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HISTORICAL DEVELOPMENT OF THE SOVIET ECONOMY

1915

3 April 1951

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HISTORICAL DEVELOPMENT OF THE SOVIET ECONOMY

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COLONEL HICKEY: The second lecture in our Russia series for the first period this morning deals with the historical development of the Soviet economy, something which, of course, is most important to your studies on the economic potential for war of that country and the satellites.

Our speaker is Mr. Leon M. Herman, Office of International Trade, Department of Commerce. It is with pleasure that I introduce at this time, Mr. Leon M. Herman.

MR. HERMAN: Thank you, Colonel. Distinguished members of the Industrial College: There is, as you know, general agreement among practitioners in the field of Soviet affairs that on the subject of Russia there is no expert knowledge; there are only varying degrees of ignorance--the accent is on variety. I hope, therefore, that the broad subject of Russian economic history will provide me with ample opportunities for such variety.

Speaking of Russian history in the nineteenth century, the Russian historian Kliuchersky made the penetrating observation that most of the turbulent and ineffectual history of that period was due to the basic fact that Russia had failed to develop sufficient economic power to carry out its political tasks. More recently a certain Russian revolutionary politician and professional admirer of strength by the name of Stalin expressed a similar judgment on Russian history in the nineteenth century. He summed up the whole development of Russia until his time in terms of weakness, nothing but hopeless weakness. In a speech on this subject delivered on the eve of the First Five-Year Plan, he made it clear that his interest unlike that of Kliuchersky was strictly practical, and that he was determined to do something about it. In reading a little bit of his prose, I think we can get some impression of the simplicity to which he has reduced the idea of the distinguished Russian historian:

"To slacken the tempo means to fall behind. And the backward are always beaten. The history of old Russia is the history of defeats, due to backwardness. She was beaten by the Mongol feudal lords. She was beaten by the Polish-Lithuanian squires. She was beaten by the Anglo-French capitalists. She was beaten by the Japanese barons. All beat her for her backwardness, for military backwardness, for governmental backwardness, for cultural backwardness, for industrial backwardness, for agricultural backwardness. She was beaten because to beat her was profitable and could be done with impunity."

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To go back no further than the nineteenth century we find Russia very actively involved in all the political affairs of Europe, engaged in every important European power conflict, yet somehow she fails to derive any permanent gains out of her purely military potential. Russia in the nineteenth century was certainly the equal of any European power or combination of powers in terms of territory covered and population controlled. But the Russians were still living under semifeudal conditions, economically largely self-sufficient, maintaining only sporadic contact with the outside world. As you know, until 1861 the peasants of Russia, comprising the bulk of the population, were still tied to the land under conditions of nearly complete serfdom. Although the Industrial Revolution was transplanted to Russia during this period, between 1830 and 1860, it just did not find the necessary climate and related conditions for taking root. The two main factors lacking were a free labor force and liquid capital. The organization of economic units was mainly geared for subsistence without much commodity production or exchange. Of course, there were many subsidiary factors, such as bad roads, sparse settlements, archaic legal and educational systems. After the reform of 1861 was carried out and the peasants freed from bondage, Russia witnessed the development of a free labor force that could be absorbed by an expanding industry. But by that time again it had fallen behind in the general march of industrial progress.

Russia's own capital resources were meager. The result was that such industrial enterprise as was possible in Russia during the second half of the nineteenth century usually came out of three sources. It was usually initiated directly by the government, by the nobleman turned manufacturer, or by foreign capital owners. Thus when industry came to Russia during the second half of the nineteenth century, it came typically in rather large units, and often buttressed by foreign capital, foreign technicians, and management. The first rudiments of Russian industry grew up in three isolated centers--one around Russia's Western-most city, St. Petersburg (now Leningrad), one around Moscow, and one in the Ukraine around the Donetz Coal Basin. The new industrial units were rather large, technologically well advanced, and on a par in efficiency with similar industrial undertakings in Western Europe. In terms of the size of factories and the number of workers employed per plant, Russia was rather outstanding among European countries at the time inasmuch as the newly imported techniques, methods of organization and capital from abroad tended toward the introduction of large units based on the latest installations devised abroad.

The rapid influx of large numbers of people into the mushrooming cities caused considerable tension. All too often the operation of Russian industry was geared not so much to the slowly emerging internal market as to outside economic outlets. Although Russia was expanding and diversifying its economy, it became steadily more dependent on the foreign market for the export of its grain and for imports of many

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types of consumer goods. At the same time the labor code was rather harsh. The regime had not developed to the point where it was willing or able to cope with the problem of industrial relations. The result was that any kind of economic dispute within a plant or within an industry would nearly always culminate in desperate strikes and political riots. The labor force was still largely the same element that had only recently moved from the countryside where economic disputes of all sorts could only be settled by force of one sort or another.

