

PRODUCTION IN THE USSR

5 February 1958

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INDUSTRIAL COLLEGE OF THE ARMED FORCES

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Colonel Charles E. Taylor, USAF, Chief of Policy and Management Group, Directorate of Collection and Dissemination, ACS/Intelligence, Headquarters USAF, was born 18 July 1918 in Welsh, West Virginia. He was graduated in 1938 from high school in Wilmington, Ohio, and entered the service on 27 July 1940. Colonel Taylor received his primary, basic, and advanced flying training in the Army Air Force Flying Training Command. He was commissioned in July 1940. In 1949 he received his B. A. degree from Michigan State College. In 1950 he attended Radiological Defense School at Keesler Air Force Base, Mississippi. In 1954 he completed the Russian language and area course at Georgetown University and the Strategic Intelligence School Course. His foreign service consists of 7 December 1941-22 October 1945--Asiatic Pacific and Eastern Mediterranean Theaters. From 28 August 1954-22 October 1956, Colonel Taylor was the Air Attaché, Moscow, USSR. Since October 1956 he has held his present position. His decorations include the Bronze Star; Distinguished Flying Cross with four oak leaf clusters; the Air Medal with four oak leaf clusters; the Purple Heart; and the Legion of Merit. He is rated a command pilot. This is his first lecture at the Industrial College.

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CAPTAIN WRIGHT: Admiral Clark, Gentlemen: In this closing week of your study of production, we have attempted to round out the picture by considering sources of production outside of the United States.

Yesterday you heard about "Production in Allied Countries." Today we are to consider "Production in the USSR." We have called on the Intelligence Staff of the Headquarters, United States Air Force for help on the USSR.

Colonel Charles E. Taylor, United States Air Force, has been with the Air Intelligence Staff since he returned from Moscow, where he served two years as Attaché for Air.

It is a great pleasure, Colonel Taylor, for me to welcome you to the college platform and to introduce you to this audience. Colonel Taylor.

COLONEL TAYLOR: Admiral Clark, Students: I am pleased to have been invited to talk to you this morning on this subject of "Production in the USSR." The subject is rather general and quite complicated. It is somewhat like the magazine article that was written not long ago about sin in Sweden. You know it's there, but it is a little difficult to get down to the specifics, and unfortunately, it's not nearly so interesting.

People who have traveled to any extent in the Soviet Union and who speak Russian well enough to converse with casual contacts they might meet on trains, as well as government officials, do acquire a certain amount of information and insight into the Russian scene and the Russian people. Such information as I have acquired in this way I am very happy to pass along to you. When you consider the length of time it takes for an individual to become knowledgeable on any facet of life in Russia, it rather reminds me of what Bulganin said to the British when he was in London on his famous visit--an old Russian proverb. He said, "Moscow wasn't built in a day."

Most of the factual information that I have this morning comes from Russian publications. It is compiled and edited by linguists who, in most cases, are engineers of various types, such as aeronautical, mechanical,

and so forth, and this provides a certain amount of discrimination and competency in what they select and compile. The opinions, of course, are my own, and do not represent the Air Force or the Intelligence Section of the Air Force, or anyone else.

The Soviet Union presents without question the most serious threat that western nations have ever faced. This is so largely, I think, because of the industrialization of Russia, which has become a reality practically since World War II. It is highly debatable as to whether the industrialization of Russia is due to the Communists or would have taken place in any event. I am of the opinion that Russia would have been industrialized, with or without the Communists, because of the great natural wealth which is present in this area, and the compulsive social and economic changes which are taking place in the Russian nationality.

You must admit, however, that the rate of industrialization has been accelerated to a great extent by the Communist policies, the centralized planning, and the inherent ability of the system to concentrate on shortcomings. Such measures have forced the accumulation of capital goods at a very rapid rate; and of course, this is the production base, which makes the industrialization extremely important to us, and makes it a threat to western nations.

