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To: General Donovan

Per your cable request.

STATEMENT SUBM

by

E. J. Putzell, Jr.

LEO T. CROW

FOREIGN ECONOMIC ADM

before the Sub-Com

War Mobilization

Senate Military Affa

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Office of the Executive Officer

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"GERMANY'S ECONOMIC BASE FOR AGGRESSION"

June 26, 1945

STATEMENT SUBMITTED

by

LEO T. CROWLEY

FOREIGN ECONOMIC ADMINISTRATOR

before the Sub-Committee on

War Mobilization of the

Senate Military Affairs Committee

on the subject:

"GERMANY'S ECONOMIC BASE FOR AGGRESSION"

June 26, 1945

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The first part of the report deals with the general situation in the country...

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\* Only Exhibit 8 is attached hereto.

## ORAL STATEMENT

We have won a war with Germany for a second time in less than 30 years. Today the most important question facing us is: "What can we do to prevent a third World War"? In my opinion, the subject of the Committee hearings i.e., "the economic base for German aggression" is the important key to the problem of peace.

There may be many solutions to the German problem of a political and social nature. Of none we can be sure, however, unless steps are taken to see to it that the economic and industrial potential of Germany does not permit her to wage another war of aggression. Hence, it seems most timely that through the forum of your Committee, while memory of battle and death is still fresh, the American Congress and the public will become acquainted with the fact that a powerful German economic base for aggression still exists at this moment -- and that it must be eliminated or controlled before we will be able to live at peace.

For many months now the Foreign Economic Administration, through its Enemy Branch, specially constituted for this purpose out of various units of FEA concerned with economic warfare problems, has been engaged in a broad and inclusive study of what we call "German economic and industrial disarmament". This extensive study and programming project was undertaken by FEA in response to a direction from the President last fall in which he instructed me to carry forward "studies from the economic standpoint of what should be done to limit the power and capacity of Germany to make war in the future". The Director of the FEA Enemy Branch, Mr. Henry H. Fowler, who is here with me today, is in charge of this work. In the detailed statement, which is to be presented for your record, there is a brief account of some of the work projected by the FEA Enemy Branch in response to this Presidential direction. Among other things, this FEA work program includes, as its major feature, the formulation of a specific program for German economic and industrial disarmament -- industry by industry -- designed to apply to Germany as a whole. This is precisely the type of specific program which Mr. Baruch advocated before the Senate Military Affairs Committee last week.

Let me hasten to add that in undertaking and carrying forward this extensive and important study project, the FEA does not preempt to itself the function of deciding what American policy should be on this subject or the job of executing that policy through international negotiations or the performance of occupation tasks in Germany.

The task of advising the President on executive policy on this subject is one shared by various agencies, including the FEA, acting under the direction of the Department of State. The negotiatory and executory responsibilities fall logically to the State and War Departments. In accordance with the President's letter\*\* FEA tries to perform the role of a service agency for the agencies charged with negotiatory and executory functions and to promote understanding, appreciation and knowledge in the U. S. field representatives of the problem of economic and industrial disarmament of Germany,

Because of the delicacy of the entire German question during the period of actual hostilities, we have had to work quietly upon this subject. But now that hostilities are over, the FEA appreciates this opportunity to present to this Committee of the Congress its impressions of the nature and magnitude of the problem of German economic and industrial disarmament. I believe this to be a matter of the highest importance for the following and obvious reasons.

Unless the American people, speaking through the appropriate officials of their government, are prepared to enter into the undertakings that will be necessary to sustain their security by affirmative action regarding Germany's economic and industrial war potential, all of the studies, knowledge, and programs that a Government agency can develop will be of no avail. Indeed, such a policy will prove fruitless unless the American people are willing to commit themselves to a course of determined action over a long period of years that is designed to render Germany economically and industrially incapable of waging World War III.

This job of controlling Germany, I must emphasize, is no short term business. The Germans are capable and industrious people. They are fired by their desire for revenge and can rebuild an industrial war machine and reorganize it for war purposes in a few short years, regardless of the damage wrought by bombing and regardless of the deprivation of existing facilities through removals or destruction. Cartels struck asunder today may be restored by an agreement tomorrow. German industrial assets held abroad, although wiped out tomorrow, may be built up again within a decade. Although during the year 1945 we may confiscate Germany's tools and implements of war down to her last gun, a few years from now war materials may flow out of German plants in newer and deadlier forms -- unless we take

\*\* Letter of September 29, 1944 from President Roosevelt to the Foreign Economic Administration.

steps to prevent such a catastrophe from happening.

Hence, I say that this problem of eliminating and controlling Germany's economic base for aggression is no short term job. But it can be done, if the public realizes that it must take out and maintain insurance against future German aggression. Insurance means premium payments in vigilance and positive action -- payments which must continue for decades if protection is to be maintained.

Balancing the costs of such insurance against the fatal consequences of a new holocaust of war, I submit that the American people should protect themselves with this security.

Although the problem is a long term one, it does not follow that we have a long time to make up our minds about whether or not we will undertake to deal with it. Many decisions are upon us now. Action or inaction today will prejudice our later opportunity to achieve our basic aims. To wait until many months of occupation have lapsed before beginning the necessary measures would almost surely constitute fatal delay.

In order to save the time of the members of the Committee this morning, I am submitting for incorporation into your record a detailed statement dealing with this problem. It will be the purpose of this statement to acquaint this Committee with the existence and dimensions of Germany's economic base for aggression as it still exists today. (See Chapter I.) Secondly, the statement presents a brief outline, largely historical, of the mistakes which we made after the first World War, in treating Germany's base for aggression and the way in which the Germans took advantage of these mistakes and rearmed for World War II. (See Chapters 2 and 3.) Finally, this statement will address itself to some of the measures we are using to develop the outlines of a full-fledged long term program for German economic and industrial disarmament, including the work in which the FEA Enemy Branch is presently engaged.

In conclusion, I am glad to be able to place in the record of this Committee, the first chapter of what promises to be one of the most important stories of our time. What we have endeavored to prepare and present today is an appropriate back drop for the many succeeding occasions in which this topic of preventing renewed German aggression will be discussed. Less dramatic than the account of battles, but basically more important, the effort of our government to anticipate and defeat the forces that would fight and win World War III surely deserves continued and intensive national attention. I congratulate this Committee upon its determination to put this problem at the top of our national agenda.

## SUMMARY OF WRITTEN STATEMENT

It is the purpose of the statement submitted today to provide for the Committee's record an appropriate factual backdrop for the many succeeding occasions on which this topic of Germany's economic base for aggression will be discussed.

In order to provide this perspective, the statement includes:

- (1) An appraisal of the nature and extent of Germany's present day economic base for aggression (see Chapter I).
- (2) A review of the inadequacy of the disarmament provisions in the last Treaty of Peace (see Chapter II).
- (3) An historical analysis of Germany's rearmament for World War II on the economic base left to her by the victorious Allies (see Chapter III).
- (4) Some observations on the task of development of a program for the economic and industrial disarmament of Germany (see Chapter IV).

### Germany's Present Economic Base for Aggression

What is the nature and extent of Germany's economic base for aggression as it exists today?

Unhampered by international restrictions or intervention, and given the will and political leadership to prepare for war, Germany could be far better prepared for war economically and industrially within a few years than she was in 1939.

It is easy to confuse a momentary inability to utilize an industrial potential for war that is a natural consequence of defeat with a permanent elimination or control of Germany's physical war-making power.

Allied bombing and military operations accomplished their mission. That mission was to harass and damage German industrial production or reduce it to possession by force of arms in order to achieve the defeat of the German armed forces.

But, such military operations, basically selective in their character, were not and could not be executed so as to eliminate

permanently a national industrial war potential. That can result only from the making and keeping of the peace in such a way as to complete the process of German economic and industrial disarmament and prevent any rearmament.

The most important fact about Germany today is the size and range of the existing German industrial plant. It has been geared for total war and can be geared again; the bone, muscle and sinew of the economic and industrial war power that nearly conquered the world is still in existence -- Germany's economic base for aggression remains to be eliminated or put under long term control.

What are the component elements of this existing economic base for aggression?

A principal element is a huge machine shop equally capable of turning out arms, ammunition and implements of war and a wide variety of useful peacetime products. The possession by a nation of a large installed stock of machine tools constitutes a major element in a war-making capacity, outweighing the military potential of population numbers. Germany with a 1938 population of 70,000,000 had a machine tool inventory and a machine tool building capacity larger in 1939 than that of the U.S. with more than 130,000,000 people and a more highly mechanized civilian economy. It is believed today that even with allowances made for damage and obsolescence, Germany has in excess of 4,000,000 tons of machine tools together with a vast undamaged capacity for new machine tool production. As it stands today, Germany, except for the U. S., is the outstanding machine shop in the world.

This huge machine shop is based, in turn, on an iron and steel capacity which even before Germany entered the war was capable of producing 25,000,000 tons per annum. The greater part of that capacity is available today, given rubble removal and some basic repairs.

In the light metals field, Germany's capacity to produce aluminum approaches 250,000 tons per year with only a relatively small percentage incapable of operation because of bomb damage.

Despite rather substantial bombing damage the capacity of a huge German chemical industry remains or can be rebuilt in a short time. Some segments of it, such as that devoted to the production of synthetic petroleum, were substantially curtailed in their operation in the latter stages of the war because of bomb damage. But, substantial segments of the industry are capable of high level operation in the near future, given an opportunity to repair and rehabilitate.

Fundamentally, this is the story all the way up and down the scale of



industrial production. Many buildings stand in rubble, including a vast amount of residential housing. Many plants were damaged sufficiently to put them out of operation for the war just ended. But, a huge block of industrial capacity is or can be made available for operation, given a relatively short period and the opportunity to repair and rehabilitate. The skill, "know how" and physical capacity is there.

The shape of the German economy of the future, war like or peaceful, will depend fundamentally on what happens in the months ahead, not those just behind.

Many raw materials are available to provide the working materials for this industrial potential. Coal is still in the ground, in huge deposits. The forests still grow. Through a marvelous capacity for synthetic production, supplies of textiles, rubber, petroleum, nitrogen and many other items not available in their natural state in Germany can be produced in synthetic form.

A huge electric power industry, based on both ordinary coal and so-called brown coal stands ready to provide power for the wheels and tools to fashion the raw materials into semi-finished and finished forms. Germany has the capacity for an outstanding position in many of the vital components industries. It has an outstanding electronics and electrical equipment industry and a superb precision and optical instruments industry. These are examples of industrial superiority and capacity which are esteemed by our military production authorities as vital elements in a war machine, particularly where they exist in a highly oversized form. This existence in Germany to produce a given material or product in amounts far beyond that necessary for a peaceful civilian economy must be considered as a threat to peace.

As we view a prostrate Germany economy today, let us not forget that in 1944 the German nation achieved the highest general level of production in its entire history, despite heavy losses in war casualties, the absence of a huge quantity of manpower of an army beyond her borders and the impact of aerial attack and economic warfare.

Apart from the purely physical availability of plant, raw materials, and power capacity, there are other important components in Germany's economic base for aggression which must not be overlooked.

The last months of the war provided ample testimony to her amazing technical ability to produce new weapons and materials as a result of organized technological research and development. The organized and adequately

financed research institutions, operating independently of or in connection with normal industrial operations and including large numbers of highly trained and specialized scientists, constitutes one of the most important parts of the German war machine.

An equally important and sometimes overlooked base consists of the properties presently or formerly owned by Germans which are located outside the physical borders of the country, together with a wide variety of economic and trade activities which constitute a transmission belt for the achievement of German economic and political objectives. Through German economic penetration, and the Fifth Column activities on which it was based, Germany won an amazing string of victories. It is this economic base for aggression outside of Germany, which like the Fifth Column, can be most easily overlooked in any organized effort to defeat the peace. Why? Because this is the base which can be most readily utilized in all of the varied countries when the cynosure of all eyes is upon the prevention of organized planning for aggression in Germany.

Some elements in this base for aggression outside Germany are long term investments in industrial and commercial enterprises, stock piles of raw materials and merchandise usable for renewal of quick trading; gold holdings, securities and bank deposits in neutral countries or in the hands of cloaks in allied nations; private trade agreements in the field of cartels, patents, licenses, etc.

Finally, we must not overlook the highly integrated control of German economy which has become both traditional and intensified. This integrated control took many forms, sometimes manifest in the relationship between the state and industry, sometimes between German military leaders and private industrial organizations, sometimes being effected by trade organizations themselves through the cartel and similar devices. It is easy to be deceived by the temporary state of disorganization of the Germany economy about which we hear so much. The years of working together in a highly organized fashion which have created a habit pattern and manner of doing business that is easily reconstituted.

#### THE INADEQUACY OF THE DISARMAMENT PROVISIONS

##### OF THE TREATY OF VERSAILLES

What can we learn from the history of our last experience in peace-making, concerning an adequate treatment of this economic base for aggression?

Already we have avoided two of the difficulties that last time defeated an attempt to prevent Germany from making war again. We have avoided

a negotiated peace. We have instituted allied authority in lieu of a German government. We have agreed that Germany should be treated as a defeated nation and disarmed so completely that she would not be able to menace the people of the world.

Last time the disarmament of Germany was conceived of as a part of a universal disarmament, not as a specific program for preventing a recurrence of German aggression that might impinge upon the sovereignty of a German government.

Last time Germany was permitted to retain and equip an army. The possession and manufacture of arms, ammunition and implements of war was only restricted. It was not abolished.

The provisions of the Treaty of Versailles were eloquent in their omission of provisions constituting a program for the elimination or control of German industries capable of military production. They aimed rather at reducing the standing military forces of Germany and the amount of true military equipment they could retain and manufacture.

Last time there were wide-spread attempts to violate and evade the provisions restricting the maintenance of or redevelopment of Germany's armed might. The enforcement commissions were slow in beginning control. They were possessed of inadequate powers, badly understaffed, and particularly hampered by the lack of adequate Allied intelligence personnel. A surprising course of Allied policy of upholding German sovereignty against the role of the commission greatly interfered with enforcement activities.

#### THE ECONOMIC AND INDUSTRIAL REARMAMENT OF GERMANY FOR WORLD WAR II

Even before World War I was over, German military leaders were analyzing the causes of their impending defeat and planning for the next war. They found few defects in German arms and military strategy. The main weakness that they discovered was in the field of war economics.

The Treaty of Versailles abolished the German General Staff but the German General Staff was able to circumvent that prohibition by continuing its work in various governmental organizations such as the National Archives where they purportedly worked on a historical study of the First World War.

Not long after 1918, the German General Staff set up schools to train German officers in military economics and industrial organization. By the middle 1920's many German officers trained in those schools had been sent out to help and guide German industrialists to rearm Germany economically and industrially for World War II.

By the end of 1923 the German Staff's plans for the next World War were so apparent that the British Brigadier General, John H. Morgan, of the Allied Disarmament Committee was able to state:

"Germany is in many respects far better prepared, industrially speaking, for a great war than she was in 1914."

The German General Staff did not confine its economic efforts to Germany itself. In fact they hardly had surrendered in 1918 when, working closely with the industrialists, they encouraged and organized the flight of specialized assets and personnel from Germany. Blue prints, plans and many valuable documents, and in some instances, equipment and machinery, were taken from Germany into neighboring countries where German research and development was continued.

There are many examples of this:

For instance, not long after the Armistice of 1918, a train after train crossed the German border into Holland bearing equipment and materials of an important Fokker airplane works. Along with them went German technicians. A similar incident occurred with regard to a Dornier subsidiary which was established in Switzerland, just across the lake from its parent company in Germany.

All through the 1920's the German General Staff and the industrialists continued their efforts to reorganize and prepare the German economic and industrial system for World War II. They instituted and managed inflation; they arranged for foreign loans to Germany; they were able to make arrangements with the Allies so that Reparations actually were used to promote their plans rather than to impede them and they widened and strengthened the network of domestic and international cartel arrangements for the same purpose. This Committee has already conducted hearings with regard to those cartel arrangements. For that reason I believe it is unnecessary to refer to them further in this summary.

When the Nazis came to power in 1933 they found that long strides had been made since 1918 in preparing Germany for war from an economic and industrial point of view. However, they also found that Germany was lacking in many basic raw materials and that her imports of those materials and her production of necessary synthetics would have to be increased. Working closely with the German General Staff, the Nazis

achieved a high degree of success. In particular their foreign trade policy toward the countries of South eastern Europe was so successful that during World War II Germany was able to obtain a very high percentage of strategic raw materials from the Balkans and Central Europe.

Today, many people are inclined to give the Nazis credit and blame for Germany's accomplishments and policies from 1933-1935.

In reality, the German General Staff and the military German authorities were equally responsible. During those years, Germany was in fact ruled by the Nazis in partnership with the German General Staff and the major industrialists. Any effective program of economic and industrial disarmament which we and our Allies undertake must take cognizance of this fact.

SOME OBSERVATIONS ON THE TASK OF

DEVELOPING A PROGRAM OF GERMAN ECONOMIC AND INDUSTRIAL DISARMAMENT

How are we to cope with this problem of Germany's economic base for aggression in the light of our failures and difficulties in the history of our experience after World War I?

The problem must be studied intensively and a program for action devised; regular and intensive discussions and negotiations with our Allies should continue; an adequate short term policy should be maintained so that long term plans will not be unduly prejudiced; as soon as is consonant with sound judgments and careful study a U. S. policy for a long term program of German industrial disarmament will be determined at the highest level; afterwards, through diplomatic negotiations and the exercise of vigorous policy, we can seek a substantial measure of agreement on the part of our Allies.