Toward the end of the nineteenth century there emerged in Russia several Marxist political parties competing for the control of the labor movement. The extreme revolutionary faction under Lenin's leadership was willing to take advantage of the tendency of the recently urbanized Russian labor to go out into the street and riot for what he rightly or wrongly considered his rights. The first opportunity to exploit the tense labor conditions in Russian industry in the interest of Lenin's Bolshevik Party came during the revolution of 1905 which followed the Russo-Japanese war. This unsuccessful revolution was followed by a period of political repression, during which the government did attempt to find some solution for the festering agricultural problem which was considered to be the key to Russian economic progress. Prime Minister Stolypin the man who led this movement for reform in the countryside was assassinated in 1911, five years after his program got under way. The result of that assassination was more repression, and they had another period of widespread, if latent, discontent between 1912 and the outbreak of World War I.

What occurred politically in Russia in the aftermath of World War I is well known. The Bolsheviks on 25 October (7 November by our Gregorian calendar) rode into power on the bayonets of the Petrograd garrison. The new revolutionary regime had no specific blueprints on the basis of which to build a new economic system. Vaguely, Lenin believed that state capitalism was approximately what he wanted at the beginning, and he acted accordingly from the outset. State Capitalism, he said, is three-fourths socialism when a Socialist Party is in control of the state apparatus. Reasoning by analogy from his political experience, he moved to take control over the economic centers of power. And so he blithely went after the banks, which he described as the nerve center of the capitalist economic system, took over the main offices of the large firms and proceeded to give orders.

What had happened in the meantime, of course, was that he had shattered the entire system of incentives; the whole mechanism of the market economy. Production for the market and the monetary system itself had broken down. Incentive was lacking both in the cities and in the country. Lenin pursued this futile line of economic policy for about 8 months, and by the summer of 1918 this first phase of what might be called the experimental period in Russian post-Revolutionary

economic development came to an end. After the summer of 1918, when "state capitalism" collapsed, Russia's economy entered a new phase known as "war communism."

Official Soviet historians usually speak of the period of "war communism" as if it were a deliberately devised economic scheme intended for the duration of the civil war only. The historical record, on the contrary, shows that this system came into force sometime before the outbreak of hostilities and lasted for many months thereafter.

During the period of "war communism," as in the preceding phase, the first problem to be solved, of course, was the acquisition of food for the population and army and raw materials for industry. That was solved rather simply by a system of direct requisition on the one hand and by direct distribution of the other, both by the government. The population was supplied with food along with other bare necessities, directly from state stores. Wage payments declined considerably as a factor in total consumption, and more and more of goods in distribution were supplied by government rationing.

The breakdown of the system of direct distribution was first observed not so much in the countryside as in the cities where hasty nationalization, currency, depreciation, the appeal to decentralized control to local rule caused severe dislocation of production. Discipline had broken down completely and even some of the larger plants operated by the government were interested more than anything else in exchanging their products for food, by-passing the directives of the government apparatus. Instead of supplying the commodities they produced say, to one of the plants with which they had a contract, they exchanged these commodities with the villagers--illegally, of course--in order to obtain sorely needed food or raw materials.

In general, there developed during this period of "war communism" considerable tension within industry, especially between labor unions and the new management of industry appointed by the government. Remarkably enough, the great debate which developed in Russian political circles at that time about the failures of the government's economic program began around the relationship of labor to management rather than around the more profound problem which soon came to the surface, namely, the conflicting interests of the city and the village. That conflict was not long in coming to the surface.

Peasant resentment soon manifested itself in violent opposition--resistance was still possible during that period--to the government's forcible grain collections, which were the main burden as far as the Russian peasant was concerned. In a year or so peasant resistance began to show up in a marked decline in the area of planted crops, and by 1920 the situation was quite critical despite the endless devices introduced by the Soviet Government. The latter tried among other

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things, to divide the crops into three categories, allowing the peasant a free hand in the case of industrial crops, the third category. The shift in planting was so much to the third category of crops that the cities were threatened by a lack of food supplies. This resistance of the peasantry to the direct method of requisitioning continued to spread throughout the countryside. Violence against the government's procurement agents and riots were frequent. Finally, the extreme discontent of this period was forcibly dramatized in the uprising of the sailors at the Kronstadt fleet base around Petrograd, the original scene where the Bolshevik Revolution had started in November 1917 and hitherto the mainstay and loyal supporter of the Bolshevik regime.

The Kronstadt rebellion of 1921 was suppressed with extreme cruelty. But the lesson was not wasted on Lenin. Following the meeting of the tenth Congress of the Communist Party, Lenin sounded a retreat from his policy of direct requisitioning of food. The retreat was to a restricted restoration of the market. The main effect of this major reform, known in Russian history as the "New Economic Policy," or N. E. P., was to substitute for requisition by the government an agricultural tax to be paid in kind by the peasant on the basis of acreage after the family needs had been satisfied, thus leaving a certain amount of food at the disposition of the peasant.

Now, the reform itself was modest enough, but the implications were rather far-reaching because there was no point in leaving the peasant this small surplus unless he was allowed to sell the surplus in an open market. In practice, this restored to a degree the market as an instrument for the exchange of agricultural products for the products of industry. This, in turn, led to the partial restoration of capitalism, or production for the market, in agriculture trade and small-scale manufacturing. The government at the same time had retained for itself full control over what was called the "commanding heights" of the economy, namely, the branches of heavy industry, transport, credit, and foreign trade.