The Communist Party has always considered itself to be at war with anyone, Russian or otherwise, who opposes the pseudoscientific theories which it holds. But, in addition to that, there is a great deal in Russian history which provides a basis for the antipathy of the Russians to Westerners. Europeans in particular; and this includes Americans, because our principles, to a great extent, come from Europe.

It was popular a few years ago to take the view that, if we could just get rid of the Communists--if Uncle Joe would go--everything would be all right, and there would be no more problems. I believe, however, that the character of the Russian people has influenced the Communist Party as much as or more than the Party has influenced the people. In other words, I think that, without the Russian nationality, there would be no Communist Party and no Communist thesis today.

If the Communist Party considers itself at war, then it follows that the Russian people, at least those with a measure of authority and responsibility, likewise consider themselves to be at war with European ideas. And certainly the United States, as the most advanced industrial nation which is characterized by these Western principles, is the chief enemy of

the Russians; and it must be defeated, from the Russian viewpoint, in all ways before the Communist thesis is proved.

The continuity of this state of war is firmly set by the basic Communist doctrine which still governs party and national activities and which states: "Only through the annihilation of capitalism and the victory of the socialist system throughout the world will wars cease, since the economic political prerequisites for their eruption will disappear, as will the division of society, into antagonistic classes." Khrushchev's claims at the 20th Party Congress that war was not unavoidable does not alter this basic thesis, since he meant only that communism can be established in some countries without a civil war or the interference of the Soviet Army. This is due to the increased strength of the Communist bloc in general, the local Communist parties, and the socialist forces in the countries concerned. Khrushchev still considers that this method of advancing communism is impossible in those countries where capitalism is entrenched. Force will have to be used.

The coexistence of two different systems is a temporary situation. The Soviet Union, even if it is not always at war in the direct sense of the word, is always feverishly preparing for a conflict of one sort or another--cold war, psychological war, propaganda war, or gradual infiltration of countries where they think they have a chance of success. The whole Soviet state system is adjusted primarily to meet these demands of the conflict and is on a permanent wartime footing.

The industrialization of Russia and the history of the 5-year plans can be appreciated only when these military demands are understood. At the end of World War II we saw the western nations demobilized to a great extent, while not only did the Russians not demobilize but they embarked on a frantic program of research and development and an all-out strengthening of their armed forces. Soviet military research and development continues today to take precedent even over the most modest peacetime requirements. The technological and economic development continues to ignore the need for economy in consumer goods as much as they can.

A dictatorship, of course, can direct scientific developments in accordance with a fixed plan, as well as concentrate on particular areas of importance, regardless of other demands. Thus the ballistic missile was built and the satellites were launched during an acute shortage, in the Soviet Union, of such items as footwear, clothing, and housing.

Forced labor is as essential to the Soviet economy as are the free workers, the collectivized peasants, and the state employees. Optimism

would be justified if these class formations in Russia came from the caprice of a supreme leader, such as Stalin. The fact is, however, that the development of forced labor, and the entire system, for that matter, in Soviet Russia arises not from the good or bad will of individuals but is rather the consequence of the specific principles upon which the Soviet state has been founded.

I was driving once just south of Minsk and got my car stuck. The usual procedure was to get the first truck driver coming along to pull you out. This we did, and he pulled us for some five or six hours across the frozen road. During that time I had quite a few conversations with him. One of them sticks in my mind. This was just after the early 1955 announcement that they were going to raise wages, cut prices, and in general increase the standard of living. So I asked this fellow, who was an ordinary truck driver, although he could express himself quite well, what he thought of the new announcement. He made a very penetrating remark. He laughed, and said, "Well the norm remains the same." Since the norm, or amount which must be produced per day, governs labor more than hours, the new rules meant either increased productivity per hour or longer hours.