Confronted by this rather simple and obvious course of action, the responsibilities of the FEA are limited to the first point, namely, the study of the problem of German economic and industrial disarmament and the development of a specific and definite program for U. S. consideration. This responsibility is derived from a letter from the late President, directing the Agency to make "studies from the economic standpoint of what should be done after the surrender of Germany to control its power and capacity to make war in the future." The responsibility for the carrying on of negotiations and the execution of U. S. policy and programs in the field, falls to such organizations as the Allied Control Council or the Reparations Commission, in which U. S. representatives operate under the direction of the President and the Departments of State and War.

The FEA has sought to execute the President's direction to organize and accelerate studies and programs bearing on the subject of German economic and industrial disarmament by various devices.

It has established a new organizational unit known as the Enemy Branch for this purpose. It has transferred to that Branch the substantial quantities of files and information concerning the German economy which FEA and its predecessor agencies had collected in the business of economic warfare and the continuing study of the enemy's economic potentials and institutions. It has transferred to this Enemy Branch all of the staff available from the Economic Warfare Section of the Agency and other units doing related work.

It has sought to bring together in the study and analysis of this problem a variety of experts in or available to many of the Executive

Agencies. It has sought affirmatively to widen the circle of trained minds available to this government who would work toward the formulation of an adequate program for dealing with it.

The attention of the Committee is directed particularly to one group of projects which were launched some months ago and constitute, in our judgment, the most intensive and organized attempt yet made to develop the essentials of this new science of economic and industrial disarmament. A detailed description of the inter-agency study project on this subject which is being carried forward by the FEA Enemy Branch is described in pages 37 through 42, and is the subject of exhibits 7 and 8 to the Statement.

The completion of these study projects within the month should result in:

- (a) An organized consideration by experts drawn from various backgrounds of the more important components in Germany's economic base for aggression. Among other things, they will provide specific industry by industry studies which Mr. Baruch suggested be prosecuted in his appearance before the Committee last week.
- (b) Creation of a series of adequately prepared written analyses of the various topics selected for detailed examination. These reports are being prepared to include not only a description of the particular German industry or economic resource under consideration, but also to deal with various detailed questions that undoubtedly will be raised or answered in connection with any international considerations of a long term program. They will include recommendations of a specific and definitive character, although they will be advisory only to FEA and the other agencies concerned, and not have the force and effect of adopted government policy.
- (c) The early provision of a basis for searching and complete technical discussions of the problems of German economic and industrial disarmament by our appropriate representatives.

These 27 study projects are being conducted in a variety of ways. To handle most of the specific industrial projects, the FEA worked out careful cooperative arrangements with a number of departments and agencies of the government, including State, War, Navy, OSS, Commerce, WPB, Interior and others, possessing or having access to specially trained technical personnel. In some cases, a given project has been redelegated by the FEA to a particular agency because of a peculiar aptitude of the personnel of the agency

to deal with the subject. In dealing with other projects, particularly those of an economic character, involving such difficult and troublesome questions as cartels, German assets abroad, and inter-corporate relationships, the FEA had depended primarily upon its own personnel.

These reports, now in the process of completion, will be submitted to the FEA as reports of the individuals who served on the Committees or prepared the report, speaking from their own knowledge and point of view, rather than as reports reflecting the policy or fixed views of the agencies to which they are attached. The reports are being made to not by the FEA. Rather than constituting adopted policy of the Executive Branch, they are being prepared for the advice and information of officials responsible for the making of such policy. They will incorporate the informed views and judgements of the best experts available to the government, organized and assembled in an orderly manner.

After the submission of these reports to it, the FEA will undertake to evaluate and coordinate the conclusions and recommendations in these reports with many others worked out by its own staff into one master report. The Agency will submit this overall summary report on the subject to the State Department and the President with specific detailed recommendations constituting a suggested long term program for German economic and industrial disarmament.

The FEA, which has devoted more man hours to this subject than elsewhere in the country, feels that only a beginning has been made in the study of this problem and the development of sound informed judgements. In effect, only the preliminaries are out of the way. It urges that military, economic and industrial experts be increasingly employed in the task of diagnosing the plans of the enemy and in developing and executing plans designed to frustrate them. It is especially important to procure economic information and intelligence within Germany itself, particularly on the subject of German economic penetration of other countries.

Without discussing the nature or substance of the definite and detailed program which is in process of development to carry out the Yalta agreement, certain ground rules regarding the character of such a program can be outlined. The attention of the Committee is directed to a brief summary of these important ground rules which is contained on pages 46 through 49 of the detailed statement.



## CONTENTS

There are few Americans today who will contradict the statement that the ability to wage a modern, large scale war is no longer dependent upon industrial and economic resources as it is upon military weapons. An airplane factory is now as important than the glass, a sufficient stockpile of munitions for making airplanes is as important as a stockpile of airplane engine parts. The lessons realized this year as a result of their experience during World War I, and after they were militarily for World War II, they also acted economically and industrially. However, if we are ever to prevent Germany from possessing the means of waging a Third World War, we must attack her economically and industrially as well as militarily. That is one of the lessons learned in the last two decades. How can we apply it to the present situation in which we, as a victorious nation, seek, with our allies, a lasting peace from German aggression? The answer is that certain conditions:

1. An appraisal of the Written Statement presented herewith regarding the war (See Chapter I).
2. A review of the functioning of the Government provisions in the last twenty years (See Chapter II).
3. An historical analysis of Germany's development for World War II in the economic area left to her by the victorious allies (See Chapter III).
4. Some observations on the task of developing a program for the economic and industrial development of Germany (See Chapter IV).

## INTRODUCTION

There are few Americans today who will question the statement that the ability to wage a modern, large scale war is as dependent upon industrial and economic resources as it is upon military weapons. An airplane factory is more important than the plane. A sufficient stockpile of bauxite for making aluminum is as important as a stockpile of airplane spare parts. The Germans realized this as a result of their experience during World War I. And when they armed militarily for World War II, they also armed economically and industrially. Therefore, if we now mean to prevent Germany from possessing the means of waging a Third World War, we must disarm her economically and industrially as well as militarily. That is one of the lessons learned in the last two decades. How can we apply it to the present situation in which we, as a victorious nation, seek, with our Allies, a lasting peace from German aggression? The answer to that question involves:

1. An appraisal of the extent of Germany's present economic capacity to wage war (See Chapter 1);
2. A review of the inadequacy of the disarmament provisions in the last treaty of peace (See Chapter 2);
3. An historical analysis of Germany's rearmament for World War II on the economic base left to her by the victorious Allies (See Chapter 3);
4. Some observations on the task of developing a program for the economic and industrial disarmament of Germany (See Chapter 4).

THE PRESENT GERMAN ECONOMIC BASE FOR AGGRESSION

Germany is a defeated nation. She cannot use her economic potential for war. At the moment the Allies by the sheer force of occupation, prevent such a result. But what would Germany do in her current condition if opportunity for attack was presented, and she had the will and organization to fight? What is Germany's present day economic base for aggression on which it can build for yet a Third World War?

Germany has the better part of her economic and industrial strength today, even though she could not martial it immediately for a Third World War. It is there to build on.

The fighting has been over for only about six weeks. A detailed assessment of Germany's present economic and industrial position is still unavailable. But enough is known to safeguard an estimate that, if we were to leave Germany to its own devices and not to institute a program of economic and industrial disarmament, Germany could be far better prepared for war within five years than she was in 1939.\*

A major element in the defeat of Germany was the havoc wrought on Germany's industrial war machine by Allied bombing. But, contrary to popular belief, Allied bombing did not reduce most German plants to utter ruin. It substantially curtailed the production of aircraft.

This does not mean that Allied bombing failed to accomplish its purpose. Its effect on German production in 1944 and 1945 was tremendous. Its effect on German production for 1946 and 1947 and a few years after that will probably be tremendous. But it didn't eliminate permanently Germany's industrial war potential -- and its effect on Germany's productive capacity could almost surely be discounted by the Germans before many years have passed unless we take steps to prevent that from happening.

Air bombing during World War II disrupted the flow of raw materials, fuels, and other supplies by wrecking the transportation system. It put certain big plants out of commission by destroying essential working parts, such as power houses. Demolition put out of operation a few key units, such as the ball-bearing plant at Schweinfurt. Other plants here and there were flattened.

\* For a brief account of German industrial mobilization prior to 1939, see Exhibit 1: U. S. Senate, 79th Congress 1st session, Report from the committee on War Mobilization to the Committee on Military Affairs, Organization of European Industry (Washington, Government Printing Office, 1945,) Gallies 94 - (1) 10: Significant Data on the Pre-War German Economy especially Gallies 94-97. This document will be referred to hereafter as Exhibit 1.

but even here the tools and plant equipment can be put back in shape; it is the buildings that are gone. For the most part the great majority of the most important plants could today go into operation after very little repair. In fact, some plants are already in operating shape.

The size of the existing German industrial plant is still enormous. All of it is geared for total war. All of it is still part of a huge modern industrial machine, which was organized and used for war.

#### DYES AND CHEMICALS

Germany, less than four times the size of New York State and with only five times New York State's population, has one dye plant that can turn out almost as much dye in a year as all the plants in the United States together. Not one of its windows has been shattered. During the First World War this plant using the equipment needed for dyemaking was a key unit in production of poison gases, the surprise weapon of that war. During the Second World War it turned out great quantities of chemical materials for ordnance. It is in perfect operating condition today.

#### IRON AND STEEL\*

Practically all the great iron and steel furnaces of Germany are ready for operation or can be in operation with minor repairs. Germany, which produced only three million tons of steel in 1932, including that used to manufacture goods for export, made more than 19 million tons in 1938 and at that time had a capacity of 25 million tons.

This capacity would have been sufficient to supply half of the U. S. requirements at that time which, of course, included the tremendous transportation system, railroads, waterways, and highways necessary to keep together our economic and industrial structure which is spread over an area 16 times as large as that of Germany. Germany could not utilize a capacity of 25 million tons of steel except for warfare. The mere continued existence of such a capacity is an invitation to war.

#### NITROGEN

In 1936-1937 the world output of chemical nitrogen was around 2.6 million metric tons. Germany was producing about 1,000,000 metric in 1939 and had a potential of at least 1.6 million tons. It was this enormous capacity that enabled the demolition bombing of Warsaw, Rotterdam, London, and Coventry. More than twenty-eight percent of the contents of each bomb consisted of chemical nitrogen from the atmosphere over Germany. The plants that supplied the nitrogen for many thousands of demolition bombs were vast enough also to supply great quantities of nitrogen for explosives needed by the Wehrmacht. A large part of the capacity remains or can be rebuilt in a short time.

COAL TAR

Germany's coke oven, which provided the coal by-products also necessary for explosives, produced 2,228,000 metric tons of coal tar in 1937 -- only 115,000 tons less than the ovens of the United States. From coal tar are derived many thousands of chemical compounds important to war. The German capacity is now considerably greater and has not been materially reduced by military action.

SYNTHETIC TEXTILE FIBRES

In 1934, Germany imported nearly 400,000 metric tons of raw cotton and cotton yarn for domestic use and for sizeable exports of textiles. Today, Germany has rayon factories with a combined capacity of at least 450,000 metric tons. She no longer has to worry about her overseas cotton supplies being cut off in time of war.

Part of Germany's rayon output is used to supplement the limited supply of wool available at home and to provide high-tenacity fibres for industrial purposes.

Germany has domestic supplies of flax. This is supplemented by a new synthetic paper binder twine which takes the place of the hemp and jute which she had been accustomed to import from abroad.

In summary, Germany did not lack materials for textiles during the Second World War, the shortage of which was so serious during the First World War after the British Blockade cut off the arrival of supplies from overseas. On the basis of incomplete information, it would appear that little permanent damage has been done to most of the plants which have been producing those materials during the last six years of war. Today Germany is still in a position to produce these essential synthetic materials.

RUBBER

In 1933 Germany imported 60,500 metric tons of rubber, in the form of raw rubber and semi-manufactured rubber goods. According to the best available estimates, the German synthetic rubber capacity today is more than 100,000 tons.

PETROLEUM PRODUCTS

In 1934 Germany was consuming less than 4,000,000 tons of petroleum products. Of that total, approximately 300,000 tons were supplied by natural petroleum found in Germany. In 1935, Germany manufactured about 300,000 tons of synthetic oil. Nine years later, in 1944, Germany was producing about 1,000,000 tons of natural petroleum and about 5½ million tons of synthetic oil, within the borders of Germany as she stood in 1938 before Hitler began to annex other parts of Europe. By the time the war ended in 1945, Allied bombing had

done great damage to Germany's natural petroleum and synthetic oil production, but it is believed that a large part of Germany's 1944 capacity for producing petroleum products can be restored within a brief period.

#### ALUMINUM\*

In 1933 Germany had the capacity to make approximately 40,000 tons of aluminum a year. Actually, however, in 1933, Germany's aluminum output was only about 19,000 tons. According to the best estimates today, her capacity is currently around 250,000 tons. That capacity is still available to build Messerschmitts, Focke-Wulfs, jetpropelled planes and improved pilotless flying weapons.

#### COAL\*\*

Germany has almost no raw materials except coal to feed its vast industrial machine. Coal, however, is a material required for the synthetic gasoline industry, the nitrogen-fixation industry, the dye industry, the pharmaceutical industry, the plastic industry, and many other industries that provide substitutes for the resources Germany lacks. Germany ranks with the United States, the United Kingdom, and the Soviet Union as one of the important coal producers of the world. Its output of bituminous and subanthracite coal in 1938-9 was 187,000,000 metric tons, and production did not drop far below that annual rate until the last months of the war. In addition, Germany has vast fields of brown coal, half of it in Central Germany, that can be scooped up from open pits. In 1938-9, 187,000,000 tons of brown coal were mined; in the year ending in March 1944 the annual rate had reached nearly 250,000,000 tons. This brown coal was being used to provide a considerable proportion of the electric power of the country, to make briquettes and coke, to meet the requirements of much of the retail trade of the country, and as a material for the manufacture of liquid fuel and other military necessities.

#### MACHINE TOOLS

Machine tools are much more important in modern war than soldiers. A nation vastly superior in its machine tool population is possessed of a potential for production of instruments of war that surpasses in its importance the ability to produce soldiers. One tool may be the equivalent to hundreds of workers. The possession by any nation of a large, installed stock of machine tools constitutes of itself a major element in defensive or offensive war making capacity and outweighs the military potential of population numbers. The capacity of any nation to produce machine tools in quantities is an even greater factor in war making potential. Whereas machine tool capacity installed may be said to add arithmetically to the military power of a given

\* See Exhibit 1, Gallies 32-43, The Light Metals Industry in Germany.

\*\* See Exhibit 1, Gallies 2-6, Coal Production and Distribution in Germany.

population, the possession of knowledge and capacity to build quantities of machine tools effectively multiplies that war potential in geometric progression.

In the light of this knowledge, Germany's war potential in machine tools is a fact that is truly arresting. Recent studies and comparisons show that Germany not only has a very large number of machine tools but a capacity to produce them altogether disproportionate to any normal needs of the civilian economy. Germany, with a 1938 population of 70 million, had a machine tool inventory and a machine tool building capacity larger in 1939 than that of the U.S., with more than 130 million people and a more highly mechanized civilian economy. German over all holdings compared to those of the U.S. on a 1939 peace time basis are:

- 2 to 1 per capita of population,
- 3.2 to 1 per ton of steel capacity,
- 3.4 to 1 of production of civilian machinery,
- 16 to 1 per motor car produced.

This disproportion in Germany's holdings of machine tools is even more striking in relation to other European countries. The German nation had developed manufacturing industries far beyond her own consumption needs. These industries exported to and dominated middle Europe. In addition, Germany was the main source of supply of these non-German areas for the machinery and the machine tools they did use. Thus, the location of all of this manufacturing and tool producing capacity inside Germany meant a large subtraction from the defense potential of other European countries.

While this same economic domination was true in other fields, such as chemicals, it was outstanding in the machinery and machine tool field.

It is believed today that even with allowance made for damage and obsolescence, Germany has at the present time in excess of four million tons of machine tools together with a vast undamaged capacity for new machine tool production. Converted from their use for producing instruments of war to the uninhibited production of machinery of all types, there is no reason why Germany's industrial war potential in this field could not preserve itself and maintain its domination over the entire continent of Europe. As it stands today, Germany, except for the U.S., is the outstanding armament machine shop in the world.

#### OTHER INDUSTRIAL POTENTIALS

This listing and tabulation of existing German industrial war potential could be multiplied into other critical fields such as: shipping, ship building, anti-friction bearings, electric power, electronic and electrical equipment, precision and optical instruments, and a vast and striking array of

primary and sub-contractors in the direct armament field.

The most striking fact that should be underscored in our current thinking is that in late 1944 the German nation achieved the highest level of production in its entire history. This testimonial to her economic and industrial war potential stands out even more sharply in the perspective of heavy losses in male population due to the war casualties, the presence of a huge German army beyond her borders, and the impact of accumulated years of serial attack and economic warfare.\*

In assessing these bare bones of Germany's industrial war potential certain other less tangible, but none the less important, aspects of her economic base for aggression should be appraised. These include her amazing technical ability to produce new weapons as a result of technological invention, her vast pool of skilled workmen and highly trained scientists, the existence abroad of extensive economic assets and activities, and finally, a highly integrated organization and control of her economy. Each of these aspects of Germany's base for aggression deserves a brief re-appraisal as of today.

#### ABILITY TO PRODUCE NEW WEAPONS AND PRODUCTS

According to recent reports from Germany, it appears that if the Germans could have held out only six months longer they would have been able to smash New York City with improved V-2 bombs.

Only a little longer period would have been needed to bring into production the jet-propelled planes that could have reached Washington.