During the N.E.P. period, which lasted between 1921 and 1928, the peasant carried out his side of the bargain with conspicuous success. The main difficulty arose out of the conditions prevailing in industry. With the government in a monopoly position the main branches and units of industry not only failed to supply sufficient products but failed especially to supply them at prices reasonably comparable to prevailing farm prices. By 1923 this price disparity reached a crisis, known in Russian history as the "scissors crisis", a name given to the situation in which the level of prices in agriculture and industry were growing farther and farther apart. This crisis reached its climax in October 1923, at which time agricultural

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prices had risen 3 times above the prewar level while industrial prices were 10 times as high as in 1913.

In the face of this crisis, which again threatened the withdrawal of the peasant from the market--still a grave threat to this new regime--the government was forced to take serious measures to stabilize the currency and to press for lower prices in its own industry. Prices, of course, were not lowered as rapidly or as far as they should have been, but some confidence was restored with the introduction of the new currency and the two systems of prices came into some form of alignment.

From 1924 on, therefore, we have a period of fairly stable conditions in the Russian economy. This was the period in which the basic economic capacities of the country were on their way toward operating approximately at the 1913 level.

But in the back of the mind of the political leadership the peasant remained the principal political problem precisely because he remained the key to all the economic resources of the regime. Whichever way the Soviet leaders turned, whatever plan they proceeded to elaborate at the time, the peasant always figured very prominently in those plans. To begin with, it was necessary to get him to produce more and to deliver more of his surplus. For it was his surplus of food for the growing cities and for export, his supply of raw materials for industry that could render the elaborate plans of the government feasible. A planning apparatus, the so-called State Planning Commission, had been in existence ever since February 1920, but it could not begin any serious forecasting work until a modus vivendi with the peasant had been achieved. From about 1925 on, the State Planning Commission began to work out an annual economic plan known as the "controlling figures" for the year ahead, which has been described by most objective historians as probably the best example of planning under the Soviet period before or since 1928.

In these annual plans, the detailed control figures, the idea of the expert planners, who constituted the cream of the professional economist in Russia, some Marxist in ideology and some not, was to plan for a maximum of industrial expansion feasible in a country which had altogether too little of it. Before very long there developed a serious divergence of views among the planners because obviously there were two ways of doing it. You could do it on the basis of the existing peasant economy by following the interests, demands, and aspirations of the peasants, by using their surpluses obtained in an orderly process to invest in expanding the national economy for the purpose of industrialization. Another way, of course, would be to return to an economy of force such as was in effect during the period of "war communism" and to remove forcibly the surpluses of the peasant by one means or another so as to assure the government of maximum resources with which to trade in the foreign market, import industrial machinery and with which to invest heavily in domestic industry.

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Inevitably this difference in economic alternatives developed sharp differences on political policy within the Communist Party. On the one hand you had the Right Opposition, led by Bucharin, who openly encourages the peasant to produce more and get rich in the process. The only hope they saw for economic expansion, social welfare, and new resources for investment was in a thriving countryside, in which the economically stronger elements would be left free to produce in expectation of fair prices and become the large suppliers of surplus grain, on the basis of which the government could plan and implement a reasonable industrialization program.

The Left Opposition, developing at the same time, was considerably worried over the position of the rich elements within the peasantry. They argued that what was taking place in Russia was the rise of a strong, individualistic kulak element--you are all familiar with the term--which will eventually represent a serious threat to the regime. This Left Opposition group was preparing the Communist Party, and the government, of course, through the party, to exert pressure on the peasant so as to make him fit into the government plan of advancing industry and improving the position of the urban working classes. At that time in Russia there developed a little joke among the population. The question would be asked, "Who says everything for the country, nothing for the city?" The answer would be, "The Right Opposition of course (Bucharin)." "Who says nothing for the country, everything for the city?" "The Left Opposition (Trotsky)." "Who says nothing for the country and nothing for the city?" "Why, that's the general party line (Stalin)."

By 1928 it became clear that some decisive action had to be taken along this line, and a long-term plan be brought into effect. This general plan, submitted by the Planning Commission in 1927, was discussed for about two years before it was finally adopted. The disposition of the planning experts was to go along with the moderate Right Opposition, which was interested in an organic development of the economy based on a thriving peasant agriculture. It was apparent to the economists, however, on the eve of the inauguration of the First Five-Year Plan, that the government was getting impatient with the peasantry and ready to pounce on the peasant surplus and appropriate it for its own use.

A leading member of this group of professional economists, by the name of Kondratiev, warned the Soviet Government that if it returned to the use of force against the peasants it would have to witness the return of the "bag men." These were the original black-market operators in Russia, who always turned up in time of food shortages. They were petty speculators who bought up small stocks of food in the country and then brought it back by the sackful into the city and made enough profit in the process to keep them going until they could make their next trip.