People sometimes ask, "What is the Soviet timetable? When will they attack?" I do not believe that a specific timetable has ever existed or exists now. Lenin is often quoted, especially in the Soviet Union, as saying that the Soviet power, plus electrification--and here you can read industrialization--of the entire country is communism. This statement is still quoted widely. The possible, the practical, the accomplished, the next step toward the goal, is always the principle that governs the Soviet Union in both its internal and its external politics.

These Communist goals are not hard to understand. The Party has always pressed and continues to press to achieve them. Their achievement, one by one, is dependent upon many things--the unity, the morale, and the will of the people at home, the strength of the opposing camp which the Communists have selected as their enemy--and this is you. The goals remain constant; only the means and the tactics vary. This has been said many times, but it is still the key to understanding the Soviet Union. You might say, if you want to get a little poetic, "The challenger waits. He attempts again and again to defeat the champ. He will try again and again as long as his strength grows. Therefore there is no timetable, but there is a compulsion to victory which should be of no less concern to us.

Time is too short here, of course, to consider all the methods by which the Communists hope to achieve their ascendancy and the accompanying

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defeat of the western nations as world powers. Certainly everything points to the fact that they have every intention of outproducing the industrial West as one of these means. If the ability to outproduce the United States and the European combination is achieved, aggressive Soviet diplomacy, backed by superior arms, will cause the nations to fall like ripe plums into the Communist basket.

This year, for the first time, the Soviet Union produced over 51 million tons of steel, while the United States produced about 115 million. In the United States, however, a much larger percentage of steel production went into automobiles, refrigerators, and other consumer items than went into armaments or expansion of the production base. In the Soviet Union by far the larger part of the steel went for armaments or for further expansion of the production base, in other words, for capital goods. The trend is obvious. It imposes a great problem for the United States.

To express this another way: In the United States this year we produced about 1,375 pounds of steel per person. The Soviet Union produced 526 pounds per person.

Even considering the arguments that the Soviet Union is starting from a much lower level in terms of productive capacity and therefore the percentage of production devoted to capital goods would naturally be greater, there is still cause for concern, because, given the basic Communist philosophy, can you doubt that this accumulation of productive capacity will continue as fast as possible until the Communist planners estimate that their production of armaments exceeds that of the United States and its probable allies, or that overwhelming military power can be achieved without parity in all production items?

Right after I arrived in Moscow Mr. K. and Mr. B. embarked on their famous tourism program and they became much more available and much more accessible, as did all Russian leaders, to small conversations that Westerners might have with them at various receptions and other official functions. On one of these occasions I spoke with Bulganin for a few minutes while he was the Minister of Defense, before the fall of Malenkov. At the end of the conversation, during which, I must say, he was rather rude, as only Russians can be, I rather naively, I guess, asked him to come to America, and said that he should see New York. With a rather evil glint in his eye, he said, "I may be there some day." The sense was clear. It had nothing to do with a friendly visit to New York.

Mikoyan, the wily old economics expert, who probably knows the United States economy better than most of us do, once told Chip Bohlen that the Soviet economy is an economy of scarcity, while the United States has an economy of abundance--meaning, of course, consumer goods, where much of Western production goes--and that they intend to keep it this way.

During a period of tension, about two or three years ago, Molotov announced, prematurely, perhaps, but indicative, certainly, of what is to come, that the Soviet Union is not less strong than the United States. The Party is banking heavily upon achieving the necessary superiority in production, without matching pound for pound or item for item in total production. It is a matter of judgment for the Party as to when the power balance tips the other way, based on the ability of the USSR to cripple the United States with a single blow and still have the means to follow through to victory.

But, one thing is clear. The comforting comparison that we sometimes make of gross national product between the two countries is somewhat meaningless when you consider the problem of what it takes to keep a consumer going in the United States, and what it takes to keep a consumer going in the Soviet Union. And, when you consider that rather new military parameter, time compression, the concern becomes even greater. Will there be time in the event of war to reorient the United States economy to needed production? Is the United States system capable of maintaining its present dominant position of production capacity of the necessary military end products vis-a-vis the Soviet Union? Is there sufficient understanding of this problem?

