceded them. During the thirties the American people, even American business, had come to have their doubts about the effectiveness of the much-acclaimed private enterprise system. The war years changed all this. The great wartime achievements, although accomplished, it is true, under Government control and direction, restored and strengthened the traditional faith in the economic system of the Nation.

This restoration of faith in private enterprise was perhaps the most important byproduct of our economic mobilization.

Now, just a few closing comments.

In these two introductory talks I've thrown pretty much the whole book at you, plus the kitchen sink and stove. Yet, as you can see, I've been obliged to pass over entirely, or almost entirely, many important phases of our economic mobilization experience. I've said almost nothing about such important matters as manpower, requirements, public services, and procurement; and not a word about technological progress, and not a word about distribution logistics.

But then, the purpose of these talks is not to give you a complete picture of the subject, but simply a preliminary view. To many of you the subject will be new, strange, and unfamiliar; and on first exposure, much of the stuff won't sink in. No matter. Simply absorb what you can. Relate new things to what you already know or have experienced. Bit by bit you'll build up your own picture and your own understanding of economic mobilization.

Thank you.

COLONEL WALSH: Gentlemen, who has the first question to direct to Dr. Hunter?

DR. HUNTER: May I suggest also that you may have some questions left on hand that were unresponded to yesterday. So if you wish to bring up questions relating to yesterday's talk, that is quite all right.

QUESTION: I notice that you referred several times to the establishment of a very elaborate system of super Government agencies in order to implement these various controls in the mobilization plans in time of war. I have also seen that referred to in several of the texts we have been reading. I wonder if it is essential that we establish, after the day that we go to war, or after the President declares a state of national emergency, a lot of Government agencies in order to implement these plans. It would seem to me far more efficient if we implemented these plans by already established Government agencies, established for the implementation of these plans; in other words, have the existing Government agencies just take on the implementation of the plans and establish the controls that are necessary.

DR. HUNTER: Your question is a very pertinent one. Actually we are moving somewhat in the direction to which you refer as desirable.

Keep in mind that there has been in this country and in Washington, in certain circles at least--though the New Deal Administration was not, perhaps, such a circle--a continuing fear of the growth of the big Government. There is the traditional view that once an agency acquires power, it never gives it up. The planners back in the twenties and the thirties shared this fear and this view, possibly reflecting the somewhat conservative attitude toward political matters that was found in the armed services at that period. So in their planning they stressed the importance of setting up emergency agencies. There was another important reason advanced for the use of emergency agencies, the belief that the old line agencies were deep in the rut of routine and could not be shaken out of that rut fast enough to move with the speed that was needed.

So the stress in planning was always upon emergency agencies, because they would not be bound by routine, by custom, and by tradition. The new agencies would recruit personnel from the outside to an important extent. The industrial mobilization planners always talked of bringing in patriotic businessmen to head up these agencies. Then when the war was over, the emergency agencies would fold, and, thank God, we could go back to normal conditions again.

During the planning period since 1945, specifically since the National Security Act of 1947, which established an entirely new planning arrangement, they have been working in a way somewhat similar to that, as you will see when you get to study the planning activities; and that will come in rather early in the picture in our work, in some degree.

We have a permanent agency, the Office of Defense Mobilization, which is charged with planning and preparing readiness measures for dealing with a mobilization emergency. But here I have to go back to its predecessor--the National Security Resources Board, as it was called. When the Korean crisis developed, a decision was made by the Truman Administration to make use of the old line agencies as much as possible. The thinking has tended to develop and harden along that line, for the simple reason recognizing that mobilization is not a temporary emergency and that we have this post-cold-war situation to deal with.

Therefore, it has seemed wise to increase the role of the old line permanent agencies, not only in planning, but in administering the plans when the emergency comes. And that was done to an important degree in the Korean emergency.

QUESTION: So far I am still not clear as to why the planning set-up, that had previously been accepted, had to fold upon the advent of war; why it was not accepted then. Were the Congress and the Administration throughout that period kept informed of what these plans were and what they were expected to do if we ever had a war? Or was the plan just pulled out of the top drawer and shown to them and they didn't like it?

DR. HUNTER: The President was very definitely informed and aware of the plans. Congress was less well informed. The public in general was much less well informed. In the field of business and industry there was greater awareness than by the public generally, because of the procurement planning work of the services in their industrial surveys and the allocation of industrial facilities among the services. They did a good deal of publicity work too in business and industrial circles.

There were a variety of elements and influences that entered into the picture, but I think the basic fact was President Roosevelt's conviction that you had to move into this thing very, very slowly. It was the problem of carrying the public along with him--his belief that you had to move slowly, in the step-by-step manner I've outlined.

In August, 1939, a group of prominent businessmen, financiers, and industrialists, known as the War Resources Board, was set up to review the latest revision of the Industrial Mobilization Plan, the 1939 revision. It did review the Plan. It met with the President, I believe, at least twice to discuss it; and he indicated something of his own views as to the type of overall organizational structure of emergency agencies that should be established. But when this War Resources Board made its formal report to President Roosevelt, in November, 1939, he simply had the report filed away. He refused to release it or to comment upon it. He thanked the board for their work and the report was not released until well after the war.