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But this time the "bag men" did not return. They did not return obviously not because the food shortages were avoided but because by this time the system of repression had advanced to a point where it was possible for the dictatorship to control the individual behavior of the population. By now, in fact, the government felt strong enough to tackle the peasant population as a whole.

After 1928, the Russian economy enters a period of forced expansion by broad, centralized planning. The principal objective of this new planned Soviet economy, as it has been called since 1928, was not so much, as is usually thought, to create a socialist form of ownership and distribution but rather to create new heavy branches of industrial production in order to generate for the benefit of the regime new strength and added security. The whole official emphasis was less on socialism and more on strength for the Russian state. The main stress was laid on new lines of production for industry and a larger urban proletariat which would serve as a lever for more power to the regime internally and externally. Internally, the problem of the Soviet leadership was to solve certain political difficulties with the peasantry. Externally, of course, it was a question of advancing Russian economic and military power to a level commensurate with its vast material and human resources. It was suggested officially that this single (first) Five-Year Plan would make it possible for Soviet Russia to overtake the rest of the world in industrial production; at the least the hope was held out that the "plan" would help Russia "enter a new historic era," which would eventually make the socialist system victorious over the capitalist system.

In drawing up the balance sheet for this period--the crucial decade of 1928 to 1937, represented by the first two Five-Year Plans--the results achieved in the development of the Soviet economy were largely along the lines of the party's objectives. Speaking at a special meeting in 1927 Stalin made it very clear that not all expansion of industry amounted to industrialization. You can have all kinds of increases in industry and still not succeed in industrializing a country. "What we must do," he says, "is to expand primarily the basic materials of industry--fuel, steel, electric power--and especially to produce the means of production, the machines that make machinery. By that time Stalin had discovered the key role of the machine tool in an industrialized economy.

When the Second Five-Year Plan was over, the range of productivity of the Soviet economy had changed considerably. I have a few figures here just to show the ratio of increase more than anything else. These are for the period 1928 to 1937. Coal output increased 3.6 times during these ten years; steel, 4.1 times; electric power, 7.3 times; petroleum, 2.5 times; the whole machinery class, for which index figures are available in value terms only, which usually exaggerate the upward trend, increased during this period 13 times. Significantly, the one type of machinery in which the Kremlin had become especially interested, machine tools increased in physical terms also about 13 times.

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On the opposite side of the medal we have the picture in consumer and food production, which did not improve nearly so well. I have four figures here: Sown area in agriculture increased only 20 percent; grain, 13 percent; cotton textiles, a key consumer commodity in Russia, increased 25 percent; and potato output, 40 percent.

The kind of industry, therefore, that Stalin had in mind was precisely the kind that Russia got at the end of the era of maximum expansion during the interwar period. He had erected the base on which to expand, the base from which to launch into military production. While the standard of civilian consumption remained approximately at about the same irreducible minimum level it was 10 years earlier. But it was only the basic productivity of the economy that had improved; the structure of Russia's industry had also changed during the period. A few figures will help to illustrate. For example, foodstuffs, which accounted at the beginning of the period for 22 percent of total industrial production, declined to 17 percent of total by 1937; textiles, which used to contribute 17 percent, declined 6.2 percent; machinery, on the other hand, went from 11 percent of total industrial production in 1928 to 26.9 percent in 1937.

In generalizing about Soviet economic experience during 1928 to 1937, along officially approved lines, Soviet theorists like to expostulate about what they call the Soviet method of industrialization. According to this theory, the Bolshevik Party has found an entirely new approach, rejecting the "customary" road of the older industrialized countries, which is to move from light industry and consumers goods to heavy industry, a method apparently characteristic of purely capitalist systems. As they explain it, capitalists are primarily interested in profits and therefore they go after such petty industries like textiles, stockings, and shoes, in which the turnover of capital is most rapid. Heavy industry under capitalism develops, they argue, only as a by-product of the profit-making industries. In Russia, on the other hand, the emphasis is from the beginning on building the base first. Then, on top of this base, at such time as the government will consider it adequate, it will proceed to build a consumer industry.

To return to another phase of the crucial decade of 1928 to 1937: The first prerequisite for the two Five-Year Plans was the reorganization of the farming system. This is a problem that had dogged Soviet leadership during the entire first 10 years of the preplanning period. By deciding to proceed with its program of wholesale collectivization, the regime was finally certain of a new institution whereby it would not have to deal with the millions of individual peasant households. Instead, the new larger units had a number of advantages, chiefly in that they lent themselves to control more effectively.

The most effective instrument the regime had devised for use against the peasant after collectivization was the machine tractor station. This

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simply amounted to the declaration of a monopoly by the government on all agricultural machinery. The government then proceeded to organize a network of machine tractors in the countryside, which perform all the machine work and collect a payment in kind at rates fixed by the government. With the machine tractor stations in this dominant position, the erstwhile bargaining power of the peasant declined considerably.