It is not necessary here to elaborate upon the terrifying scientific discoveries which our economic and industrial intelligence is gradually uncovering as we work beneath the lid in Germany. With the memories of her new V-weapons fresh in our minds, little needs to be added except to point out that they just didn't appear out of thin air. They were the fruit of carefully organized and adequately financed research institutions in which large numbers of highly trained and specialized scientists went about their business of inventing and developing the weapons that would establish German world supremacy. The results they achieved and would still achieve if opportunities are provided, spring from the existence of a laboratory here and pilot plant there and a research institution in another place. These institutions and these scientists are still on hand ready to do business for a new Germany when the break comes. Nor will their ideas and inventions be fruitless because of a lack of German capacity to translate them into mass production.

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\* These record making levels of production in late 1944 finally sluffed off in the last part of the year and the early part of 1945 as a result of intensified Allied air attack, primarily on transportation.



Germany could rapidly set up plants for such new products because of its enormous capacity to produce machines and machine tools, and the huge supplies of machine tools that were built up in advance of need. The plants the victors so innocently permitted to operate after the last war to turn out agricultural, construction, and textile machinery for the devastated regions of Europe were expanded and re-equipped to supply German factories to meet the needs of the war of 1939 -- already being planned when the armistice of 1918 was signed.\*

GERMAN ECONOMIC ASSETS AND ACTIVITIES OUTSIDE GERMANY\*\*

One of the most important bases for German aggression consists of the properties owned or controlled by Germans, which are located outside the physical borders of the country. Coupled with these properties and based upon them, there are a wide variety of economic activities which act as transmission lines for the achievement of German economic and political objectives.

The story of the 5th Column is a companion piece to the story of German economic penetration.\*\*\* While quantitatively this economic base outside Germany may not seem to be of high importance, qualitatively, it is of the highest importance. Why? Because unless the United Nations are alert, this is the base on which plans for future aggression can be most readily utilized in the years immediately ahead when presumably our occupation forces in Germany will be engaged in preventing such planning there.

In viewing this economic base, two aspects should not be confused. One aspect consists of German efforts in the latter stages of the war, to get out of Germany, particularly to neutral countries, funds, loot and key industrial technicians and organizers. The second aspect, less dramatic, but infinitely more important, was the existence, even before the war, of (a) extensive German investments in business properties and concerns of an enduring and well established nature,\*\*\*\* and (b) long term business relationships in the world of commerce and trade, that often took the form of private trade agreements or cartels.\*\*\*\*\*

\* See Exhibit I Galleys 94 and 95, section II, "German Industrial Planning and Subsidization of Industry".

\*\* See Exhibit 2: How German Assets and Economic Activities Outside Germany Affected German War Potential and Propaganda. Note, in particular, section c(3).

\*\*\* Some of the story is told in Exhibit I, Galleys 65-68, "German Economic Penetration and Exploitation of Southeastern Europe".

\*\*\*\* The evidence in this respect is overwhelming. See Exhibit I, Galleys 18-27, section II on "Integration of the Continental Iron and Steel Industry into the German War Economy"; Galleys 34-36, section on "German Penetration of the European Aluminum Industry"; Galleys 69-71, German Penetration of Corporate Holdings in Serbia; Galleys 72-75, German Penetration of Corporate Holdings in Croatia.

\*\*\*\*\* See Galleys 29-31, section on "The Iron and Steel Cartels"; and Galleys 42-43, section on "The International Aluminum Cartel".

When World War II broke out Germans were strongly entrenched economically in Spain, Switzerland, Turkey, Argentina, and Portugal as well as Finland, Bulgaria and Romania. During the occupation of the remainder of Europe they took the opportunity to lay the groundwork for an economic empire which involved in direct affiliations of business relationships, literally hundreds of thousands of individuals in the liberated areas, including such countries as France, Belgium, Holland, Norway, and Yugoslavia and Austria. \*

This economic network grew with government supervision and was carefully planned as an important component in the German scheme for the maintenance of an overwhelming political and economic power. Old established investments, contractual rights, personnel and other assets were used to serve the objectives of the state.

With the defeat of Germany these assets previously used in outright war, take on a new meaning. They are the means whereby the groundwork for rebuilding a new German war potential can be developed beyond the reach of the Allied occupation forces.

This is a story which can be told country by country in great detail. The agencies of this Government, in painstaking fashion, are trying to build up, through various means, more complete records of the story of German economic penetration. We are all sure that as of today, that story can by no means be fully told.

This Committee and agencies of the Government including the Department of Justice and the FEA, having painstakingly traced the records of a goodly number of international cartels through which the Germans attempted to build up their own war potential and prevent their potential opponents from achieving an adequate defensive position. Yet, the probabilities are that for the dozen stories of this sort that are fully known to us today, there are a multiplying number as yet unknown or barely glimpsed.

However, we do know enough to assess and place in special categories the more important types of German economic bases abroad which are important to take into account in our planning.\*\*

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\* Details on some of the business relationships established by the Germans in France may be seen in Exhibit I, Galleys 56-65, The Textile Industry of France, particularly Galleys 56-65. Galleys 44-51, The Belgian Economy and Its Contributions to Enemy Europe (especially Galley 46 ff.), give some idea of the extent to which the Belgian economy was tied to the German.

\*\* Sample cases of Recent and Current German Economic Penetration Abroad are presented in Exhibit 33, Cases 1-15.

They are:

1) Long-term investments in industrial plants, banks, mines, commercial enterprises, shipping, warehouses, public utilities, insurance companies and other types of industrial, commercial and financial undertakings, whether completely or partly owned. \* These are by far the most dangerous of German assets since most long-term investments are of pre-war origin and have become well-integrated with the neutral economy.

2) Stockpiles of merchandise or raw materials built up in anticipation of continued trade between Germany and the neutrals. These consist of stockpiles of German goods either accumulated in order to maintain a dominant position in the neutral markets or destined for shipment to Germany when the latter was cut off by the Allied landing in France, or originally intended for safe haven.

3) Art objects, jewelry, and privately owned precious metals which often may be looted property, but in many cases the legitimate property of Germans who either reside in the neutrals or have shipped their valuables abroad in order to escape contributing to reparations or other Allied penalties.

4) Gold holdings, securities, and bank deposits which make up a large part of German assets in the neutrals. German government-owned gold may be deposited with the German Embassy or Legation; privately-owned gold may include stocks, usually bearer shares, of foreign and domestic companies, bonds, and the like. Securities and bank deposits of German nationals and companies and their cloaks in the neutrals undoubtedly are considerable in amount.

5) Contractual rights include cartel agreements, mortgage, patents, licenses, trademarks and copyrights, re-insurance treaties and options of various sorts.

#### INTEGRATED CONTROL OF ECONOMY

The last mentioned but not the least important economic base for a new German aggression is the highly developed control machinery that blanketed the country from top to bottom. It is our belief that it is capable of functioning fairly efficiently even in the absence of any native political government. Although authority over policy was concentrated in Berlin, for the last two years, a considerable measure of local industrial authority was

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\* The way in which the insurance business of Europe lent itself to German long-term plans for domination is described in Exhibit I, Gallies 76-93, Axis Penetration of European Insurance.

permitted during the closing months of the war, when bombing disrupted communications and transportation. At all levels the persons participating in the control of German industry have been trained to follow a pattern that will advance the interests of the country.

Its elements are:

- (a) Some of the officials of the large civil service bureaucracy that has never attracted any great attention to itself by political activity in the Nazi party. This body has no doubts about a revival of Germany and will seek to act in a manner that cannot draw censure when foreign troops are withdrawn.
- (b) The military organizations that are being disbanded. The military tradition is so firmly imbedded that uniforms and open display of rank are not needed to obtain unquestioning obedience. Even with the General Staff disbanded there will be men of lesser rank ready to promote the long-term program of Germany, just as happened after the last war. Every graduate of the military schools knows what that program is, and can be counted on to act accordingly. Small groups will begin, if they have not already begun to do so, to meet cautiously to study the causes of defeat and devise ways of preventing it the next time. As long as the industrial plant of the country is intact, it will be far easier for new groups to mobilize the country's resources for war than it was for their predecessors of the 1920's, because industry has now been integrated for total war.
- (c) The network of trade, industrial, and cartel organizations. These have been streamlined and intermeshed, not only organizationally, but also by what has been officially described as "personnel union." Legal authority to operate this organizational machinery has been vested in the concerns that have majority capacity in the key industries, such as those producing iron and steel, coal, and basic chemicals. These concerns have been deliberately welded together by exchanges of stock to the point where a handful of men can make policy and other decisions that affect all. During six years of war the ordinary procedures of the free market largely disappeared.

Each small buyer learned to depend on a given supplier or to have a substitute provided by a higher authority. As one prisoner of war stated it: "We smaller manufacturers have become plant superintendents and bookkeepers."

The managers of the German machines are already displaying their tactics. Almost daily there are newspaper reports that American members of the Allied Military Government are met in each factory by hand-picked men, frequently engineers, speaking English and often prepared with credentials to prove acquaintance with reputable citizens of the United States. After disclaiming all association with the Nazi party, they endeavor to persuade the visitors that the German industrial capacity can greatly contribute to the war with Japan, or at least to relieve the needs of liberated Europe. These are precisely the tactics the Germans adopted after the defeat of 1918: to get the wheels of Germany's industry required for military production, rolling and operating for purposes other than war production, so that the Allies would continue to allow them to operate and forget or disregard their importance to Germany's industrial war potential.

No criticism of individual cases of plant reopenings or the resumption of production in "peaceful types" of industries is intended or implied. The purpose of the observation is to point up the general danger to which we must be constantly alert.

As we have reviewed the various aspects of Germany's economic base aggression, it would seem to be abundantly clear that the problem of eliminating or controlling that base in such a manner as to prevent renewed German aggression is not a simple one.

If such an objective is to be achieved surely we must understand the complexities of the problem and plan on a broad plane. At the risk of rehashing history of recent years that may be well known to members of the Committee, it will be the purpose of the next two chapters of this statement to trace the fatal errors made in the wake of World War I which left the Germans the opportunity to wage World War II and the way in which the German nation took advantage of that opportunity.

CHAPTER 2

THE INADEQUACY OF THE DISARMAMENT PROVISIONS OF THE TREATY OF VERSAILLES

The economic and industrial war potential of defeated Germany in 1918 was small compared with the potential of defeated Germany in 1945, just described. However, it was a large war potential in terms of 1918 and compared favorably at that time with the economic and industrial war potentials of the victor nations. Nevertheless, it was largely ignored by the Allied statesmen when they convened at Versailles in 1919 to draw up a treaty of peace. It is necessary for us to examine carefully the reasons for this and to take advantage of the lessons of the past.

Today our rights in Germany are those of conquerors. The Germans surrendered unconditionally about six weeks ago, after they had been beaten so thoroughly that they were unable to continue resistance. Today, in 1945 there can be no question of a negotiated peace. In fact, there is no German Government with which to negotiate. In 1918, by way of contrast, there was an armistice, a negotiated peace and a German Government which we recognized.

Lack of Unified Allied Policy

At the end of World War I, there was no unified Allied policy toward Germany. There was no general agreement that Germany should be treated as a defeated nation and disarmed completely so that she would not again be able to menace the peace of the world. Instead, there was a desire on the part of many Allied statesmen to deal with a responsible, democratic German Government, to impinge as little as possible on the sovereignty of the German Government once the Kaiser was removed, and to prepare the way for the eventual entrance of Germany into the League of Nations. The disarmament of Germany was conceived of as part of a program of universal disarmament, not as a program for preventing a recurrence of German aggression. The introductory paragraph of Part V of the Treaty of Versailles states:

"In order to render possible the initiation of a general limitation of the armaments of all nations, Germany undertakes strictly to observe the military, naval, and air clauses which follow."

To repeat: in 1919 there was no unified conviction on the part of the Allied leaders that it was necessary to disarm Germany in order to secure the peace. And it was against this background that the Peace Treaty was written and enforced.

#### The Military Disarmament Terms

A quick reading of Part V of the Peace Treaty indicates clearly the extent to which the provisions fell short of adequate disarmament. Germany was allowed to retain and equip a provisional army of 100,000 men--an army larger in proportion to the population of Germany than the regular Army of the United States before the present war was to the population of the United States. In an attempt to prevent evasion of the 100,000 limitation, the Treaty limited the number of customs officers, forest guards, coast guards, police, members of veterans societies, etc., which the Germans could have.

The Treaty provided that the German General Staff should be abolished. It limited the number of officers in the Ministry of War and similar Ministries and restricted the number of civilians who could be employed by the military services.

Just as the Treaty limited, but did not do away with, the armed forces of Germany, so also it restricted but did not abolish the possession and manufacture of all arms, ammunition, and implements of war. It did prohibit the retention or manufacture of any poison gas equipment, armored cars, and tanks. But it provided for the German army of 100,000 men to be equipped with artillery, machine guns, trench mortars, rifles, and ammunition. All such material of these types in excess of the amounts allowed to be retained was to be surrendered to the Allies. All war plant capacity, in excess of that needed to keep the army of 100,000 men equipped with the permitted types and amounts of war material were likewise to be surrendered to the Allies, but such war plants were not so defined as to include definitely anything other than a specialized, direct arms producing factory or arsenal.

#### The Naval Disarmament Terms

The naval terms of the Treaty were similar to the ones directed at the German Army. The German Navy was reduced to specifically named

warships. Further, Germany was not permitted to retain any submarines and all construction of submarines and warships was prohibited.

#### The Air Disarmament Terms

The air clauses of the Treaty forbade Germany to possess or manufacture military land or sea planes, but no limitation of any kind was placed on the manufacture of civilian aircraft.

#### Import and Export Prohibitions

The Treaty prohibited the importation into or exportation from Germany of any arms, munitions or war materials.

#### The Commissions of Control

The Treaty provided for three Inter-Allied Commissions of Control: Military, Naval and Air. The German Government was instructed in the Treaty to provide liaison officers to aid these Commissions. In general, the Commissions were given investigatory and supervisory powers.

#### Lack of Any General Economic and Industrial Disarmament Provisions

The Treaty placed limitations and some absolute prohibitions on the production of direct military goods. It provided for the surrender to the Allied authorities for destruction of "any special plant intended for the manufacture of military material, except such as may be recognized as necessary for equipping the authorized strength of the German Army". (Article 169) But it contained no provisions prohibiting or limiting the production in Germany of any but direct military goods. There were, for instance, no provisions reducing Germany's steel production capacity to the level required for peaceful purposes. There were no provisions to keep Germany from building up plants for the production of peace time goods in times of peace and war materials in time of war. There was in short no attempt to regulate those key industries which are related intimately to war production.

The omissions were undoubtedly due in part to a lack of understanding of the concept of economic and industrial armament and disarmament, a concept which Germany learned through bitter experience in World War I. But even if that concept had been understood by the Allied leaders in 1919, they would have almost surely not adopted it. For the concept would have been applicable against Germany only if the Allies had decided to treat



her as a defeated nation over which long-term control was necessary.

To summarize: the disarmament provisions of the Treaty aimed merely at reducing the standing military forces of Germany and the amount of direct military equipment which they could retain and which could be manufactured for them. This was the same approach which was taken during the 1920's at the various international disarmament conferences at which attempts were made to persuade the major powers to reduce their military establishments and their manufacture of articles of war.

Violations and Evasions  
by the Germans\*

The ink was hardly dry on the Treaty before its provisions began to be violated and evaded. The size of the German armed forces was, in fact, reduced, but the police forces were increased beyond their authorized size and a number of voluntary military and semi-military organizations were formed. In addition, many military officers were transferred to civilian status and entire divisions of the military organizations and the Ministries administering those organizations were transferred to Civil Ministries.

In addition, the 100,000 men making up the regular army were not constituted as an army but rather as a body of specialists and leaders who were trained as such. The General Staff, while formally abolished, was reestablished in such innocuous looking organizations as the National Archives where it studied the causes of the defeat of Germany in the First World War and planned for German Victory in the Second World War.

The enforcement of the provisions of the Treaty dealing with stocks of military equipment and war factories was even less effective than the enforcement of the provisions dealing with the size of the armed forces.

Slowness of Commissions in Beginning Control

In the first place, the Military Commissions were too slow getting started. They did not begin active enforcement until 14 months after the Armistice was signed in November 1918. During those 14 months, the Germans were able to hide away and camouflage equipment, blue prints, and other articles, and to organize methods of evading the provisions of the Treaty.

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\* See Exhibit 4: A Collection of Interviews Held in the United States by U. S. Government Officials with German Industrialists, Scientists, Attorneys, Journalists and Former German Government Officials.

### Inadequate Powers of the Commissions

In the second place, the Commissions were not given sufficient independent powers and freedom of action and their prestige was weakened by the Allied leaders who by-passed them from time to time and dealt with the various Allied ambassadors in Berlin on military matters which should have been handled solely by the Commissions. Further, the Commissions were ordered to report to the Conference of the Ambassadors of the principal Allies which continued to sit in Paris. In addition, in between the Conference of Ambassadors and the Military Commissions in Germany was interposed the Inter-Allied Military Committee of Versailles which was set up to interpret and transmit decisions of the Conference of Ambassadors on military points arising under the Treaty. All this made for cumbersome, unworkable machinery and meant that the Commissions in Germany were not free to act on the spot.

In addition, the Commissions were badly understaffed and were particularly hampered by lack of adequate Allied intelligence gathering personnel. As a result, they were largely dependent on their German liaison officers for intelligence. These liaison officers were supposed to act as servants of the Commissions. Instead they were in fact often advance agents of the German Government and helped to keep the German Government informed of every move the Allied Commissions were making and in many cases, enabled the Germans to hide away equipment and records which the Allies desired to examine.