The Soviet Union recently under Khrushchev has emphasized steps to improve its productive capacity still faster. It remains to be seen whether the changes, which in their net effort overhaul industrial planning and administration, will actually result in improved productive capacity. We should assume that they will, after a transition period, because they are quite radical changes. The appearance of streamlining and preparing for greater armaments production was recognized by Khrushchev himself. He stated that the changes would be interpreted by Western war mongers in just this light. I, for one, do interpret recent Soviet economic developments as an intensified effort to achieve a preponderant balance of industrial power in the shortest possible time.

The sixth 5-year plan was cancelled in 1957, and the new goals for the 7-year plan, which will govern the economy from 1959 to 1965, will not be announced until July of 1958. However, from statements that

were made by Khrushchev and other people, it is evident that the primary goal will continue to be heavy industry above all other branches. They are still concentrating on expanding the base of production.

In 1957 Khrushchev gave the broad goals for the first 7-year plan. You have, in this statistical abstract that I passed out, those broad goals.

We have so far considered the positive aspects of the Soviet industrialization program. We have stated that, from the viewpoint of the Communist Party, the rapid accumulation of capital goods is really the goal of all planning. The demonstrated achievement and the plans for the further expansion of the production base add up to considerable success in achieving the Communist goals. However, there are also negative aspects to the industrialization program of the Communists. These negative aspects could cause the rate of production to level off, or they could cause the reorientation of the economy in the direction of more production of consumer goods. In the unlikely extreme they could result in the downfall of the present Communist government.

I think we can summarize the foregoing. The Communist domination of the masses of people and the practice of exploiting those who have performed the industrialization is undergoing a serious crisis, which is tending to become ever more acute. Society in general is beginning to show a lack of confidence and a desire to escape the Communists. The Communists pride themselves upon their rationality, but there are increasing signs that something irrational is threatening the Communist hold on the people. The domination of the masses is in danger. They are threatening to slip from the Communist grasp. Events in Poland and Hungary, the necessity to reorganize the economy, the economic difficulties which caused the industrial administration, and the discarding of the sixth 5-year plan are indications, among others, of this growing discontent. Although the USSR has made undoubted technological progress, it is at the cost of a growing mood of depression among the people, which is caused by the constant exertion and exploitation. The forlorn hope of the West is that the remedy will be a more moderate Russia and not a Napoleonic manifestation which has been the bitter heritage of other revolutions.

As a direct result of the industrial program, a new class has emerged in Russia which might be called the managerial or the "technicrat" class."

At various times in the past some people have expected that the managerial class would provide the moderating influence upon the Russian revolution; that, because these people are of necessity practical, they

would in the end control the government of the Soviet Union in such a manner that it would be less likely to pursue the aggressive goals that it had; and it would concentrate upon the Soviet economic problems. There is a great deal of validity to this thesis.

After Stalin's death, when there was more confusion than normal in the Soviet Union, the dominant element, probably, for a period of about two years, was the technicians. Malenkov, Kaganovitch, Pervukin, and many others in high places were all engineers and practical managers of industrial plants and trusts. At that time, I am quite sure the Soviet Union had the idea that it could become at last legitimate in the eyes of the world and lose its stigma of revolution, but without rejecting the basic doctrine of communism. However, I don't think that this was compatible with the basic aims of communism, and I think that, even though the managerial class was strong at that time, it was not strong enough to go this far.

In the end, as has been demonstrated recently, the Communist purists, such as Khrushchev, the men who slavishly believe the doctrine, have succeeded in eliminating the power of the technician or managerial class in so far as determining the course of Russian national policy is concerned though the managers left their mark in instilling a certain flexibility never known under Stalin. This, then, I think, is the meaning of the reorganization of industry which has occurred recently. This was Khrushchev's answer to the managerial class and to the bureaucracy. He has eliminated their central authority. The Party does not intend to let itself become managed by these people. The Russians have always had this periodic cleaning-out. They even have a word for it, "chistka." So Khrushchev conducted a "chistka" for the Party when he dismissed these people. When you consider recent events in this light the power struggle and the reorganization of the economy are part and parcel of the same milieu.