An important contribution to this program of rapid industrialization was made by the use of the government's monopoly in foreign trade. This institution had come into existence at the very beginning of the Soviet regime, in April 1918. This was also one position which the government never yielded. The New Economic Policy, which represented a retreat along the Right Opposition within the party exerted considerable pressure on the assumption that the abolition of the monopoly could give the peasant what he wanted by way of imports regardless of domestic production plans.

On the other hand, dominant majority under Stalin retained the monopoly in trade as most suitable to its own requirements. It required, for example, that in any economic contacts with the outside world there cannot be any freedom of choice left to the population. Only the materials and equipment that the government needed would be permitted to be imported from abroad and only those products that the government needed for trading in the foreign market would be raised for export.

It is interesting to note that in drawing up the official summary of the consequences of the First Five-Year Plan, Stalin spelled out the important results almost entirely in noneconomic terms. He did not claim that he had developed a new Socialist system of productive relationships or had developed a higher level of welfare. He summed it up in terms of defense: We now have new types of powerful machinery for military operations. He summed it up in terms of autarchy: We no longer have to depend on foreign markets for machinery. He also summed it up in terms of internal security: We have eliminated the basis for hostility in the rural areas of the country.

In case of agriculture, therefore, the Russian Government in 1937 put itself in a position where it had complete control over the annual procurement of farm products, but at the same time the country suffered a disaster in livestock as a result of wholesale slaughtering. It is a very curious fact in the whole industry of Russian economic expansion, that the available livestock population of 1928 has not recovered to date; in 1937 it was below 1928, and at this particular moment it is lower than it was in 1937.

Another consequence of the first two Five-Year Plans was an unmistakable decline in real wages in the cities. It is significant to recall that in the history of the Soviet-statistical blackout, the first to disappear was the price index. The basic facts about wages

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and prices could not be easily misrepresented to the population. These facts may be illustrated by two figures. During this 10-year period the price of bread increased 10 times, while average wages rose only fivefold. All talk about real wages disappeared; all subsequent references in this field have been to nominal wages. So that when Molotov reported, for example, in 1939 on the results of the Second Five-Year Plan, he claimed that wages had increased 100 percent. The Russian economist Prokopovicz, working outside of Russia, easily proved this to be a falsehood. What had actually happened, he said, was that real wages during 1933 to 1937 had declined 45 percent.

Conversely, because of these failures in the field of social welfare the government had to resort to new harsh labor legislation. In fact, the end of 1938 saw the passage of two basic pieces of legislation in the scheme of present Soviet labor control, namely, the labor book, and the whole comprehensive system of penalties for coming late to work, for absenteeism and the rest. Thus the labor and farm policies pursued by the Soviet Government during the two first Five-Year Plans ultimately gave rise to the whole system of punitive legislation, deportations, and especially to widespread institutions of forced-labor camps.

After 1938 much of the usable statistics previously published in the Soviet Union began to disappear altogether. A last, detailed glimpse of Soviet economic operations on the eve of World War II has been provided by a captured document, only recently declassified; it was prepared in January 1941 for official circulation in Russia only. It is known as the National Economic Plan for 1941; this document is very illuminating in many respects. It gives us, in the first place, a body of relevant information on what happened to the economy between 1938 and 1941. From this document we can see that one of the reasons why economic statistics had to disappear after 1938 was because it had become too difficult to hide the transition to a war economy. For example, civilian machinery like automobiles and tractors, which were being expanded constantly up until 1938, were set at a much lower level for 1941. But while lower targets were set for such civilian products, the range of industrial production followed the established pattern. Basically, they were still pressing heavily for the expansion of industrial materials, raising levels of output as rapidly as possible.

We looked in this document for some evidence pointing to the redistribution of industry into the interior in terms of military security; there is no conclusive evidence on that score. We can find some evidence, however, of very low labor productivity in this 1941 plan. For example, the Steel Ministry has 485,000 people employed to produce 17.8 million tons of steel which points to an output of about 40 tons per worker as compared to 150 tons per worker in the United States steel industry.

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There is also in this 1941 document evidence of the role of forced labor in the Soviet economy, especially in connection with construction and mining in the northern regions of the country. You may have seen references in the press to the heavy use of slave labor in construction; accounting for 14 percent of all the building work done in the USRR. Forced labor is also an important factor, according to the 1941 report, in the production of some minerals and metals, furnishing, for example, 40 percent of all the chrome ore mined in the USSR. But the one mining field in which forced labor is probably heavily used, namely, nonferrous metals, is simply not covered in this document. It is probably a document on the first level of secrecy, so that industries like synthetic rubber, nonferrous metals, and war industries are deliberately excluded. But the role of the forced-labor camps in the normal operation of the Soviet economy is quite clearly documented with names of camps and output quotas.

It seems to me the unique contribution of this document is that it gives us a fairly clear picture of the special position occupied by the war industries in the Russian economy. We can see, for example, that the defense ministries accounted for 20 percent of total industrial output as planned for 1941, before the outbreak of war. We can also see that the war production industries produced their own machine tools, and these again constituted 20 percent of total production of machine tools in the country. We can also see that this large volume of war production is sold to the government at abnormally low prices. There is also evidence that war production normally absorbed the best available plants, so that most of the watches, for instance, made during this period, or clocks, stoves, samovars and sewing machines were being produced by the munitions, tanks, and airplane industries simply because they have taken over the plants where these products had once been turned out.