### Allied Policy of Upholding German Sovereignty

Added to all this was the Allied policy of upholding German sovereignty and of not treating Germany as a defeated nation. The Commissions were in enemy country without adequate military enforcement powers and without the support of adequate Allied military garrisons. They had to argue with the German Government concerning the interpretation of the provisions of the Treaty. They had to ask for advance permission to make inspection visits at factories, depots, and barracks. Also

they had to face the fact that the German courts were invoking the German treason law against informers who cooperated with the Commissions, thus severely discouraging Germans from cooperating with the Commissions.

#### Efforts by the Commissions to Control Production of Military Goods

Under these circumstances, it is surprising that the Commissions were able to accomplish as much as they did and that they were able to arrange for considerable amounts of military equipment to be turned over to them. They also seem to have succeeded, in some degree, in restricting production of direct military equipment, though it is highly doubtful if such production stayed within the limitations set by the Treaty. In fact, a number of instances of direct violation, particularly by firms such as Krupp, are on record.

#### Destruction of Surplus War Plants

The provision of the Treaty requiring that surplus war plants be surrendered to the Allies was narrowly interpreted by the Commission. Only such buildings and machines incapable of conversion to peace time uses were destroyed. Some general purpose machines which were in direct war material factories were dispersed in order to break up the factory, but this dispersal was on a very small scale and had little adverse effect on the German industrial war potential.

#### Achievements of the Germans

While the Commissions were meeting great obstacles inside Germany, the Germans were busy sending personnel, blueprints, and some equipment abroad where manufacture and research were continued. These activities outside of Germany (which are described in some detail in Chapter III), when added to those activities which the Germans were able to carry on inside of Germany, provided the Germans with adequate opportunity for continuing to develop, design, test, and improve models of war equipment for future production and future use.

It was not the amount of military material which Germany was able to save from destruction by the Allies nor the handful of military material which Germany was able to manufacture by devious methods in violation of the provisions of the Treaty of Versailles, which were

important during the years which immediately followed the defeat of 1918. Rather, it was the fact that Germany retained intact a vast aggregate of economic and industrial war potential and was able to continue to experiment, plan, and prosecute its development in terms of future war production that was important. Indeed, it was this fact that later enabled the German nation to organize itself completely and entirely for war in a very short space of time, when the opportunity came with the ascendancy of the Nazis to power and the final breach by Germany of the provisions of the Treaty of Versailles.

#### Lessons from the Past

There are lessons to be learned from the failures of the Allied statesmen in the period immediately following World War I. We have already demonstrated that we have already learned some of those lessons. Germany today is being treated by the victor nations as a defeated country. It is being administered by Allied military forces. Considerations of German sovereignty are not weighty and inhibiting as yet. We are not beset by divergent aims the way we were last time. President Roosevelt, Prime Minister Churchill, and Marshall Stalin pledged at Yalta to "eliminate or control all German industry that could be used for military production". This is a tremendous advance over the attitude which governed at Versailles in 1919 when the concept of general economic and industrial disarmament of Germany was lacking.

Yet we are only at the beginning. We have still to agree on and to begin to apply a detailed, specific, unified economic and industrial disarmament program which will eliminate the German war potential as a part of a unified occupation program. We have yet to impose a treaty of peace on Germany and to enter into an accord between the Allies that will establish permanently a control of Germany's war potential. We have yet to establish anything that resembles a long term disarmament machinery which, over a period of decades, will see to it that the disarmament provisions of such a treaty are enforced and adapted as the situation may require.

We have seen the extent of Germany's present war potential--a war potential which exists despite the military defeat we have inflicted upon the German nation. Further, we have seen the mistakes which we made immediately after the last war. But in order to understand completely the problem of economic and industrial disarmament of Germany, it is necessary for us to trace through the pages of history the ways by which Germany achieved the economic and industrial rearmament for World War II.

CHAPTER 3

THE ECONOMIC AND INDUSTRIAL REARMAMENT OF GERMANY FOR WORLD WAR II

In the early summer of 1918 it was clear that Germany would be defeated. The men who had directed her war effort began to develop a new plan for the next war. The men who had drawn up Germany's economic plans for mobilization of the entire Germany economy during the First World War began in 1918 to plan the economic and industrial rearmament of Germany for World War II.

General Staff Emphasis on War Economics

The German General Staff, while officially abolished, as discussed in Chapter II, by the Treaty of Versailles, actually continued in existence after 1918, operating mainly in the National Archives, where, it was announced, some former war leaders were engaged in writing a historical study of the recent war. They did publish some volumes on military events, but their primary work was analysis of the causes of their defeat, and planning for the next war.\* Few defects were found in German arms and military strategy; the main weakness discovered was in the field of war economics. For that reason, soon after 1918, the General Staff determined that part of the Officers Corps must be trained in this subject. Under the Treaty all military schools were to be abolished. They were, in fact, closed, but at the same time the underground General Staff opened a new academy in the Institute of Technology at Berlin-Charlottenburg. This old institution not only had some of the best engineering faculties of the country but also one of the best economics staffs. Later, other similar institutions were developed.

Carefully selected officers and officer-candidates were sent to the Institute for a course of studies that included the efficient use of industrial manpower, the economics of raw materials, production management, industrial standardization, and war financing. In time the course came to include one year of practical experience in plant management.

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\* See Exhibit 4: A Collection of Interviews Held by U. S. Government Officials with German Industrialists, Scientists, Attorneys, Journalists and Former Government Officials. The cases set forth in this exhibit are illustrative of a great deal of the discussion in this chapter.

As early as 1926 graduates of the General Staff's new type of military academy for economic and industrial training had become active in the industrially important army corps areas, where they were the technical advisers of the army commanders and worked closely with the industrialists. Among their functions was the "rationalization" of industry; they brought the latest advances in technology and production methods to the attention of manufacturers and promoted research on such matters as the synthetics Germany must have to wage successfully another war. They later took credit for having accelerated the development and production of synthetic petroleum, for increasing the production and improving the quality of rayon, rayon staple, aluminum, and magnesium, for improving the methods of working low-grade iron ore, and for greatly expanding the capacity of the machine-tool industry. In many cases government funds were used to stimulate the desired activities. The corporations concerned often received freight rebates, tax exemptions, and similar favors in return for their collaboration.

Long Range Plans for World War II

The plans of the General Staff branch that on the eve of World War II emerged as the War Economics and Armament Office embraced these measures:

- a) the freeing of Germany from war debts and reparation payments;
- b) the re-organization of industry essential to war; the expansion of its capacity; the equipment of all plants with labor-saving machinery to lessen the vulnerability of industry to wartime shortage of manpower;
- c) the development of domestic resources to the maximum, and of synthetic substitutes for critical materials not to be found in Germany, or nearby in Europe;
- d) the stockpiling of critical materials that could not be developed in Germany;
- e) the rebuilding of the merchant marine and the building up of an air fleet;
- f) the construction of strategic motor highways and the unification and re-equipment of the railroads;
- g) the institution of governmental economic and industrial controls well in advance of the outbreak of war to prevent confusion in the critical period of initial attack.

Statements by One of the Allied Disarmament Commissioners

Too little information is available to judge precisely the extent to which the German General Staff and its industrial collaborators planned and promoted certain situations in the years immediately after World War I and to what extent they merely took advantage of them in putting their program into effect. But the Staff's operations were already so apparent at the end of 1923 that the British Brigadier-General, John H. Morgan, of the Allied Disarmament Commission was able to state:

"Germany has now got, ingeniously camouflaged, that Economic General Staff which was the dream of Rathenau... and the whole of the key industries of war--coal, tar products, sulphuric acid, nitric acid, aluminum, and all the rest--have been reorganized, subsidized, and controlled to this end. The whole of German industry and production have been reorganized by some astute and able brain with a view to making her independent of overseas supplies of material in the next war. Even her rolling-stock for ordinary commercial traffic has been altered to a new type capable of immediate conversion to troop trains."

Later Morgan said General von Seeckt was the director of the secret re-armament, that the government of the German Republic was collaborating fully with him, and that members of the General's economics staff were planted in key positions in government agencies, including the Ministry of Finance.

Morgan also wrote in 1923 "Germany is in many respects far better prepared, industrially speaking, for a great war than she was in 1914."

General Morgan made these statements in 1923, 3 years after the guns had ceased firing on the Western Front. We were trying to forget there had been a war. The Germans were already on their way toward a new one.

Flight of Specialized Assets and Personnel from Germany\*

The German General Staff did not confine its economic efforts to Germany itself or to international cartel arrangements worked out by German industry. In fact, they had hardly surrendered in 1918 when they encouraged and organized the flight of specialized German assets and personnel from Germany. Indeed, the 1918 surrender had taken place so far beyond the German boundaries that the Germans were able to secrete, camouflage and smuggle key blue prints and other vital data of a technical and military character out of the country or into hiding places in Germany before a single representative of the Allies entered the country. The

\*See Exhibit 2: How German Assets and Economic Activities Outside Germany Affected German War Potential and Propaganda. See particularly, sections (a) and (b).

situation in the period before the formal arrangements of Allied control were put into effect was so lax that the Germans even continued the construction of submarines in Germany until an annex to the armistice terms ended the work.

The informality and looseness of the situation also was so favorable to the Germans that the important Fokker airplane works were shipped out to Holland. Train after train crossed the border from Germany into Holland bearing equipment, parts, and materials,--and German technicians to install the machines and resume construction of planes. Later a Dornier subsidiary was established in Switzerland, just across the lake from its parent company. Junkers continued to make planes through a Swedish subsidiary. Thus, German technicians continued German military research and trained other German technicians for the next war.

Other German firms arranged to have various kinds of military construction carried on abroad, and to protect their patents on devices of military importance by use of native firms and secret subsidiaries in neutral countries. Krupp, for example, transferred key patents, licenses, and secret processes to Bofors, the Swedish armament company, in exchange for a bloc of its stock. Later, in order to circumvent Swedish legislation aimed at preventing direct German ownership of Swedish armament facilities, Krupp gained control of the company by the purchase of additional shares. Krupp brought suit against the British armament firm of Vickers for infringement of Krupp patent rights on fuses for hand grenades; in settlement of the case Vickers turned over to Krupp its steel-rolling mill at Miers in Spain. This strengthened its outpost operations in that country, which already included naval construction and manufacture of machinery.

Submarine construction was carried on in the Netherlands through a disguised subsidiary of the German government-owned yards at Kiel. The manner in which this subsidiary operated is of interest. Finland advertised for bids on a submarine. It was arranged that the contract should go to a small Finnish firm, though none in the country had facilities for doing such work. The Finnish company then subcontracted the order, placing it with the German subsidiary in the Netherlands. This operation was publicized by the French company that had completed for the Finnish sub-contract with others from Britain and Italy, offering lower bids than the German puppet in Holland. Protests of the French



government over the treaty violation brought no Allied measures against Germany.

A more direct arrangement for submarine construction was made by the German Navy in 1924, when two model submarines were built in Spain and the German U-Boat ace, Captain Manfred von Killinger, founded a company in Echevarria, Spain, to experiment with submarines.

One of the best opportunities afforded the Germans for maintenance of forces skilled in manufacture of a military nature, and for experimentation, was arranged with the Russians. At a time when Russia's former allies were invading the country and supporting the so-called "White Armies", the Soviets had too few engineers and technicians to utilize the old tsarist armament plants to advantage. German firms, above all Krupp, offered to operate these plants on lease and did so for a number of years. Junkers also operated a plant in Russia.

At a time when the continuation of experiments with engines and plane parts was vital to the Germans if they were to build up a fleet of military planes as good as that of future opponents, some German designs were almost forced into production in countries not considered dangerous to Germany. Blueprints for a fighter engine were donated to a Czechoslovak manufacturer and designs for bomber parts were sold to the Czech government for a nominal price. In return, the Germans were allowed to watch performance tests.

While the establishment of some German subsidiaries abroad in the field forbidden to parent companies in Germany under the peace treaty might be considered merely a series of commercial ventures, the completeness with which every industry falling within the terms of the treaty was soon in operation abroad left little doubt that the corporations were working in close collaboration with the General Staff. Some of the production they undertook could not have been carried on otherwise, since it involved the use of blueprints for which the manufacturers were responsible to the Government.

#### Military Research Inside Germany

Not all the experimentation in the immediate years after World War I was carried on outside Germany. As shown in Chapter II of this statement, military production and research never actually ceased in Germany. The Reich military research institutes which could carry on in properly

guarded buildings, continued operations with budgets that were buried in government appropriations for the benefit of agriculture and similar peace time activities.

#### Military Production Inside Germany

An example of military production in Germany during these years is set forth in the Report of the Special Senate Committee of the 73rd Congress on the Munitions Industry. The Report refers to a statement by a representative of Du'Pont to his company in which he said that a State Department official had informed him that the Germans were exporting powder and munitions and that the Allies were not objecting because these exports were increasing Germany's ability to pay reparations.

#### Use of American Methods

The United States accidentally played an important role in the technical arming of Germany. Although the German military planners had ordered and persuaded manufacturing corporations to install modern equipment for mass production, neither the military economists nor the corporations seem to have realized to the full extent what that meant. Their eyes were opened when two of the chief American automobile companies built plants in Germany in order to sell in the European market without the handicap of ocean freight charges, and high German tariffs.

Germans were brought to Detroit to learn the techniques of specialized production of components, and of straight-line assembly. What they saw caused further reorganization and refitting of other key German war plants. The techniques learned in Detroit were eventually used to construct the dive-bombing Stukas. While this aid to the German airplane industry was accidental, at a later period I. G. Farben representatives in this country enabled a stream of German engineers to visit not only plane plants but others of military importance, in which they learned a great deal that was eventually used against the United States.

#### Industrial Reorganization

During the latter years of World War I, the German military economists had found many industrial plants with outmoded equipment and dependence on cheap manpower rather than modern devices that not only saved labor but also promoted mass production. They had also found industries poorly grouped for efficient operation and the saving of transportation. Some important segments, while having capacity sufficient for peacetime markets, were much too limited to meet military demands. Plants producing

synthetic substitutes for critical materials were quite inadequate, both in the character and type of their output. In other words, much of the German plant needed re-organization, re-equipment, and expansion before Germany could safely enter another war.

But accomplishment of this program required the expenditure of large sums of money at a time when reparations payments and service on public and private debts were materially reducing the funds available for investment in construction--especially in construction on which no immediate return could be expected. Thus, during the early 1920's, the German General Staff and the industrialists had a problem on their hands: how was Germany to finance the program of construction needed to arm Germany economically and industrially for World War II.

The answer was in a sense threefold: Inflation, Foreign Loans, and Reparations, although all were related rather than separate methods.

#### Inflation

Various apologists for Germany have denied that inflation in Germany during the early 1920's was managed. But, General Morgan, who was in Germany through the period when it was in operation and in an exceptionally good position to discover the facts, stated the conviction that inflation had been "the instrument" of the underground General Staff to accomplish a large part of its program. Such a program could not have been carried out without the collaboration of the government of the Weimar Republic and of the major industrialists. The latter were in control of banking and, in addition, occupied many of the government offices concerned with public finance. They, furthermore, were the chief beneficiaries. While small business-men who did not understand the techniques of managed bankruptcy were ruined, and salaried workers and wage-earners were driven to desperate expedients in order to subsist with prices doubling overnight, a constantly narrowing group of the major industrialists were creating economic domains of fantastic proportions. As company after company was forced to the wall, the successful manipulators bought them up.

The new empires built with the aid of inflation were not all within Germany. At the same time when Germany was pleading poverty and inability to pay reparations, German manufactured products were being sold abroad in large quantities, thanks to the low-production costs, and part of the proceeds from them were being used to acquire properties abroad--some of them German holdings that had been confiscated by the Allies.

The final triumph of inflation was its blackmail value. Germany's ability to undersell other nations with goods produced under inflationary conditions began to cause trepidation among other trading nations in 1922. The speculation in the mark was also disturbing the money markets. The German government insisted that it was powerless to handle the situation. Finally the Allies agreed to review the reparations question and to consider aiding Germany financially. The mark was abruptly stabilized.

#### Foreign Loans to Germany

The Dawes Plan, adopted in August 1924, fitted perfectly into the plans of the German General Staff's military economists. A more than reasonable program of reparations payments was worked out. It was agreed that the German obligations ended with payment in marks to the Allied Agent General in Germany. And the Allies undertook to float loans to enable German economic rehabilitation. With such guarantees, German business had little difficulty in floating private loans in other countries. German municipal and regional governments, as well as the Reich government, shared the inflow. The result was a new construction boon whose stimulating effects on other industries caused many observers to write approvingly of the amazing recovery of Germany.

There was surprisingly little intelligent analysis by foreign observers of the purposes for which the moneys were spent, or investigation of the soundness of the investments. While some foreign money was used for housing and much-needed public works, a very considerable portion of the funds went for the construction of iron and steel mills and similar works that Germany already had in sufficient capacity for legitimate peace-time needs. Coal mine development went ahead sharply and in spite of reparations deliveries German coal was soon cutting in/<sup>to</sup> British export markets. The results of this building up of German industrial capacities were fully apparent by 1937, when the bituminous coal output almost reached the all-time peak of Greater Germany in 1913, the steel output was slightly greater than in that year, and the pig-iron output was only about three million tons less than when Lorraine ore was in German hands. Long before 1937 Germany had more than replaced the industrial capacity of the territories taken from her by the Treaty of Versailles.

#### Reparations in Finished and Semi-Finished Goods

Reparations in finished and semi-finished goods played a not inconsiderable role in the German economic and industrial rearmament. The reparations in goods kept the enlarged plants busy and skilled staffs together,

built up buyer demand for Germany in the receiving countries against the day when the deliveries stopped, and retarded the development of key war-potential industries abroad, particularly in the machine and chemical fields. Countries receiving German machines became dependent on Germany for spare parts and replacements. Consumers of dyes who had learned to use the German products successfully were later unwilling to risk the use of other products when the reparations deliveries ceased.