But there is one part of the industrial scene that even the Party could not tamper with too much. This is the defense industry, which was left relatively untouched, and even strengthened, by this organization.

Even so there has never been in Russia such a wholesale decentralization as Khrushchev put into effect. It is significant that he believes he has enough power, or rather that the people are trustworthy enough on the lower levels, to carry out these Communist ideals and the industrializations, in spite of the elimination of the top managerial and bureaucratic elements of a year or two ago as the policymakers. Perhaps Khrushchev

sincerely believes that this will free the energies of these lower level people and actually result in an acceleration. This is something that only time will tell. However, it is almost certain that the effects of the reorganization will result in a lessening of the rate of growth in production over the next two or three years, due to the dislocation and the disorientation which are bound to occur. It could result in widening the gap between the people and the Party.

We have proceeded here from the general to the specific. Let's now consider two examples of Soviet production in greater detail. Let's consider the defense industry and the electronics industry. In February of last year Khrushchev made the first proposal for industrial reorganization. He proposed to replace administration from Moscow with administration by region. He also proposed to strengthen the functions of centralized planning and indirect control, by statistical methods, policymaking, and so forth. In some ways this is one of those Russian enigmas--to decentralize, but to further centralize control.

Before these proposals were adopted, various production ministries exercised tight control from Moscow. Only someone familiar with the limits to which a Russian bureaucrat can go fully understands what this means--the accountant, the statistician, the bookkeeper is the petty king of the Russian bureaucracy. Reports on every facet of plant operation were required to be sent directly to Moscow. No doubt, such requirements lead to many illegal practices, falsification of records, and stifling of initiative. The control of an entire industry from Moscow also caused difficulties in maintaining procurement and distribution relationships between industrial plants under separate ministries, even though they were located in the same area and had natural relationships. Recent decrees which classify failures to deliver items necessary for production schedules between plants as criminal tend to strengthen the view that the new system is having its difficulties.

I was with a friend in Tbilisi once, and we stopped several times in the same restaurant for meals. We noticed that outside they were selling rather wonderful little melons. We had had them before, and knew they were good. So we ordered them in the restaurant. No melons. We did this a couple of times. Finally as we were going into the restaurant, we stopped and bought a melon from a man selling them on the street, intending to have the waiter serve it for dessert. We were stopped at the door by the doorman, who is ever present in the most unlikely places in Russia, and were told that we could not bring food into the restaurant because the state restaurant trust prohibited it. Well, we argued and, because we

were foreigners, we were allowed to enter with the melon. We gave it to the waiter and asked him to carve it up. This threw him for a spin, of course, but he went off to hunt a knife to do it. He came back, and, after we had had our melon, we talked to the manager, who came by to ask us how everything was. We said, "There's one thing we don't understand. Here melons are in season. They are being sold on the street, and yet we can't order one in this restaurant. We haven't seen them anywhere in the Causasus." He said, "Simple. This is a different ministry. This is the restaurant trust. The melons all go to the food industry, and that industry has not yet made them available to us." This is an example, very admittedly a poor example, of what must occur when an industrial production expert is faced with the problem of procuring his raw material, distributing the finished product, or getting the necessary components to assemble finished machines. This is one of the things that the Party is trying to eliminate, without losing control.

In early 1957, at a stroke of the pen, 25 industrial ministries were abolished and national economy councils were established at all levels. This is something of a gamble, of course. We have already said that the armaments industry or the defense production could not be gambled with. The solution was to merge the ministry of defense industry and the ministry of general machine building into a ministry of defense industry and to retain six ministries originally proposed for elimination which contribute to military production or heavy industry for the industrial base. I think it is important that we note the titles of these ministries. They are the aviation industry, the defense industry, the radio engineering industry, the shipbuilding industry, the chemical industry, and the electric power plants industry.