There is little that needs to be said about the performance of the Soviet economy during World War II because we are all more or less familiar with its more spectacular phases. The fabricating industries in the interior of the Soviet Union repaid for the heavy investments and the minute inspection exercised by the government over their production lines. They produced large numbers of tanks, and planes, reaching, as you know an average of 40,000 airplanes and 30,000 tanks and self-propelled artillery per year toward the end of World War II.

The type of control over labor and over agriculture surpluses introduced during the thirties apparently facilitated production discipline and distribution during the war. But we also became aware of evidence of extreme tension that had developed in the economy and in Soviet society as a whole. For example, Russia was the

only country to which many of its own natives refused to return at the end of the hostilities. Russia was also the only country which had to take harsh measures against some of its own population groups by dispersing five national communities which apparently collaborated with the enemy on a large scale.

It is one of the profound ironies of history, it seems to me, that Russia, which had set out to abolish private ownership and the economic influence of the individual and the small class, has evolved a system of economic institutions, which is devoid entirely of public purpose. The Soviet economy today is manipulated by what is probably the smallest ruling class in the world. Ironically, too, the one principle which it set out to abolish, namely, the principle of profit, appears in contrast to serve in a very real way as a guarantee that over the long run that the interests of the public will be a controlling factor in the pattern of production.

Indications are that the Soviet leadership will continue to use the economic apparatus it had built up for the purpose of expanding internal security along the line of autarchy and military strength. What is more difficult to predict is the degree of tension that will be generated by the continuance of economic development along direction presently pursued. How and whether the present regime will be able to control the increased tension, developing in response to its policies both internal and external, should properly be the subject of another lecture.

Thank you.

QUESTION: Mr. Herman, there have been some stories in the papers recently about the breakup of the collective farms and their consolidation into some type of larger units. I wonder if you could tell us anything about that?

MR. HERMAN: Right now this is the principal internal economic problem in Russia. The party and the government have ordered a consolidation or merger of the existing relatively small collective farms into larger units. The development has not gone far enough for anyone to form any definite conclusion as to what the implications are. There are indications that somehow the government has emerged from the period of World War II with the feeling that the limited freedom which the collective farmer has right now still represents a threat to its internal security. As you know, the collective farmer was given one concession when the forced collectivization drive was over. He was given the right to own and till a little plot of ground around his own house, which apparently he has made pay off rather well. By reason of chronic food shortages he has been able to take the surplus he raises to a special, limited city market and

sell it at premium prices. This limited market represents anything from 10 to 20 percent of total distribution, primarily food stuffs. This gives the collective farmer an advantage over the industrial worker. It also affords him some degree of freedom from government control which apparently does not fit too well within the general scheme of the leadership. It is for the purpose of trying to weaken the economic position of the collective farmer and at the same time improve morale in the city (by reducing the difference between rural and urban population) that the government is apparently bent on carrying through this reform, although it is generally agreed that it could cause considerable dislocation should the peasant choose to take a strong stand against the program which obviously threatens his social status still further.

QUESTION: Mr. Herman, during the early part of your discussion you mentioned the factor of bad roads in Russia. I wonder if you would elaborate a little on the possible developments in the interim?

MR. HERMAN: Somewhere in my notes I had a brief reference to the transportation system, but not too much of it can be covered in this sort of survey.

Transportation in Russia, as you know, is still a very crucial problem and the bulk of the freight load is carried by the railroads. The railroads carry about 90 percent of the total freight moved in the country. Inland waterways, as you know, are not too dependable because many of them freeze up for a good part of the year, and nearly all of Russia's great rivers in Asia flow in the wrong direction, to the North; some of them flow into the Arctic Sea. Internal maritime transportation is limited because except for the Arctic shore there isn't much of a maritime coast line.

The most backward of all Russia's modes of transportation, of course, is the highway. It is simply a case where the highway has not had any history of development at all because the automobile was usually late in getting to Russia. When it did, it immediately fell under the control of the government. To date annual production of automobiles is still quite small. The Russians are now producing about 400,000 automobiles and trucks per year, of which 85 percent are trucks. These, of course, are used either in the government distribution system or delivered in small lots to the countryside. It is a sort of vicious circle. The small number of automobiles keep the highways in a state of retardation, while a chronic state of bad highways in turn create poor incentive for the larger production of automobiles. Besides, Russian consumption of steel is of such a pattern as to preclude large-scale production of automobiles.

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Improvement of highway conditions has been very slow, and almost every visitor comes away from Russia with the impression of a complete dependence in transportation on the railways. For example, people who have flown over some fairly important urban centers in Russia report that while flying over it one gets the impression of passing over a village or a town because of the small number of automobiles in sight.

QUESTION: Do you have any figures on the development of the electronic industry in Russia?