It was of considerable significance that Germany, long before the day in 1928 when she had an option to end the deliveries of chemicals, informed the Agent General that she was quite ready to continue this form of reparation payment. In that year, 16.6 per cent of the value of all the alizarine dyes Germany exported, 18.3 per cent of the value of the chemical fertilizers, and 26.3 per cent of all the synthetic ammonium sulfate were on the reparations account.

In his annual report the Allied Agent General for Reparations Payments stated that the Allied Experts considered it advisable to encourage the deliveries in goods because of their healthy effect on German industrial activity. He further justified the continuation of reparations in this form with the explanation that the deliveries had become "an inevitable part of the economic condition of several of the Allies, so that they could not be abandoned without considerable dislocation."

The word "inevitable" was ill-chosen in the light of the facts. France, for example, was a major recipient of German dyestuffs, though it had its own dye industry, which had been expanded during the war and which had been strengthened by the seizure of German dye patents. As early as 1924, however, Germany had begun to regain control, not only of the plants using its patents, but also of the French chemical company that had taken them over. By 1927 there was an agreement with the company that enabled I.G. Farben to dictate what quantities and kinds of dyes France might produce and export.

This took place only ten years after the Germans had used their dyes plants to manufacture poison gases\* and to launch gas attacks on French soldiers and civilians, counting on the superiority of German dyes production capacity to prevent equivalent Allied retaliation.

Not long ago President Roosevelt pointed out in a letter to Secretary of State Hull that "the history of the use of I.G. Farben by the Nazis reads like a detective story". But the detective story had been running in serial form when Adolf Hitler had been a mere corporal on the Western Front. It had been running under the authorship of the German General Staff and the major German industrialists

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\*See Exhibit 5: I. G. Farben's Manufacture of Poison Gases, 1913-18

Cartel Arrangements

The cartel program as developed first by the General Staff and the big industrialists, and after 1933 by the Nazis as well, called for the manipulation of the world's trade and the world's resources by German industry through the medium of cartel arrangements so as to strengthen Germany's position to make war, and, in turn to weaken the defensive position of its potential enemies.

Two of the best examples of the success of such manipulations are the stories of the aluminum and magnesium cartels.

Aluminum, a light-weight metal, is an important war item. It is used for aircraft, and also as a substitute for steel, copper, brass and as a catalyst in the production of aviation gasoline and important chemicals.

During the 1920's and 1930's the Germans gradually built up their aluminum production and entered into cartel agreements under which French, British and American production was limited. Germany increased its purchases of bauxite, and alumina from France (bauxite is the raw material from which alumina is made; alumina is the base from which aluminum is made), by seeing to it that the French owners of bauxite and alumina made more profit by selling to Germany than by increasing French aluminum production. When World War II started, France paid dearly for this arrangement. And when, not long after, the United States was attacked at Pearl Harbor, it found itself with far less aluminum production than it needed. The British went through a similar experience.

Magnesium is one-third again lighter than aluminum. It is highly inflammable and generates great heat when it burns. It is *one of* the main ingredients of the incendiary bombs which our Super-Forts are now showering on the Jap homeland. But when we were attacked in 1941, we had insufficient magnesium production and very small stocks on hand in this country. This we owed to cartel arrangements made by I. G. Farben under which American--and British--magnesium production was limited.

The result was that for many months, until American manufacturers were able to produce sufficient magnesium, we had to use thermite instead of magnesium. Thermite is highly inflammable, but it burns

in 30 seconds. It is therefore not nearly as suitable for incendiary bombs as the longer burning magnesium. Thus, during months of war, the magnesium cartel arrangements were responsible for greatly reducing the efficiency of what is today one of our main aerial weapons-- the incendiary bomb.

In addition to the economic and industrial advantages which Germany gained by means of cartels, the system was exceedingly useful to the military planners. It gave access to military developments abroad in a much more direct way than any spy system could, and it actually allowed Germany to undertake a program of disarming the powers who had beaten her in World War I.

All this was going on at a time when we were engaged in helping Germany get back on her feet. The Dawes Plan was in operation and Germany was quiet on the surface. But underneath, war preparation was going on.

#### Foreign Trade

The Nazis found when they came to power in 1933 that long strides had been made since 1918 in using German foreign trade as an instrument of preparing for war. The reparations arrangements, the extension of the cartel system, and the flight of assets and personnel to neutral and other countries after the Armistice in 1918 fitted roughly into a pattern of foreign economic policy which included a determination to gain control over the sources of strategic materials required by Germany, even in view of her program of synthetic production, to wage successfully the new war.

#### Germany's Lack of Raw Materials

As a matter of fact, it is actually amazing that England, France, Russia, America and all the other nations who have repeatedly suffered from German aggression stood by and allowed Germany to accumulate the raw materials she needed for the Second World War. With the exception of coal, and about one-third of her iron ore requirements, Germany possesses none or grossly inadequate amounts of strategic raw materials. Germany is dependent, wholly

or in large part, on synthetic production or on imports from abroad for her--

- petroleum
- rubber
- copper
- manganese
- nickel
- lead
- zinc
- chrome
- bauxite
- industrial diamonds
- opium
- fats

She has solved the need for some of these materials by the production of synthetics within her own borders. Well-known examples of this practice are synthetic rubber and synthetic oil. But synthetics alone were not able to satisfy Germany's needs for strategic materials-- and so the Germans looked abroad--to foreign trade.

The trade statistics for the years between the two World Wars were available for everyone to examine. They portrayed a pattern of preparation for war--a pattern which was almost entirely ignored by the nations against whom it was directed.

German Imports

During the period 1934-38 German imports of

iron ore	)	165	)	
copper ore	)	101	)	
lead ore	)	71	)	
chrome ore	)	increased 130	)	percent
bauxite	)	262	)	
petroleum	)	57	)	
rubber	)	34	)	
pyrites	)	45	)	

During the same six years, total German imports increased less than 10 percent. And the two principal exporters to Germany during this period were the United States and the United Kingdom.

Nazi foreign trade policy was simple--(1) to import as large quantities of raw materials and products needed for war as possible and to import as little of anything else as possible, (2) to obtain the required imports by exporting things which (a) Germany did not need for war, and (b) the receiving country could not use for war, and (c) Germany could produce with the slightest possible burden on her domestic rearmament production program eg. children's toys.



Some of the instruments used by Germany to implement this policy have already been mentioned. Cartel arrangements, for instance, were one. Others included subsidies, foreign exchange control, German government allocation of import requirements, etc.

#### Bilateral Agreements

Foreign Trade however involves two partners and German unilateral control was not enough. To overcome the shortage of foreign exchange which continued to stifle trade, Germany turned to a series of discriminatory bilateral agreements, the network of which was spread over Europe and certain countries of South America. Barter agreements provided for the exchange of definite quantities of specified commodities; clearing agreements set up special accounts in the Central Bank of each country in which local importers deposited domestic currency and out of which exporters were paid. These types of agreements were negotiated particularly with countries which could directly supply commodities in which Germany was deficient.

Barter and clearing agreements, however, did not supply foreign exchange. It was of paramount importance therefore that Germany should obtain free exchange particularly from her good customers who happened, however, to be her ~~reparations~~ creditors. With them she ran the danger that they would retain any surplus exchange for the amortization of her ~~World War I~~ debts. To safeguard against this eventuality a third type of bilateral agreement was negotiated, known as a Payment Agreement, which contained among other terms a definite commitment as to the amount of exchange derived from German exports which could be reserved for payment of war debts.

#### Southeastern Europe

Germany had another primary foreign trade objective--namely, the development of sources of supply of strategic materials in nearby European countries--sources which could not be disturbed by a British sea blockade. And so after 1934 Germany accentuated a program of economic penetration into her neighboring countries, which

had as its purpose the development of resources in those countries which, safe from marine blockade, would complement German synthetic production.

This was especially true of Germany's interest in the countries of Southeastern Europe which could supply commodities in which Germany was dangerously short, such as foods of all sorts, oil, and non-ferrous metals. The economic drive to obtain those products showed good results before the war and paid high dividends during the war period. The main techniques employed by Germany consisted of paying higher than world-market prices, of signing long term contracts for the development of certain lines of production, such as oilseeds in Roumania and Bulgaria, of selling on credit machinery to be used to develop certain resources, of granting preferential tariffs, and of handling all transactions through bilateral clearing arrangements. In addition, Germany followed a policy of maximum buying and minimum selling which resulted in the creation of large clearing balances in favor of the exporting countries. In order to utilize these balances, which constituted a heavy burden upon their central banks, these small countries were forced to enter into new agreements with Germany providing for imports from Germany conditioned by new exports to Germany, and resulting in a still greater entanglement in the German network of economic domination.

From the German point of view, this economic policy proved highly successful. About three-fourths of Germany's war supply of chrome, more than half of her copper, and over one-fourth of her lead were produced in Southeastern Europe. Roumanian and Hungarian oil represented more than 40 percent of Germany's total supplies, including synthetic. One third of Germany's bauxite supplies were delivered by Hungary. Manganese and mica, practically unexploited before 1939 as industrial weapons of war, were imported from the southeast and used with increasing military importance by the Germans. In the textile field, hemp and other fibres were obtained, while the wool delivered by Southeastern Europe represented about one-half of all new German wool supplies.

### The Weimar Republic

Germany was a republic--the so-called Weimar Republic--from shortly after the end of World War I to the ascendancy to power of Hitler and the Nazis. During those years, the German military leaders and major industrialists helped to keep up the pretense of a democratic regime, but they were both restless under it and constantly seeking a means of replacing it. The family and other bonds between the officers corps and the industrialists was strengthened by the frustrations both suffered as a result of national humiliation and the concessions necessary to keep up the appearance of popular government.

During the 1920's various right wing political parties came on the scene but only a few gained any considerable popular following. Although Ludendorff took part in the National Socialist putsch in 1923, most people of importance were not yet ready to back the Nazis. The character of many of the Nazi leaders was too crude to appeal to the General Staff and the industrialists. Moreover, while they shouted for Pan-Germanism, treaty repudiation and military action, the Nazis also advocated a kind of internal German socialism which was objectionable to the industrialists, the land-owning Junkers, and the General Staff.

By 1929, however, the Nazis had enough of a popular following to make it seem possible that they might be able, with proper backing, to overthrow the existing regime. Some of the Nazi party leaders began to explain to the militarists and industrialists that the socialist parts of the Nazi platform could safely be forgotten though its use must be continued in campaign oratory. A few of the Ruhr group began to send secret contributions to the party; but as a whole the Ruhr was not convinced until Hitler met with certain Ruhr bankers and other conservatives and convinced them that he could be trusted to set up a strong central government with a stable, aggressive, foreign policy.

First Year of the Nazis

During their first year in office, the Nazis were on probation so far as their monetary backers were concerned. While some of their acts were pleasing to the industrialists, certain others, intended to cement their hold on the populace, were not. The purge of 1934, which was publicized as a measure to rid the party of certain notoriously immoral and treasonable elements, was the blood price paid to re-assure the doubters. Thereafter Germany was ruled by the Party, in partnership with the major owners of combines and the German General Staff.

Unofficial Government

In effect, there was an unofficial super-governmental structure in Germany from 1934 to 1945 which included the Nazi government officials, the General Staff and most of the important industrialists. Attached as Exhibit 6 is an editorial explanation, along with a chart which attempts to combine a simplified outline of the official government structure during the winter of 1944-45, with the structures of the major combines and the General Staff. This chart, which is based on a study of the laws, decrees and administrative orders since 1930, plus an examination of governmental appointments and such industry records and data as are at hand, shows clearly the integration of German industry into the German war machine. The big German industrialists may claim that they took their orders from the Nazis--that they were sheep like the masses of the German people. But they were guilty of being more than sheep. They were full partners of the Nazi shepherds--just as were the members of the General Staff. Any effective program of economic and industrial disarmament must take cognizance of that fact.

CHAPTER 4

SOME OBSERVATIONS ON THE TASK OF DEVELOPING A PROGRAM FOR

GERMAN ECONOMIC AND INDUSTRIAL DISARMAMENT

How are we to cope with this problem that emerges to confront us today in the fearsome perspective of a history that showed the Allies to be wholly inadequate in dealing with it after World War I?

Certain lines of action are clearly indicated:

- (1) We must see to it that this problem is studied intensively, that the facts are marshalled, that our previous mistakes are analyzed, that corrective programs are devised, and that a general understanding and appreciation of the problem in all of its ramifications is created in the executive agencies and departments, the Congress and the public.
- (2) We must seek to promote regular and intensive discussions and negotiations with our Allies on this subject to the end that a common program can be devised and adequate international arrangements be made to execute that program.
- (3) We must see to it that a short term policy of controlling Germany's economic base for aggression is launched and maintained so that any common efforts to achieve a long term result will not have been unduly prejudiced by errors of omission or commission in the interim.
- (4) We must, as quickly as is consonant with sound judgments and careful study, adopt as high policy a long term program for German economic and industrial disarmament which this government and the people of the United States are prepared to commit themselves to for many decades.
- (5) We must attempt, through diplomatic negotiation and the exercise of a bold and vigorous foreign policy in this field, to seek a substantial measure of agreement to our program on the part of our Allies. This effort should result in the incorporation of an international program of German economic and industrial disarmament as one of the important foundation stones in the foreign policy of all governments committed to maintain peace, including that of a future German government.

The present interests and responsibilities of the Foreign Economic Administration concern the first point listed above, namely, the study of the problem of German economic and industrial disarmament and the development

of a specific and definite program for U. S. consideration, designed to eliminate or control Germany's economic base for aggression.

As a result of the experience of the FEA and its predecessor agencies in the business of economic warfare and its continuing study of the enemy's economic potentials and institutions, the agency found itself in possession of a substantial amount of information concerning the German war economy and the nucleus of a trained staff equipped to deal with the analysis of this and other post-surrender problems. On September 28, 1944, the President directed the agency as follows:

"Control of the War Making Power of Germany. You have been making studies from the economic standpoint of what should be done after the surrender of Germany to control its power and capacity to make war in the future. This work must be accelerated, and, under the guidance of the Department of State, you should furnish assistance by making available specialists to work with the military authorities, the foreign service and such other American agencies and officials as participate with the United Nations in seeing to it that Germany does not become a menace again in succeeding generations."

In the intervening months, the Foreign Economic Administration has been in the process of executing this direction.

Before going further, I want to make it clear that the FEA, in carrying out the President's Directive, does not arrogate to itself the responsibility for determining what American policy should be, or for executing that policy through international negotiations or the performance of occupation tasks in Germany.

The FEA is primarily concerned with seeing to it that the subject of German economic and industrial disarmament is intensively studied and that feasible programs for securing that objective are prepared and presented at the various points in our government where decisions can be made and action taken. In addition, the FEA participates as one of the executive agencies in making policy decisions or recommendations on this subject for executive action.

In accordance with the President's letter, the FEA also acts as a service agency for either the State or War Department or military and civilian officials abroad in providing personnel or performing other work at their request. It does so, however, as a service agency without the responsibility or authority for either carrying on negotiations with other countries or executing U. S. policy and programs in the field. That responsibility handled through such organizations as the Allied Control Council or the Reparations Commission falls, under existing arrangements, to the State and War Departments.

In the light of the foregoing, the Committee will understand that I must be limited in my subsequent comments to the way in which a program for German

economic and industrial disarmament is being developed rather than what form it is taking or how it is being executed.

Following receipt of the President's letter, the FEA set about its task of "accelerating" studies of German economic and industrial disarmament by working out arrangements for the guidance by the State Department stipulated in the President's letter and launching an intensive work program on this subject.

A new branch, first called the German Branch and later consolidated with other units in the Economic Warfare Section of the Agency and now called the Enemy Branch, was created and charged with the responsibility of carrying forward this work. Its Director is Mr. Henry H. Fowler, formerly Assistant General Counsel of the War Production Board.

In addition to consolidating the personnel with industrial and economic knowledge of the German war potential in the FEA Enemy Branch, the FEA has sought to bring into the study and analysis of the subject various types of experts in or available to many of the other executive agencies. In other words, the FEA has not been content to treat this important problem exclusively within its own ranks. It has sought affirmatively to ever widen the circle of trained minds available to this government who would think and work toward a solution.

I will not burden the record with a description of the many studies and reports which have been collected and prepared since we undertook that task. I will describe, for illustrative purposes, one particular group of study projects, which I believe, taken as a whole, constitute the most intensive and organized attempt yet made to master the essentials of this new science. That group consists of a series of interagency projects which the Committee may be interested in following.