Thus, President Roosevelt was fully aware of the plan and its meaning. Even when the Low Countries were invaded, in May, 1940, Roosevelt knew exactly what he was doing when he established the National Defense Advisory Commission, the statutory authority for which existed as a hangover from World War I. It was weak and mild, and, from the point of view of many, quite ineffective if we wanted something done quickly. But it served his purposes. It fitted in with

his belief as to how much the country was able to take. Whether his belief was right or wrong, your opinion and mine are equally good.

QUESTION: You skipped in your historical coverage the Spanish-American War. Why?

DR. HUNTER: Well, I skipped it because it was a very brief episode. It was not too flavorable an episode in terms of procurement. The load on the economy was very slight. The scale of operations was extremely small. So we had a considerable amount of confusion on the military mobilization end. To the extent that there was a supply problem, there was a great deal of confusion in handling that relatively small supply problem.

QUESTION: Perhaps I am premature or anticipating something--

DR. HUNTER: All this period is in anticipation; so you are quite in order.

QUESTION: During most of the mobilization period of World War II unionized labor continued more or less outside the law and outside the regulatory controls. What are our lessons from that?

DR. HUNTER: Well, I will not attempt adequately to deal with so large an issue. The assumptions of your statement, I think you will find were largely without basis. You will hear a great deal about this matter later.

In both wars there was a problem of working out the relationship between capital and labor, between employers and employees. But I think that when you examine in detail the record in World War II so far as labor-management relations are concerned, as it will be presented in the manpower part of the course, by specialists brought in from the outside, both from the employer-management side and the labor side, you will find the record is really, statistically speaking and quantitatively speaking, a very good record, however indignant one may properly get at certain episodes that occurred.

QUESTION: I haven't heard you mention demobilization. Is that an oversight?

DR. HUNTER: No. It is a matter of condensation.

At one stage there were three lectures on the history of economic mobilization; now there is but one. The military profession, incidently, is becoming very sensitive on the subject of history. Someone made the wisecrack a few years back to the effect that the military were always preparing to fight the last war. So I get the impression that in more recent years many soldiers have been trying to forget history. The discussion of demobilization was simply squeezed out in the condensation of the historical treatment.

But the demobilization end of it in both wars is a rather unhappy story, on the strictly economic side. I am not referring now to the military demobilization. There is a widespread feeling of course, that the military demobilization was handled also with unfortunate speed. But I am speaking strictly on the economic side.

During the First World War hardly a thought was given to what would happen at the end of the war. Demobilization took the form of a collapse rather than an orderly process. It took years to straighten out some of the resulting confusion.

We did somewhat better in the Second World War. For example, whereas in the First World War I think almost literally no attention was given by any Government agency to plans for what to do when the war came to an end, in the Second World War the Army set up in the spring of 1944 a Readjustment Division, to make plans for demobilization. There was also another War Department agency to deal with the more comprehensive problems of demobilization. And there was the famous Baruch-Hancock Report on postwar readjustment, relating to the general adjustment of the economy from war to peace, not simply the problems of contract termination and readjustment. So a good deal of thought was given to that subject.

But then you will recall what happened in the years immediately following the end of the war, in the rest of 1945 and in 1946. You will recall the determination of the public, or at any rate of certain groups in the public, to eliminate controls and get back to a "free economy" as quickly as possible, and what that meant in terms of inflation. You saw how prices simply shot up, and all the unrest and unhappiness that resulted. For example, just in the labor-management field, there was a series of wage strikes that were related to that inflation. The whole

price situation from the ideal point of view was a most unhappy one in the postwar years.

QUESTION: You pointed out that Roosevelt did not choose to implement what war plans he had before this last war. Of course, that could happen again. Would it not be feasible to make the implementation of the war plans mandatory on the part of the Executive?

DR. HUNTER: Congress could do this if it so desired. But an interesting thing about the situation back in 1940 and 1941 is that numerous efforts were made in Congress to pass laws which would in effect bring about economic mobilization. They did not specifically implement the Industrial Mobilization Plan as it was then in existence, but would have done in substance something similar. Those efforts in Congress all failed.

To show you something of the temper of Congress, even today, Congress is unwilling to enact standby legislation that will in the case of an emergency permit the President to go ahead and carry out the mobilization. So you have to reckon with the fact that the problem is not simply one of what the Executive wants or doesn't want. It is a problem of what the public will accept, and, more specifically, what Congress will accept.

COMMENT: Of course, in this case many people have the feeling that Roosevelt had the opportunity to mobilize the country and just didn't do it.

COLONEL WALSH: I am sorry that there are still some unanswered questions. But, after all, we have ten months to go. I think I will have to bring this discussion to a close.

Thank you very much, Louis, for your historical coverage.

(22 Sep 1955--250)B/ekh

819350