MR. HERMAN: No. There really isn't any information that comes to my attention. I think our specialists in the various intelligence services of the Army probably have that field fairly well covered. I have the impression that it is a fairly backward industry except for what has come their way during World War II and since, especially since they have taken over the eastern zone of Germany.

Now, in connection with our Lend-Lease program in Russia, which involved an operation of acquainting the Russians with our original inventions in radar, it was necessary, I have been told, in relaying this information to competent officers of their signal corps to explain the basis of the system. Presumably they were baffled. They did not believe it existed. But since that time I have the impression they have grown a little more sophisticated on the subject.

QUESTION: Do you have any dependable figures on the number of people that Russia lost in World War II or any spread on the age groups?

MR. HERMAN: I think those figures are available; however, they are not all the given figures. Apparently the given figures just don't tell the story. I think Stalin tossed out a figure of 7 million. This figure has been taken to refer to the losses in military personnel. I think the demographic people around town, people like Dr. Frank Lorimer, worked out some figures which account for losses, as I remember, running up to about 25 million, including losses in the normal birth rate.

QUESTION: Considering the increase in population, particularly the high birth rate, what would you say about their probable ability to feed themselves now and in the future?

MR. HERMAN: I think that is a very crucial problem. When you read their present discussions of what the next Five-Year Plan will be--they are about to launch a fifth Five-Year Plan--you see that the central position in these plans will be occupied by several large hydroelectric power and canal developments, and all of these planned projects include an aspect of agricultural implications. In every one

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of these large hydroelectric stations and canals provision is made for irrigation, which involves a serious attempt at the intensification of agricultural output to yield more food in the shortest time possible.

QUESTION: There seems to have been a rather important development postwar with the satellite countries trading in areas of the economy and in products in which the satellites and Russia were heretofore pretty self-sufficient. I am wondering if that has been done merely to get these satellite nations tied to Russia and back on their own feet, to some extent, or whether that can be a permanent, continuing arrangement? There is rather extensive trade going on between Russia and the satellite countries where such trade did not exist prewar to any considerable extent.

MR. HERMAN: Yes; it's just as you say. There is no historical basis, no present-day sound economic basis, to this inflated trade turnover between Russia and the satellite areas simply because the economies are largely identical in their net foreign trade capacities. In other words, the same type of commodities the satellites have to export, the Russians also normally ship abroad. And conversely, the same things Russia imports from the foreign market they require from abroad. Russian writers have been fairly explicit in this connection. They now assert that expanded foreign trade within the orbit is necessary in the interest of Russian foreign policy. Certain favorable changes, they say, have taken place in the social organization of these nearby satellite countries. Russia, therefore, has to use its own foreign trade to help perpetuate these changes and to keep out foreign capitalist influences. Thus they are primarily aiming to carry out an exclusive economic policy in an area under their exclusive political control.

Secondly, while they seem not to get too much out of trade in complementing their economy, there is a profitable side line in this economic cooperation in the form of the joint operating corporations. Presumably the Soviet Government was given rights by the Potsdam Agreement to all German assets in the eastern European countries. On the basis of this ownership they go into partnership with these eastern governments in exploiting a number of their domestic resources. We don't know too much about the operations of these joint corporations, but we do know enough to get the impression that profit as anticipated by Russian computation, gets taken out in advance. Recently they have carried over this institution of joint corporations into Asia. There are now joint corporations in China, at least in the field of nonferrous metals, petroleum, and civil aviation.

Now, I mention the other side of the world in this connection to point out the real objectives of the joint corporations, which is to find some legal basis for directing the economy of Russia's dependent territories towards meeting a maximum of current Russian

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economic needs. The over-all result, as I see it, is that these areas, under Soviet control, even though they trade a lot more together, still remain heavily dependent on the outside world for the real deficit commodities which help keep their economy in balance.

QUESTION: We hear about Russia's forced-labor camps and the fact that there are about 20 million slave laborers in Russia. When I read these books about the Soviets and hear people talk, it sounds to me like nobody can be late for work, nobody can be absent, they must work until forced to quit, and so on. Now, what I would like to know is, what is the difference in the conditions of the slave laborers and the rest of the Russian population? Can you tell me what freedoms they still have?

MR. HERMAN: Well, the difference is of course one of degree. Essentially, they are all legally bound to perform their duties as prescribed by the state economy. There is very little freedom of choice in the economic activity of the Soviet individual. Knowing what conditions exist under normal circumstances of life in the cities and in the country, however, the regime indeed makes sure that life in the camp is somewhat more unpleasant. There is no doubt about it. The very fact that work in forced-labor camps always takes people to the extreme regions notorious for harsh climate is bad enough. There is no doubt, furthermore, that the institution of the forced-labor camps and the threat of exile to such camps represent a powerful negative incentive in Russian production where positive incentives are conspicuous in their absence. It is the all-pervasive stick of which you see in Russia more and more as you see less and less of the carrot. The very fact that you live away from your family and that you are supervised by the kind of people you are likely to come to the top under forced-labor camp conditions is enough to break anyone's will to resist.