After a review of all of the available materials within and without the agency, the problem of German economic and industrial disarmament was broken down by the newly created Enemy Branch in FEA into a series of separate projects for intensive technical examination. The basis or handbook for this effort took the form of an Interim Report on A Study Project of German Economic and Industrial Disarmament which was submitted to me by the Director of the Enemy Branch on January 10. In order that the Committee may fully understand the nature of the problem as we saw it then, and the techniques we have employed subsequently to develop a fuller governmental understanding of it, I wish to submit as Exhibit 7 to this Statement some pertinent portions of this Interim Report. I particularly call to your attention the portions of this exhibit which are entitled "Background of Study Project for German

Economic and Industrial Disarmament", and the description of the twenty-seven specific projects which this Interim Report outlined for intensive examination. I believe the Committee will be interested in the coverage of these twenty-seven projects, since their very titles indicate something of the nature and complexity of the subject under examination. They are:

- Project 1. The Post-Surrender Treatment of German Industry involved in the Production of Armament, Munitions and Implements of War.
- Project 2. The Post-Surrender Treatment of the German Aviation Industry.
- Project 3. The Post-Surrender Treatment of German Engineering and Research Related to Armament, Munitions, and Implements of War.
- Project 4. The Post-Surrender Treatment of German Engineering and Research in the "Secret Weapon" Field.
- Project 5. The Post-Surrender Treatment of the German Light Metals Industry.
- Project 6. The Post-Surrender Treatment of the German Oil and Petroleum Industry.
- Project 7. The Post-Surrender Treatment of the German Rubber and Rubber Products Industry.
- Project 8. The Post-Surrender Treatment of the German Radio and Radar (Electronics) Industry.
- Project 9. The Post-Surrender Treatment of the German Bearings Industry.
- Project 10. The Post-Surrender Treatment of the German "Common Components" Industries (Exclusive of Bearings).
- Project 11. The Post-Surrender Treatment of German Machine Tools Industries.
- Project 12. The Post-Surrender Treatment of the German Automotive Industry.
- Project 13. The Post-Surrender Treatment of the German Shipbuilding Industry.
- Project 14. The Post-Surrender Treatment of the Aggregate of the German Machinery Industries.
- Project 15. The Post-Surrender Treatment of the German Steel and Ferro-Alloys Industries.
- Project 16. The Post-Surrender Treatment of the German Chemical Industry.
- Project 17. The Post-Surrender Treatment of the German Coal Industry.
- Project 18. The Post-Surrender Treatment of the German Electric Power Industry.
- Project 19. The Post-Surrender Treatment of Strategic Minerals For German Industries.
- Project 20. Appraisal of Alternative Devices for the International Import Control into Germany of Supplies for which, for Security Reasons, that Country may be made dependent upon External Sources.
- Project 21. Technical Requirements for a Permanent Allied Commission to Enforce International Arrangements Relating to German Industrial Disarmament.



- Project 22. The Economic Consequences of a Separation from Germany of the Rhineland and/or the Ruhr, and/or Areas East of the Oder River.
- Project 23. The Post-Surrender Treatment of German Landed Estates and the Practice of Economic Autarchy in Food Products.
- Project 24. An Appraisal of the Technical Potentialities for the Development of "Peaceful" Industrial Activities in Germany for both Home Consumption and Export.
- Project 25. The Need for and Nature of Allied Activities Relating to German Property Assets, Industrial Personnel, and Economic Activities outside Germany, designed to enforce Economic and Industrial Security Measures Pertaining to Germany.
- Project 26. The Post-Surrender Treatment of German Participation in International Cartels Affecting International Security.
- Project 27. The Post-Surrender Treatment of German Foreign Trade Consonant with Economic and Industrial Disarmament Considerations.

Subsequently, two additional projects have been added, one concerned with precision instruments and optical equipment, and the other with forest products industries. The purpose of these study projects was outlined in the Interim Report, referred to, as follows:

- (a) A speedily organized consideration by experts, drawn from various backgrounds, of the more important subjects which can be singled out in this field for intense scrutiny.
- (b) The creation of a series of adequately prepared written analyses of the various subjects selected for detailed examination. These reports should include a description of the German industries or economic problems under consideration. They should note the various detailed questions that should be raised or answered in connection with any international consideration to undertake or not to undertake a disarmament program. The pros and cons on these questions should be included. Recommendations, however tentative, should be specifically and definitely stated, with appropriate reservations as to their force as accepted policy.
- (c) Through these written reports on the organized study, U. S. Policy officials should be able to develop the boundaries of the U. S. position in conference with the representatives of other powers and ultimately determine what practical and feasible stand the U. S. can take.

It should be emphasized that these so-called Technical Industrial Disarmament Projects are pointed squarely at the problem of security from German aggression, pinpointed in the President's letter. They are not concerned with other questions such as how and why industries should be built up or repaired for rehabilitation and other purposes.

These study projects, all of which are now approaching completion, have been conducted in a variety of ways. Careful cooperative arrangements were worked out with a number of departments and agencies of the Government, including State, War, Navy, OSS, Commerce, WPB, Interior who have especially trained industrial personnel and in some cases more specialized agencies such as OSRD and the Federal Power Commission. Pursuant to these working arrangements various agencies designated individuals to serve on inter-agency working groups which were charged by the FEA with responsibility for making a study and submitting report on a particular project. This method was particularly used in dealing with the industrial projects where various types of expertise were required for thorough treatment including a knowledge of the industry in question, its technical processes, its methods of public control as exemplified in the WPB type of limitation, its role in foreign trade, methods of production and distribution, etc. In some cases outside consultants were enlisted by the FEA or one of the participating agencies because of a special technical background for contributing to the particular study project.

In other cases, such as projects 1, 2, 3, 4, and 13, the project was delegated to one or two agencies for study and preparation of a report because of the peculiar aptitude of the agency in question to deal with the project. In dealing with certain other projects, particularly of the strictly economic character, the FEA has attempted to handle the project exclusively with its own personnel, leaving it up to them to seek informally advice and assistance from other agencies.

In other words, the FEA Enemy Branch, acting as a "coordinating work shop" has sought to engage and enlist the best qualified experts available to the government, regardless of current departmental or agency affiliation. I wish to offer for the record an exhibit describing just how each project is being handled, together with a list of the personnel constituting the inter-agency committee, wherever that device has been employed (see exhibit 1).

Let me add that the launching and conduct of this inter-agency project by the FEA has received the fullest cooperation from the other participating agencies. It is a striking example of the proposition that ability in various corners of the government can be assembled, organized, and put to constructive work without friction and jurisdictional dispute. It would have been impossible for us to pull together an equivalent group of experts in a single agency.

Lest there be any confusion or concern about the status of the reports of the various working groups whom we have sought to enlist in this effort, I wish to emphasize certain points.

All of these 29 project reports, when completed, will be submitted to the FEA Enemy Branch as a report of the individuals who serve on the committee or prepared the report, speaking from their own knowledge and point of view, rather than reflecting a policy or fixed view of the agencies to which they are attached. These reports are being made to not by the FEA. It has been constantly emphasized and generally understood that the reports are advisory and, rather than constituting adopted policy of any agency or of the Executive Branch, that they are being prepared for the advice and information of officials responsible for the making of such policy. They constitute the informed views and judgments of many of the best experts available to the government organized and assembled in an orderly manner.

We have been careful in the handling of these projects to refer questions to the type of personnel seemingly best equipped to deal with them. For example, in dealing with the industry projects we have sought to enlist, through our agency and the WPB, the help of industrial technicians who have a firm practical knowledge of the industry in question and of existing WPB measures of limitation or control, that represent the principal body of experience we have to go on in this field. Similarly, in dealing with the cartel question and inter-corporate relations between German concerns and

concerns outside Germany, we have confined this topic (which cuts across many of the industries in question) to a single project, number 26. There it is being dealt with by our own staff with informed contacts with an already existing government Committee on Private Monopolies and Cartels rather than the Committees on particular industries which naturally included personnel who had worked for or were interested in companies engaged in international trade and finance.

We expect all of these twenty-nine reports to be completed sometime within the next thirty days. They will be submitted for advice and information of interested U. S. officials without carrying on their face any FEA endorsement or rejection of the views stated therein. However, the FEA will undertake subsequently to evaluate and coordinate the conclusions and recommendations within these reports together with many others worked out by its own staff into one master report which the agency will submit to the State Department and President with specific detailed recommendations constituting a long-term program for German economic and industrial disarmament.

The Enemy Branch of the FEA is presently engaged in the preparation of such a program and will, before the summer is out, complete that phase of its task.

As I have indicated before, it will be for other agencies to determine with the FEA whether or not such a program is acceptable and should be adopted as long-term U. S. policy in the field. Likewise, it will be the entire responsibility of others to negotiate and execute such a program, assuming it is acceptable to the responsible policy officials in the executive and legislative Branches.

Before passing this phase of my statement, I wish to emphasize my conviction that only a beginning has been made in developing the studies and analysis of this subject. We in the FEA who have devoted more man hours to it than elsewhere in the country are impressed and appalled with the vast amount of work that is yet to be done, particularly in the realm of the collection and appraisal of views, the development of sound and informed judgments, and the welding together of an integrated program.

Politics and technology are ever changing. What is effective today may be outmoded tomorrow by a scientific or political development. I submit to you, therefore, that we are only beginning to achieve the first

point of the program I outlined in the beginning of this section of my statement, namely, the development of a knowledge and understanding of the problem.

The Executive and Legislative Branches and, I might add, a large cross-section of the general public must continue to educate and inform themselves on this subject if we are to deal with it intelligently, not only in the initial phase of staking out the outlines of the peace machinery, but in seeing to it in the years ahead that that machinery is kept up-to-date. Just as the German General Staff in the last war studied ways and means of developing an industrial war machine, and as some yet unknown German underground organization may again pursue that subject, so the peace loving nations must utilize their military, economic and industrial experts to diagnose the plans of the enemy and outwit them. An Allied General Staff for preserving the world from German aggression is indispensable.

Perhaps this sounds pessimistic. We would all prefer to think that when the Peace Treaty is signed we are done with this dirty business of policing a nation of sixty odd million people. Our efforts in that field will have to simplify and abate after a period of occupation. However, our experience in FEA in the last few months in scratching the surface in the study and development of this problem persuades me that the peace of the world requires considerable organized governmental attention to the course of industrial and economic development and operations in Germany. This will be true at least until generations of peace from German aggression have demonstrated that it is no longer necessary to keep open the watchful eye and maintain the necessary surveillance and control.

To this end it is our hope and purpose to continue to collect facts and information on this subject and develop informed judgments concerning what can be done. Thus far, we have tried to exploit to the fullest the information available to us in this country, largely in the experience and knowledge of our own war agencies concerning the relationships of various industrial processes and potentials to the business of war making and the feasibility of their control. Now that Germany has surrendered and the opportunity for obtaining authentic on the ground information from Germany itself is presented, we trust that it will be possible to obtain an ever

increasing flow of economic information and intelligence from Germany itself.

Of course, this is more important in some fields than in others. A machine tool is a machine tool whether it is in Germany or in the U. S. To a considerable extent industrial processes in both countries are similar. However, we are able to learn much in certain chemical and mechanical fields concerning new developments in German technology now that the lid is off. But, in certain other areas, having exhausted the store of information available in this country, it seems to us in the FEA that determined efforts must be multiplied to tap the resources available in Germany.

This is particularly true on the subject of German economic penetration of other countries. The ramifications of German holdings and economic interests outside of Germany can be most fully determined by investigations on the ground. Likewise, the thorough spading up of the countless business relations via the trade agreement and cartel route can become reduced to possession only by vigorous investigation in Germany. Similarly, a full story of the ways and means of which the Germans utilized exports and imports to bind other nations into dependency upon Germany can only be uncovered by complete investigation at the center of the web. The story of German efforts to utilize the neutral and other countries as escape valves and bases for future aggressive enterprises can only be uncovered by tapping the source of this planning in Germany.

Therefore, we stress the importance of adding, to the efforts which have been going forward here in Washington, very intensive efforts in Germany itself on the part, not only of the Control Council, but of the interested civilian agencies such as our own. A free flow of information back by which the sum total of our information here can be considerably refreshed with that obtained in the field is necessary if we are to keep on the top of this problem and plan and execute the necessary diplomatic measures with the countries involved.

As indicated previously, this statement will not attempt to recite in detail the efforts this government already has taken to deal with the problem of Germany's economic base for aggression as a result of the studies by FEA and other agencies of the nature and extent of the problem. Nor will it attempt to describe the series of concrete recommendations and conclusions on which we are presently working.

Since this government has undertaken to explore extensively this problem, a substantial measure of agreement on several important fundamentals has been achieved. At Yalta an agreement was reached by the late President Roosevelt, Prime Minister Churchill, and Marshall Stalin which was published to the world at large. On the subject of disarmament and security this pledge of agreement was reported as follows:

"It is our inflexible purpose to destroy German militarism and Nazism and to ensure that Germany will never again be able to disturb the peace of the world. We are determined to disarm and disband all German armed forces; break up for all time the German general staff that has repeatedly contributed the resurgence of German militarism; remove or destroy all German military equipment; eliminate or control all German industry that could be used for military production... and take in harmony such other measures in Germany as may be necessary to the future peace and safety of the world. It is not our purpose to destroy the people of Germany, but only when Nazism and militarism have been extirpated will there be hope for a decent life for the Germans, and a place for them in the comity of nations".

The Allied determination to disarm Germany economically and industrially was made by the three leaders with full knowledge of the pattern of German history from 1918 to 1945 - and specifically of the partnership between the German General Staff, the major German industrialists and the Nazis. They knew that Germany had prepared for war by a program of economic and industrial, as well as military, armament - and that to disarm her and keep her disarmed, economic and industrial measures and controls were required.

To implement this pledge the three Allies, with the addition of France, have agreed to and established an Allied Control Council to occupy Germany and exercise the power and authority necessary to carry out allied objectives regarding that country. A Reparations Commission has been established to consider ways and means whereby reparations for damage can be obtained in some measure. It is important to interject here that the tone of this agreement on reparations and subsequent statements by our Executive and his Reparations Commission quite properly have made it clear that we intend to utilize the device of reparations to carry out our security objectives, rather than permit the process to be utilized to maintain and restore a German industrial war potential.

Without discussing the nature of the definite and detailed program, which is in process of development to carry out the Yalta agreement, several general observations seem appropriate at this time. In my opinion, and the opinion of my staff, economic security from future German aggression must:

- (1) Take precedence over all other allied policies for the treatment of Germany

If there is a conflict with other policies such as reparations or the need of other countries for relief or rehabilitation, the policy of preventing Germany from rebuilding and perpetuating a dynamic power to make war must be considered primary.

- (2) Be thorough It must not be limited solely to the direct production of implements of war, but must also take into account a treatment of the general economic base for aggression, including those industries that we have come to recognize as the basis for modern warfare.

The decisive factor in modern war is the industrial plant as a whole rather than those designed particularly for the assembling of guns and explosives. The application of the Yalta formula of elimination or control of these various industrial segments must not be so strictly construed as to be meaningless as in the case of the last treaty.

- (3) Be addressed to the overwhelming German economic domination of Europe, through the abuse of foreign trade and the utilization of a wide variety of devices for economic penetration which rendered the remainder of Europe relatively powerless to resist German aggression.

- (4) Be lasting in concept and character. It serves no useful purpose to enter upon a program that bravely restricts a defeated Germany in 1946 but expires into feeble and impractical ineffectiveness in 1956 or 1976. What we undertake now must be attuned to long range objectives. This search for security from German aggression is no short term business. The Germans are a capable and industrious people. More than likely they will continue to be fired with the desire for revenge or to obtain what they believe to be their rightful position of world dominance. Given the resources and the opportunity to do so, they can rebuild and reorganize their industrial war machine within a few short years regardless of the extent of bombing or short term deprivation of facilities through plant removals or construction. Cartels struck asunder today may be restored by agreement tomorrow. German industrial assets held abroad, although greatly reduced by reparations, may be built up again within a decade. Therefore, any system designed to limit the power and capacity of Germany to make war in the future must be built and fashioned to last.



- (5) Recognize the difference between a powerful war economy and a healthy consumer economy. It by no means follows that international arrangements designed to limit Germany's power and capacity to make war need have the result of permanently lowering the standard of living of the German people or of depriving them of opportunities to have an increasing measure of goods and services. In the long run, the German people will be far better off when German resources are being used in the interest of higher consumer standards of living for the individual Germans rather than to build up an over-industrialized, self-sufficient war economy, designed to equip Germany to conquer the world. More houses and less war plants won't hurt the German people. Of course, Germany is going to go through a period of difficulty no matter what we do. Let us not make the mistake of considering that to be <sup>the result of</sup> security measures we propose when, in reality, it is directly the result of Germany's aggression. The difficulties they will encounter for the greater part will be the direct results of a war they brought on themselves. Hence, our program for preventing German aggression should not be postponed, deferred or modulated because of the confusion of its results with the results of the war itself.
- (6) Be developed and understood as a measure of security and not as a device for punishment and retribution. The issue of a soft vs. a hard peace as it applies to a program for security is a false issue. This concern with the appropriate treatment of Germany's economic base for aggression must be constantly distinguished from any desire for a soft or a hard peace; it is and should be held by advocates of both types of peace. Nor is it a derivative of feelings of vengeance. Indeed it has its origin in an unemotional and scientific point of view, being responsive to the simple common sense purpose of preventing those who have proven themselves lawless from reacquiring the unhindered power and capacity to forge new weapons with which to menace the world.
- (7) Be achieved by a variety of means. A wise occupation policy, including affirmative industrial and economic controls is a first step. Suitable terms that condition the return of sovereignty to a government selected by the German people is a second measure. Appropriate international arrangements of long term nature providing specific machinery for maintaining security from German aggression after actual occupation is the final and most significant stage in the process.

- (8) Be flexible. Changing technology and new forms of industrial and economic activity will call for a process of considerable adaptation of this program. As a nation we have watched with increasing interest and concern the emergence of full-fledged economic warfare, the competition of varying types of industrial mobilization, and the rise of new and fearful technologies. To perfect and mass produce deadly weapons, such as a more powerful explosive, a faster plane, a robot bomb, an atom smashing device, or a better tank, may condition a victory or defeat. The ability to do so may prompt an aggression as much as the ability to assemble and train an army. The perfection of processes for the manufacture of synthetic oil and rubber in Germany in 1926 and the unfettered trend of her heavy industry toward over-expansive development in the nineteen twenties and thirties were sure harbingers of war. Any program must be capable of adaptation to meet these changes.
- (9) Be realistic. A league that offered only protection against a German aggression once begun and backed up by a huge war potential was an idealistic symbol rather than a practical force. Once the power and capacity to wage war is built up in Germany, it will constitute an explosive force. It invites those threatened by a resurgent Germany to attempt to play it off against targets other than themselves or to conjoin themselves to it rather than resist it.
- (10) Be possessed of a maximum of administrative feasibility and simplicity. Complicated and detailed controls may be practical during the period of occupation. Eventually, however, a long term program must be designed with an eye for administrative simplicity.
- (11) Be simple and understandable for the common people of the world. If the conclusions of such a program can be summarized on a single sheet of paper and become the household property of the people and accepted by them as necessary, a base for the powerful and vigilant public opinion which is necessary to such a program will not be lacking.
- (12) Be spelled out in detailed particulars. General conclusions are useful to educate and inform public opinion. They must be translated, however, into specific orders, decrees or instruments of understanding, if they are to be lasting and enforceable and subject to changes required by new conditions.

- (13) Be the springboard of a peaceful industrial and agricultural future for Germany. Such a program of economic and industrial disarmament, effective for the security purpose, can become the means by which the German economy is reoriented to provide for the consumer standards of the people rather than the war madness of the leaders.
- (14) Be consistent with the ambition of Europe to regain a desirable economic and industrial development. A program for German economic and industrial disarmament, properly conceived and executed, can be a first step towards the industrial development of the remainder of Europe in the direction of a balanced economic structure that will prevent exploitation and dominance by an overpowering Germany.

In its larger aspect, the problem of the economic and industrial disarmament of Germany is part of the economic reconstruction program facing the world. All of us must get used to living in peace instead of in war or under threat of war. The United States must work with the other United Nations to achieve increased prosperity for itself and its Allies. But neither the United States nor its Allies can afford to do this unless Germany is effectively disarmed, and kept disarmed. Then, and only then, can we relax our present emphasis on military strength and our ability to protect ourselves. Then, and only then, can we look forward to peace, prosperity and life, and forget about war, destruction, and death.

EXHIBIT 8

TECHNICAL INDUSTRIAL DISARMAMENT STUDIES

A short time before the Yalta conference at which President Roosevelt, Prime Minister Churchill and Marshall Stalin pledged their respective nations to "eliminate or control all German industry that could be used for military production", the Director of the Enemy Branch of the Foreign Economic Administration set up a number of separate study projects, dealing with some of the most important German economic and industrial disarmament problems. Each of the studies is being made by a group of the most competent and best informed men in the Government, particularly trained to deal with certain specific problems of production, industry and economics. The majority of these studies have been undertaken by inter-agency working groups whose members have been provided through the cooperation of other government agencies. The balance of the projects are being coordinated within FEA or by a particularly selected agency.

Each of the completed Technical Industrial Disarmament Studies will be submitted to the Director of the Enemy Branch. They will be reports of an advisory character rather than reports having the status of approved policy documents. They are reports to the FEA rather than by the FEA. They will constitute the views of the individual signatories rather than the agencies to which they are accredited. As such they will be made available by the FEA to all U. S. officials responsible in this field. Thus, through these TID reports, the FEA and other interested agencies will have the benefit of expert advice from industrial and economic specialists in the Government pursuant to an organized and systematic work project.

The lists appearing on the following pages (along with a table of contents) show the Technical Industrial Disarmament Studies which are now being made, the persons making each study, and the Government agency by which each such person is employed. It will be noted that no projects have been set up for numbers 28 and 29. These numbers have been left open for possible additional general economic studies on Germany of the same type as projects 20 through 27.

TECHNICAL INDUSTRIAL DISARMAMENT STUDIES

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COOPERATING AGENCIES

	Letter of Invitation Addressed to	Liaison Representative
Department of Commerce	Mr. Wayne C. Taylor	Dr. Frank A. Waring
Department of the Interior	Hon. Harold Ickes	Mr. Stephen Raushenbush
Department of the Navy	Hon. James Forrestal	Admiral T. D. Rudder
Office of Scientific Research and Development	Dr. Vannevar Bush	Dr. Lyman Chalkley
Office of Strategic Services	Dr. William L. Langer	Mr. Sherman Kent
Department of State	Mr. Emile Despres	Mr. John C. de Wilde
War Department	Hon. Henry Stimson	Maj. Gen. K. B. Wolfe
War Production Board	Mr. J. A. Krug	Mr. William Batt
War Shipping Administration	Vice Adm. E. S. Land	Vice Adm. H. L. Vickery

OTHER AGENCIES CONTRIBUTING PERSONNEL

Department of Agriculture  
Bureau of the Budget  
Federal Power Commission  
Department of Justice  
Office of War Mobilization and Reconversion  
U. S. Tariff Commission  
Department of the Treasury

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF  
GERMAN PRODUCTION OF ARMEMENTS, MUNITIONS AND IMPLEMENTS OF WAR  
PROJECT NO. 1

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF  
THE GERMAN AIRCRAFT INDUSTRY  
PROJECT NO. 2

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF  
GERMAN ENGINEERING AND RESEARCH IN THE "SECRET WEAPON" FIELD  
PROJECT NO. 4

These Projects are being handled by the Army-Navy Ad Hoc  
Interdepartmental Committee for FEA Projects

Members of the Committee are:

Rear Admiral T. D. Ruddock, USN  
Major General K. B. Wolfe, USA  
Brig. Gen. H. C. Minton, GSC  
Captain B. G. Leighton, USNR, Retired

-----  
Executive Officers:

Capt. A. M. Hartman  
Lt. F. D. McAlister, USNR

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF  
GERMAN RESEARCH RELATED TO  
ARMAMENT, MUNITIONS, AND IMPLEMENTS OF WAR

PROJECT NO. 3

This project was delegated to the Office of Scientific Research and Development which invited certain members of the National Academy of Sciences to serve on the Committee. They include:

Dr. Roger Adams, Chairman

Dr. R. W. King, Secretary

-----

Dr. O.E. Buckley

Dr. George O. Curme, Jr.

Dr. Hugh Dryden

Dr. Hoss G. Harrison

Dr. Zay Jeffries

Dr. W. K. Lewis

Dr. I. I. Rabi

-----

Mrs. Helen Hill Miller  
Foreign Economic Administration  
Liaison Officer



TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN LIGHT METALS INDUSTRIES

PROJECT NO. 5

Mr. Arthur Bunker Chairman	Foreign Economic Administration Consultant
Mr. Philip D. Wilson Vice Chairman	Combined Production and Resources Board
-----	
Mr. Thomas Covel	War Production Board Deputy Director, Aluminum and Magnesium Division
Miss Dorothy Cruger	Combined Production Resources Board Aluminum and Magnesium Consultant
Lt. Comdr. J. H. Faunce	Navy Department Head, Materials Branch, Bureau of Aeronautics
Lt. Isaiah Frank	Office of Strategic Services Acting Chief, Industry and Trade Section Research and Analysis Branch
Mr. Leo Grant	Foreign Economic Administration Consultant
Mr. Arthur P. Hall	Foreign Economic Administration Consultant
Mr. T. E. Hancock Counsel	War Production Board Attorney for the Aluminum and Magnesium Division
Mr. Walter A. Janssen	Department of Commerce Chief, Metals and Minerals Unit
Lt. Col. N. O. Kraft	War Department Chief, Aluminum and Magnesium Section Army Service Forces
Mr. Samuel Lipkowitz	State Department Chief, Minerals Section, Commodities Division
Mr. Arthur B. Menefee	War Production Board Chief, Bauxite Section
Mr. Thomas Miller	Department of the Interior Assistant Chief, Economics and Statistics Branch Bureau of Mines

Project 5 (Cont'd)

Mr. Louis C. Raymond                      Tariff Commission  
Commodity Specialist, Metals Division

-----  
Butler, Albert                              War Production Board  
Executive Officer                          Executive Assistant to the Vice Chairman  
for Metals and Minerals

Wichser, M. J.                              Foreign Economic Administration  
Executive Secretary

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN OIL AND PETROLEUM INDUSTRY

PROJECT NO. 6

Mr. Ralph K. Davies                      Deputy Petroleum Administrator  
Chairman                                      for War

---

Rear Admiral A. F. Carter, USNR              Army-Navy Petroleum Board

Brigadier General H. L. Peckham              Fuels and Lubricants Division  
War Department

Mr. Charles Rayner                              State Department

Colonel Jay L. Taylor                          War Department  
(Alternate)

---

Mr. Brandon H. Grove                          Foreign Economic Administration  
Executive Officer                              Asst. Chief, Petroleum Division

Mrs. Miralotte Ickes                          Foreign Economic Administration  
Executive Secretary                              Analyst

---

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN RUBBER AND RUBBER PRODUCTS INDUSTRY

PROJECT NO. 7

Mr. Lucius D. Tompkins Chairman	Office of War Mobilization and Reconversion
-----	
Mr. E. B. Babcock	Combined Production Resources Board Consultant
Mr. Golden W. Bell	War Production Board Assistant General Counsel
Mr. John Collyer	War Production Board Director, Rubber Programs
Mr. Joseph N. DuBarry, IV	State Department Commodity Specialist
Dr. E. R. Gilliland (Alternate)	Office of Scientific Research and Development
Mr. Robert A. Gordon (Alternate)	Combined Raw Materials Board
Capt. Henry E. Haxo, Jr. (Alternate)	War Department Production Division Headquarters, ASF
Mr. Everett G. Holt	Department of Commerce Rubber Analyst
Lt. Comdr. H. W. Julian	Navy Department
Mr. Thomas J. Lynch	Treasury Department Assistant General Counsel
Mr. Sheldon P. Thacher	War Department Consultant
-----	
Mr. Walter Emery Executive Officer	Foreign Economic Administration Consultant
Miss Mildred Zahn Executive Secretary	Foreign Economic Administration Analyst

LETTERHEAD INFORMATION ADMINISTRATION  
OFFICE OF THE SECRETARY OF DEFENSE  
TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN ELECTRONICS EQUIPMENT INDUSTRY

PROJECT NO. 8

Mr. Ray C. Ellis  
Chairman

Foreign Economic Administration  
Consultant

-----

Mr. Ralph Bown

Office of Scientific  
Research and Development

Mr. Louis J. Chatten

War Production Board  
Director, Radio and Radar Division

Capt. F. C. Layne

Navy Department  
Chief, Electronics Division

Capt. Gilbert B. Myers

Navy Department  
Secretary of Joint  
Communications Board

Brig. Gen. T. C. Rives

Army Air Forces

-----

Mr. James M. Korbey  
Executive Officer

Foreign Economic Administration  
Consultant

Mrs. Elizabeth Hawkins  
Executive Secretary

Foreign Economic Administration  
Analyst

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN ANTI-FRICTION BEARING INDUSTRY

PROJECT NO. 9

Mr. Stanley M. Cooper  
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Foreign Economic Administration  
Consultant

Mr. Albert E. Fawley  
Vice Chairman

Foreign Economic Administration  
Consultant, detailed from  
War Production Board

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Lt. Comdr. Preston Gaddis  
(Alternate)

Navy Department  
Assistant to Assistant Director  
of Production  
Bureau of Ordnance

Mr. Aldon B. Gomez

War Production Board  
Legal Counsel, Tools Division

Brig. Gen F. M. Hopkins

War Department  
Chief, Resources Division, AC/AS  
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Mr. Claude C. Ostrom

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Mr. Lester G. Hawkins  
Executive Officer

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Miss Louise Eaton  
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Analyst

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN COMMON COMPONENTS INDUSTRIES

PROJECT NO. 10

Mr. Michael J. Deutch Chairman	War Production Board Special Assistant to the Chairman
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Mr. James J. Farriss	State Department Assistant Advisor, Commodities Div.
Mr. W. M. Haile	War Production Board Director, General Industrial Equipment Division
Mr. V. S. Kolesnikoff	Bureau of the Budget Chief Economist
Dr. Heinrich Kronstein	Department of Justice Special Attorney
Lt. Comdr. H. D. Murray	Navy Department Executive Officer, Production Div.
Mr. William H. Myer	Department of Commerce Chief, Machinery and Motive Products Unit
Mr. J. W. Ould Counsel	War Production Board Counsel, General Industrial Equipment Division
Mr. Virgil Tobin	Combined Production Resources Board Program Officer
Col. G. D. Woods	War Department Asst. Director for Production Service
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Mr. Lester G. Hawkins Executive Officer	Foreign Economic Administration Analyst
Miss M. J. Wichser Executive Secretary	Foreign Economic Administration

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN MACHINE TOOL INDUSTRY

PROJECT NO. 11

Mr. Mason Britton Chairman	Foreign Economic Administration Consultant
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Mr. George Adams	State Department Economist, Division of Territorial Studies
Mr. William L. Beck	Department of Commerce Asst. Chief, Machinery Unit, Bureau of Foreign & Domestic Commerce
Lt. William Bray	Office of Strategic Services Economist
Mr. John S. Chafee	War Production Board Director, Tools Division, Equipment Bureau
Cdr. E. A. Ewing	Navy Department Chief, Machine Tools Section
Mr. Frederick Gaier,	Foreign Economic Administration Technical Consultant
Mr. Aldon B. Gomez	War Production Board Legal Counsel, Tools Division
Lt. Col. P. L. Houser	War Department Chief, Equipment Branch, ASF Production Div.
Brig. Gen. H. F. Safford	War Department Chief, Production Service Division Office, Chief of Ordnance
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Mr. Franz T. Stone Executive Officer	Foreign Economic Administration Consultant, detailed from War Production Board
Miss Louise Eaton, Executive Secretary	Foreign Economic Administration Analyst



TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN AUTOMOTIVE INDUSTRY

PROJECT NO. 12

Mr. Courtney Johnson Chairman	Foreign Economic Administration Consultant
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Mr. James Cone	Foreign Economic Administration Consultant
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Mr. Francis F. Lincoln	State Department Economist, Division of Territorial Studies
Mr. Oscar P. Pearson	Foreign Economic Administration Consultant
Mr. R. I. Roberge	Foreign Economic Administration Consultant
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Col. G. W. White.	War Department Office, Chief of Ordnance
Mr. Carl Wynne	Foreign Economic Administration Consultant
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Mr. Charles R. Weaver Executive Officer	Foreign Economic Administration Consultant
Miss Peggy Garrison Executive Secretary	Foreign Economic Administration

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN SHIPBUILDING INDUSTRY

PROJECT NO. 13.

This project has been delegated to the War Shipping Administration to be dealt with by

Vice Admiral Emory S. Land

War Shipping Administrator  
Chairman, Maritime Commission

Vice Admiral H. L. Vickery

Deputy War Shipping Administrator  
Vice Chairman, Maritime Commission

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE AGGREGATE OF THE  
GERMAN MACHINERY INDUSTRIES

PROJECT NO. 14

This Project is being handled by a Foreign Economic Administration Drafting Committee.

Mr. Albert C. Shire  
Chairman

Mr. H. C. Cassell

Mr. John Ehrhardt

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Mr. John F. Coneybear  
Executive Officer

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN FERROUS METALS INDUSTRIES

PROJECT NO. 15

Mr. Hiland G. Batcheller  
Chairman

War Production Board  
Chief of Operations

Mr. Leon Goldenberg  
Executive Officer

Foreign Economic Administration  
Acting Chief, Basic Industries

Mrs. Alice Nagel  
Executive Secretary

Foreign Economic Administration  
Analyst

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IRON & STEEL SUBCOMMITTEE

Mr. Norman W. Foy  
Chairman

War Production Board  
Consultant

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Lt. Comdr. Roger S. Ahlbrandt

Navy Department

Lt. Isaiah Frank

Office of Strategic Services  
Industry & Trade Section

Col. Thomas Galbreath

Office of Chief of Ordnance  
War Department

Mr. Sidney D. Merlin

Department of State  
Division of Commercial Policy

Mr. C. E. Nighman

Interior Department  
Bureau of Mines

Mr. Peter M. Rouzitsky

Combined Production Resources Board

Dr. Walter S. Tower

Foreign Economic Administration  
Consultant

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FERRO-ALLOYS SUBCOMMITTEE

Dr. A. B. Kinzel  
Chairman

Foreign Economic Administration  
Consultant

FERRO-ALLOYS SUBCOMMITTEE (CONTINUED)

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Col. John Frye	War Department Office of Chief of Ordnance
Mr. Edwin K. Jenckes	Interior Department Bureau of Mines
Mr. Carl M. Loeb, Jr.	Foreign Economic Administration Consultant
Dr. Paul D. Merica	Foreign Economic Administration Consultant

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN CHEMICAL INDUSTRIES

PROJECT NO. 16

Col. Frederick Pope  
Chairman

Office of War Mobilization and  
Reconversion

Dr. D. P. Morgan  
(Acting Chairman)

War Production Board  
Director, Chemicals Bureau

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Minerals Specialist, Commodities Division

Lt. Comdr. R. B. Colgate

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Chief, Chemicals Section  
Office of Procurement and Material

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Chief, Chemical Unit,  
Bureau of Foreign and Domestic Commerce

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Mr. Thomas S. Nichols

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Department of Interior  
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War Department  
Chief, Commodities Branch  
Production Division  
Headquarters, ASF

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Mr. Martin T. Bennett  
Executive Officer

Foreign Economic Administration  
Chief, Industry Division

Mrs. Thelma Lewis  
Executive Secretary

Foreign Economic Administration  
Editor

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN COAL INDUSTRY

PROJECT NO. 17

Mr. Charles J. Potter  
Chairman

Interior Department  
Deputy Solid Fuels Administrator

Mr. George Lamb  
Vice Chairman

Department of Interior  
Assistant Director, Bureau of Mines

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Mr. Ralph Bowen

State Department  
Country Economics Specialist  
Division of Commercial Policy

Lt. R. S. Hauck

Navy Department

Lt. Col. C. R. Mabley

War Department  
Chief, Solid Fuels Branch  
Office of Quartermaster General

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Assistant Chief, Metals & Minerals Unit