QUESTION: Much of the literature on Russia seems to indicate there is no such thing as private profit there. But then occasionally I see references to savings bank accounts, or government war bond drives, and so on. What opportunities for investment and savings do the Russian citizens have?

MR. HERMAN: You are right, There are provisions for individual savings in state-owned banks. There are also annual campaigns, since the end of the war anyway, for loans to the government through the sale of bonds. But those things represent savings and interest earnings in the simplest sense of the word that can be used for individual consumption. It does not represent a base for investment. That is definitely not in the picture. Investments are all made from a single source--by the government, either through the central budget or from the capital resources of the individual enterprise. They are channeled, directed, and implemented by the government. The savings of the citizen are

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simply for the purpose of buying some of these rare and costly consumer commodities. You have seen references to the amount of rubles it costs in Russia to buy a pair of shoes or a suit of clothes. Obviously, before you can buy a suit you must have a bank account for three or four years. Then you are finally in business. All you can invest in is one suit.

QUESTION: Mr. Herman, I have been looking through all the publications we have here and I have found very little mention of several of the natural resources. I wonder if you would care to comment on some of them such as wolfram, cobalt, and sulphur. Do the Russians produce them or do they import them?

MR. HERMAN: I think that this point probably could be covered a little better in the next natural resources lecture. To my knowledge, Russia has sizable deposits of both tungsten (wolfram) and sulphur. We do not know their current volume of annual production. But we do know that despite this domestic production all three commodities are in short supply. We know that Russia now has direct access to China's production of tungsten. Sulphur appears at present to have become a special problem in Russia. The Russians are applying great pressure on Italy and Norway which have sulphur. In 1947 the USSR had a contract with a sulphur company in Texas, and shipments went forward regularly until our export controls began to take effect in 1948. Cobalt is known to be imported from one source only, Finland.

GENERAL HOLMAN: The capacity of management in, say, the first two or three echelons is evidently, according to their standards, pretty fair. But what do they have in managerial capacity, say, at the factory level, at the lower operations level, at the mining level? Do you have any information on this that would help us?

MR. HERMAN: Well, the information we have is mostly indirect. We get this general impression: In the first decades of the twentieth century, and earlier, although industry in Russia was still a small scale affair, there was nevertheless a sector of Russian scientific thought that was well meshed in with developments in general European and world scientific progress. That level of training everybody admits is quite good. There are people in some parts of Europe now occupying top engineering posts who will tell you quite frankly that back in 1910, or so, they got their training from some well-known Russian chemist, metallurgist or geologist.

On the lower operational level, as you know, they continue to work largely with unskilled labor, substituting quantity for quality of effort. All observers seem to agree that it is the middle layer in the technological process that is lacking, namely, an effective group of technicians who can take an engineering idea and make it pay off on the plant level, in the railroad yard, or in the mine. For that reason their accepted practice

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seems to be to ladle the cream from the top--the moment a man qualifies at the lower levels of managerial operation he gets snapped up for the war industries, for the machine tool industries. As a result, the Russians were always holding a sort of nucleus of skilled labor for the group of industries which are closest to the immediate interest of the leadership.

You can also see that the tendency on the part of the young graduates of the engineering schools trained to take these responsible jobs is to avoid both the over-all planning level and the operational phase in the factory. I have seen some recent figures to the effect that about 10 percent of the graduates get into actual plant operation; a somewhat higher proportion finds its way to the planning organs at the center, but 50 to 60 percent find a safe haven in the intermediate administrative offices doing paper work.

COLONEL BARNES: I think whenever we read about the tough life that the Russian people have, the thought always comes to all of us: How much longer are they going to stand it before they rise up?

Now, another revolution may be a costly thing for them. But back in 1946, I think it was, I had a talk with a member of the French Foreign Service who had just returned from spending several years in Russia and he was convinced that it was just a question of time before there would be another uprising. I asked him how long he thought it would be and he said it certainly wouldn't come in the next 10 years, but it definitely would come before the next 20 years. That was his impression.

I wonder if you had done some speculation along that line and how much more optimistic you have been on it?

MR. HERMAN: I think it is a very important subject for us to keep in steady focus. I was trying to direct many of the statements in my original remarks to that point--that every time the Soviet leaders pass another milestone in their economic progress they have in the meantime generated a lot of additional social tensions in the process and that these tensions are steadily tearing at the fabric of the patchwork Soviet economy.

There is, however, something in the technique of Soviet exploitation and repression which seems to generate extreme tensions and simultaneously to kill the will to resist. No small part of that is due to the fact that the regime has lasted so long. For example, how much optimism can a person who thinks of resistance have when he thinks of the countless number of people before him who have thought and tried and failed?

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I am inclined to believe you can see some evidence of a universal dragging of feet in the Soviet environment. The Russian has all avenues of resistance closed to him. The only road left is to continue to make believe he is doing all that is expected of him without at the same time making a maximum genuine effort, an effort of which is indeed capable and will exert some day when he rejoins the community of free men.

MR. LOUDEN: Mr. Herman, we appreciate your coming down here and we thank you for an interesting discussion.

MR. HERMAN: Thank you.

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