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Executive Officer

Foreign Economic Administration  
Planning Staff

Mrs. Phenola Carroll  
Executive Secretary

Foreign Economic Administration  
Analyst

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN ELECTRIC POWER INDUSTRY

PROJECT NO. 18

Mr. Edward Falck Chairman	War Production Board Director, Office of War Utilities
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Mr. Curtis E. Calder	War Production Board Consultant
Mr. C. Girard Davidson	War Production Board Assistant General Counsel
Mr. Samuel Ferguson	Foreign Economic Administration Consultant
Mr. Arthur Goldschmidt	Department of Interior Director, Division of Power
Lt. Col. Preston E. James	Office of Strategic Services Chief, Geographic Subdivision Europe-Africa Division
Dr. Herschel F. Jones	War Production Board Assistant to Director Office of War Utilities
Mr. Basil Manly	Federal Power Commission Chairman
Lt. Daniel V. McNamee, USNR	War Production Board Legal Counsel
Mr. Herbert S. Marks	Department of State Asst. to Assistant Secretary Acheson
Lt. Comdr. C. N. Metcalf	Navy Department Bureau of Yards and Docks
Dr. John C. Parker	Foreign Economic Administration Consultant
Mr. Walter A. Radius	State Department Special Asst. to Director Office of Transport and Communicatio
Mr. Philip Sporn	War Production Board Consultant



Brig. Gen. J. H. Stratton

War Department

Lt. Col. A. R. Williams  
(Alternate for Gen. Stratton)

War Department  
Production Division

Warren H. Marple  
Executive Officer

Foreign Economic Administration  
Consultant

Miss Jewell Wilson  
Executive Secretary

Foreign Economic Administration

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
STRATEGIC MINERALS FOR GERMAN INDUSTRIES

PROJECT NO. 19

Mr. Arthur Notman Chairman	Foreign Economic Administration
Dr. C. K. Leith Acting Chairman	Combined Production Resources Board
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Mr. Alan Bateman	Foreign Economic Administration Asst. Director, Foreign Procurement & Development Branch
Lt. Col. J. A. Church	Army Service Forces Chief, Miscellaneous Metals and Minerals Section
Mr. James Douglas	War Production Board Deputy Vice Chairman for Metals and Minerals
Mr. Thomas Helde	Office of Strategic Services Chief, Industries Subsection Europe-Africa Division
Mr. Walter A. Janssen	Department of Commerce Chief, Metals and Minerals Unit Board of Foreign and Domestic Commerce
Mr. Andrew Leith	Foreign Economic Administration Consultant
Mr. John C. Parsons	War Production Board Attorney Miscellaneous Minerals Division
Mr. Elmer Pehrson	Interior Department Chief, Economics & Statistics Branch
Lt. J. F. Widran	Navy Department
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Mr. Leon Goldenberg Executive Officer	Foreign Economic Administration Acting Chief, Basic Industries
Mrs. Phenola Carroll Executive Secretary	Foreign Economic Administration Analyst

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF  
GERMAN FOREIGN TRADE AND IMPORT CONTROLS

PROJECTS NOS. 20 AND 27

Mr. Clair Wilcox Chairman	State Department Consultant Office of International Trade Policy
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Lt. S. S. Alexander	Office of Strategic Services Chief, Economic Subdivision Europe-Africa Division
Mr. Morton M. Banks	War Production Board Director, Division of Stockpiling and Shipping
Lt. William Bray	Office of Strategic Services Economist
Mr. Edward J. Browning	War Production Board Deputy Vice Chairman, International Supply
Dr. Arthur Burns	Foreign Economic Administration Consultant
Mr. Louis Domeratzky	Bureau of Foreign & Domestic Commerce Chief, European Unit
Mr. Hal B. Lary	Department of Commerce Chief, International Payments Unit Bureau of Foreign and Domestic Commerce
Mr. Sidney D. Merlin	State Department Country Specialist Division of Commercial Policy
Mr. John Parsons	War Production Board Attorney, Legal Division
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Miss Ethel Dietrich Executive Officer	Foreign Economic Administration Chief, Export-Import Control Division
Miss Beatrice Rosholt Executive Secretary	Foreign Economic Administration Analyst

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TECHNICAL REQUIREMENTS FOR A  
PERMANENT ALLIED COMMISSION TO ENFORCE  
INTERNATIONAL ARRANGEMENTS RELATING TO  
GERMAN INDUSTRIAL DISARMAMENT

PROJECT NO. 21

Completion of this report has been delayed  
pending completion of the other reports.

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TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE ECONOMIC CONSEQUENCES OF  
A SEPARATION FROM GERMANY OF THE RHINELAND AND/OR THE RUHR  
AND/OR AREAS EAST OF THE ODER RIVER

PROJECT NO. 22

This Project is being handled by a Foreign Economic  
Administration Drafting Committee of which

Philip M. Kaiser, FEA, is Chairman

and on which Committee also serve:

Mr. Martin Bennett

Mr. David Levitan

Mr. Frank Lorimer

Miss Margaret Stone

Dr. George Wonderhigh

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF GERMAN LANDED ESTATES AND THE  
PRACTICE OF ECONOMIC AUTARCHY IN FOOD PRODUCTS

PROJECT NO. 23

This Project is being handled by a Foreign Economic  
Administration Drafting Committee of which

Mr. Herbert Parisius, FEA, is Chairman,  
and on which also serve:

From FEA:

Dr. Carl Brandt

Mr. Theo. W. Schultz

Mr. John Cassels

Mr. Norman Jasny

From OSS:

Mr. Wilfred Mallenbaum

From Agriculture:

Mr. Hans Richter

Mr. H. R. Tolley

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TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO APPRAISE THE TECHNICAL POTENTIALITIES FOR THE  
DEVELOPMENT OF "PEACEFUL" INDUSTRIAL ACTIVITY IN  
GERMANY FOR BOTH HOME CONSUMPTION AND EXPORT

PROJECT NO. 24

This Project is being handled by a Foreign Economic  
Administration Drafting Committee, of which

Mr. Donald Longman, FEA, is Chairman

---

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE NEED FOR AND NATURE OF ALLIED ACTIVITIES RELATING TO  
GERMAN PROPERTY ASSETS, INDUSTRIAL PERSONNEL, AND  
ECONOMIC ACTIVITIES OUTSIDE GERMANY, DESIGNED TO  
ENFORCE ECONOMIC AND INDUSTRIAL SECURITY MEASURES PERTAINING TO GERMANY

PROJECT NO. 25

This Project is being handled by a Foreign Economic  
Administration Drafting Committee, of which

Mr. Richard C. Harrison, FEA, is Chairman

---

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF GERMAN PARTICIPATION IN  
INTERNATIONAL CARTELS AFFECTING INTERNATIONAL SECURITY

PROJECT NO. 26

This Project is being handled by a Foreign Economic  
Administration Drafting Committee, of which

Mr. David M. Levitan, FEA, is Chairman

---

PROJECT NO. 27

Has been combined with Project No. 20

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TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN FOREST RESOURCES AND FOREST PRODUCTS INDUSTRIES

PROJECT NO. 30

Mr. Lyle F. Watts Chairman	Department of Agriculture Chief, Forest Service
Mr. E. I. Katok Vice Chairman	Department of Agriculture Assistant Chief, Forest Service
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Mr. John B. Appleton	Office of Strategic Services Assistant Chief, Far East Division Chief, Geographic Subdivision
Mr. Arthur Bevan	Foreign Economic Administration Chief, Paper, Lumber & Containers Section Requirements and Supply Branch
Mr. Benton R. Cancell	War Production Board Chief, Forest Products Bureau
Colonel John G. Cooke	War Department Asst. Director for Materials & Products Production Division, ASF
Lt. Lawrence B. Culter (Alternate)	War Department Commodities Branch, Production Div., ASF Forest Products Section
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Mr. Franklin H. Smith	U. S. Tariff Commission Chief, Lumber & Paper Division
Mr. Henry W. Spiegel	Office of Strategic Services Europe-Africa Division Economics Subdivision
Dr. Anos E. Taylor	Department of Commerce Chief, Bureau of Foreign & Domestic Commerce
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Dr. Edward C. Crafts Executive Officer	Department of Agriculture Forest Service
Miss Ruth Coffman Executive Secretary	Department of Agriculture Forest Service

TECHNICAL INDUSTRIAL DISARMAMENT COMMITTEE  
TO STUDY THE TREATMENT OF THE  
GERMAN OPTICAL GLASS, AND  
TECHNICAL AND SCIENTIFIC EQUIPMENT INDUSTRIES

PROJECT NO. 31

Mr. Frank Howard  
Chairman  
War Production Board  
Chief, Safety & Technical Division

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Department of Commerce  
Specialties Unit  
Bureau of Foreign & Domestic Commerce

Mr. Lawrence Radford  
Navy Department  
Bureau of Ordnance  
Production Division TR-7

Mr. Francis M. Shields  
Foreign Economic Administration  
Consultant

Dr. F. E. Wright  
War Department  
Army, Navy Munitions Board

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Mr. John Flynn  
Executive Officer  
War Production Board  
Chief, Facilities Section  
Safety & Technical Equipment Div.

Mrs. Elizabeth Hawkins  
Executive Secretary  
Foreign Economic Administration  
Analyst



EXHIBIT 8

Supplement

For the information of the Committee, there are added below notes concerning the principal public and private affiliations of the TIDC Project Chairmen designated by FEA and those Technical Consultants brought in by the FEA to advise with the TID Committees. Any further information concerning the individuals designated by the participating agencies can be secured from those agencies.

<u>Individual</u>	<u>Agency and Title</u>	<u>Principal Present Affiliation Outside Federal Government</u>
Mr. Hiland G. Batcheller, Chairman, Project No. 15, Ferrous Metals	WPB, Chief of Operations	President, Allegheny- Ludlum Steel Corp., Pittsburgh, Pa.
Mr. Arthur Bunker, Chairman, Project No. 5, Light Metals	FEA Consultant	Executive Vice President, The Lehman Corporation, New York, N.Y.
Mr. Arthur Burns, FEA Mem- ber, Projects Nos. 20 & 27, Foreign Trade Controls	FEA Consultant	Professor of Economics, Columbia University, New York, N.Y.
Mr. Stanley M. Cooper, Chairman, Project No. 9, Bearings	FEA Consultant	Executive Vice President, Fafnir Bearings Co., New Britain, Conn.
Mr. James Cope, FEA Member, Project No. 12, Automot- ive	FEA Consultant	Assistant to President, Chrysler Corporation, Detroit, Mich.
Mr. Ralph K. Davies, Chairman, Project No. 6, Petroleum	Deputy Petroleum Adminis- trator for War	Formerly Vice President, Standard Oil of Califor- nia, San Francisco, Cal.
Mr. Michael J. Deutch, Chairman Project No. 10, Common Components	Regularly employed by WPB as Special Assistant to the Chairman	
Mr. Ray C. Ellis, Chairman, Project No. 8, Electronics	FEA Consultant	Applied Physics Labora- tory, Johns Hopkins University, Silver Springs, Md.
Mr. Edward Falck, Chairman Project No. 18, Power	Regularly employed by WPB as Director of the Office of War Utilities	
Mr. Albert E. Fawley, Vice Chairman, Project No. 9, Bearings	FEA Consultant, Detailed from WPB	Manager, Detroit Office, Marlin-Rockwell Corp., New York, N.Y.

Exhibit 8 Supplement continued

<u>Individual</u>	<u>Agency and Title</u>	<u>Principal Present Affiliation Outside Federal Government</u>
Mr. Samuel Ferguson, FEA Member, Project No. 18, Power	FEA Consultant	President, Hartford Electric Co., Hartford,
Mr. Howard Frank, Chairman, Pro- ject No. 31, Scientific Equipment		Regularly employed by WPB as I nspector of Safety & Technical Div.
Mr. Frederick Geier, FEA Member, Project No. 11, Machine Tools	FEA Consultant	President, Cincinnati Machine Co., Cincinnati
Mr. Leo Grant, FEA Member, Pro- ject No. 5, Light Metals	FEA Consultant	The Dow Chemical Co Midland, Michigan
Mr. Arthur Hall, FEA Member, Project No. 5, Light Metals	FEA Consultant	Aluminum Co. of America Washington, D. C.
Mr. Richard C. Harrison, Chairman, Drafting Committee, Project No. 25, External Economic Security		Regularly employed by FEA as C oordinator of External Economic Security
Mr. Courtney Johnson, Chairman, Project No. 12, Automotive	FEA Consultant	Vice President, Studebaker Co., South Bend, Indiana
Mr. Philip M. Kaiser, Chairman, Drafting Committee, Project No. 22, Territorial Separation		Regularly employed by FEA as Assistant Chief of Planning Staff Enemy Branch
Dr. A. B. Kinzel, Chairman, Pro- ject No. 15, Ferrous Metals	FEA Consultant	Vice President, Electric Melt, and Chief of Industrial Laboratories, Union & Carbide, New York
Vice Admiral Emory S. Land, Co- Chairman, Project No. 13, Shipbuilding and Shipping		Regularly employed as War Ship Administrator and Chairman, Maritime Commission
Mr. Andrew Leith, FEA Member, Project No. 19, Non-ferrous Metals	FEA Consultant	Lavino Co., Philadel- phia, Pa.
Mr. David Levitan, Chairman, Drafting Committee, Project No. 26, International Cartels		Regularly employed by FEA as C oordinator of Property Control Division, Enemy Branch
Mr. Carl M. Loeb, Jr., FEA Mem- ber, Project No. 15, Ferrous Metals	FEA Consultant	Vice President, Clin- chfield Molybdenum Co., New York.
Mr. Donald Longman, Chairman, Drafting Committee, Project No. 24, Safe Industries		Regularly employed by FEA as C oordinator of Consumer Economy Division, Enemy Branch

dit 8 continued

<u>Individual</u>	<u>Agency and Title</u>	<u>Principal Present Affiliation Outside Federal Government</u>
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Arthur Notman Chairman, Project No. 19, Ferrous Metals; Member, Project No. 17, Solid Fuels	FEA Consultant	Consulting Engineer, 40 Wall Street, New York, N. Y.
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Scar P. Pearson Member, Project No. 12, Automotive	FEA Consultant	Manager, Statistical Department, Automobile Manufacturers' Assn., Detroit, Mich.
Frederick Pope Chairman, Project No. 16, Minerals	Office of War Mobilization and Reconversion	American Cyanamid Co., 30 Rockefeller Plaza, New York, N. Y.
Charles J. Potter Chairman, Project No. 17, Solid Fuels	Deputy Solid Fuels Administrator	Assistant to the President, Rochester and Pittsburgh Coal Co., Indiana, Pa.
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Exhibit 8 continued

<u>Individual</u>	<u>Agency and Title</u>	<u>Principal Present Affiliation Outside Federal Government</u>
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Mr. Carl Wynne FEA Member, Project No. 12, Automotive	FEA Consultant	Director of Exports, Diamond T Motor Car Co., Chicago, Ill.

## ERRATA STATEMENT

### 1. Summary of Written Statement

The following errors require correction:

- (a) P. 2, 3<sup>rd</sup> Paragraph, 4<sup>th</sup> Line: should read "stock of installed machine tools" instead of "installed stock of machine tools".
- (b) P. 3, 3<sup>rd</sup> Paragraph, 9<sup>th</sup> and 10<sup>th</sup> line<sup>s</sup>: should read "This existence in Germany of the capacity to produce" instead of "This existence in Germany to produce".
- (c) P. 3, 4<sup>th</sup> Paragraph, 1<sup>st</sup> Line: should read "German economy" instead of "Germany economy".
- (d) P. 3, 4<sup>th</sup> Paragraph, 4<sup>th</sup> Line: should read "a huge quantity of manpower in an army far beyond her borders" instead of "a huge country of manpower in an army beyond her boarders (sp.)".
- (e) P. 4, 3<sup>rd</sup> Paragraph, 8<sup>th</sup> and 9<sup>th</sup> Lines: should read "The years of working together in a highly organized fashion have created" instead of "The years of working together in a highly organized fashion which have created".
- (f) P. 5, 4<sup>th</sup> Paragraph, 6<sup>th</sup> Line: should read "The surprising course of Allied policy in upholding" instead of "A surprising course of Allied policy of upholding".

### 2. Written Statement

The following errors require correction:

- (a) P. 2, Sub-paragraph on Nitrogen, Line 2: the word "million" is misspelled as "millin".
- (b) P. 8, 1<sup>st</sup> Paragraph, 3<sup>rd</sup> Line: the word "Roumania" is misspelled "Romania".
- (c) P. 9, 5<sup>th</sup> Paragraph, 1<sup>st</sup> Line: the word "mortgages" is written by mistake "mortgage".
- (d) P. 10, Sub-paragraph (c), 2<sup>nd</sup> Line: the word "intermeshed" is written by mistake as "intermashed".
- (e) P. 16, 1<sup>st</sup> Paragraph, next to last line: the word "cumbersome" is misspelled.
- (f) P. 19, 2<sup>nd</sup> Paragraph, 8<sup>th</sup> Line: the word "was" is misspelled as "war".
- (g) P. 28, 5<sup>th</sup> Paragraph, 2<sup>nd</sup> and 3<sup>rd</sup> Lines: should read "It is one of the main ingredients" instead of "It is the main ingredient".
- (h) P. 29, 4<sup>th</sup> Line from the top of the page: the word "aerial" is written as "serial" by mistake.
- (i) P. 31, 2<sup>nd</sup> Paragraph, 3<sup>rd</sup> Line: the word "stiffle" is misspelled.
- (j) P. 31, 3<sup>rd</sup> Paragraph, 4<sup>th</sup> Line: the word "reparations" should be omitted.
- (k) P. 31, 3<sup>rd</sup> Paragraph, 6<sup>th</sup> Line: the words "World War I" should be omitted.
- (l) P. 47, Lines 12 and 13: should read "Let us not make the mistake of considering that to be the result of security measures" instead of as written minus the words "the result of".