After the reorganization was completed, 11 ministries were left. These evidently were all ministries too important to tamper with. They served to further industrialize the country and to produce for the armed forces. These ministries, in the order in which they are now listed in the Constitution of the USSR are: The Ministry of Aviation Industry, the Ministry of Foreign Trade, the Ministry of Merchant Marine; the Ministry of Defense Industry, the Ministry of Railroads, the Ministry of Radio Equipment Industry, the Ministry of Medium Machine Building, the Ministry of Shipbuilding, the Ministry of Transportation Machine Building, the Ministry of Chemical Industry, and the Ministry of Electric Power Stations. These are controlled from Moscow as before.

As a specific industry, let us select the radio engineering industry as an example of an industry vital to the armed forces and briefly trace

its development since World War II. The Soviets define this industry as that branch of industry producing equipment and apparatus for wireless telephone and telegraphic communications--radio broadcasting, television, radar, radio navigation, automation, telemetering instruments, electronic computers, tubes, semiconductors, radio parts, and so forth. In other words, it is what we would call the electronics industry in this country.

The radio engineering industry of the Soviet Union is essentially a post-World-War-II development, its history covering a brief but active period. Prior to World War II, the various 5-year plans laid the scientific research and industrial basis for the manufacture of radio equipment; but actual production was insignificant. During the war the Soviet Union received huge quantities of radio equipment from the West, principally the United States. Much of the radio industry was uprooted during the war and moved to the eastern regions of the Soviet Union, where it was reestablished and grew rapidly. Realizing her shortcomings in electronics, the Soviet Union following the war assigned high priority to the development of a radio engineering industry.

Soon significant advances in the production of equipment and parts were being claimed by the Soviet radio industry. For example, by 1955 the growth in output of radio equipment had increased, they said, by 1,080 percent over 1940, compared with an overall industrial growth of 300 percent. Yet, in spite of this rapid progress, the radio equipment industry apparently has fallen short of meeting the Soviet Union's booming needs in this vital field. Soviet radio, technical, and general publications, particularly during the first half of 1956 and since, are replete with pleas, exhortations, criticisms, and admonitions urging the industry to increase its output and to improve the quality of all types of radio equipment.

Since the latter half of 1956, there are increasing indications that the Soviets are developing significant production capabilities in electronics. New plants for the production of specialized electronic devices, such as special tubes, ceramic and other radio parts, were constructed during the fifth 5-year plan. All radio plants reportedly are operating on a continuous-line assembly basis.

Automatic processes used in the radio components industry have made it possible to produce approximately 1 million capacitors and nearly as many resistors every 24 hours, according to Soviet figures. The production of advanced electronic devices--magnetrons, persynetrons, tris- trons, traveling wave tubes, and image translators has recently been

reported. These are specialized items, required for the further development of radar, navigational aids, missile guidance, and communications.

In the last few months, evidence of Soviet advanced electronics capability has been shown by their ability to operate an all-weather strategic bomber force in considerable numbers over great distances into the Arctic, launch an ICBM, and orbit earth satellites.

The new law affects plants of the radio engineering industry in two ways: It decentralizes administration by transferring jurisdiction over radio plants and organization to regional councils; and it centralizes the control of the centralized planning organs over the operation of the radio equipment industry for defense purposes.

A list of the plants and the organizations affected by the decentralizing acts of the law was approved by the Supreme Soviet but was not made public. The dates of transfer of these enterprises, as well as of their equipment, material, and other assets were to be set by the USSR Council of Ministries. They were to be completed by 1 July 1957.

Soviet sources reveal that the two main criticisms of the radio enterprises have been that they do not utilize or incorporate the latest technical developments and that they do not produce enough radio equipment. The new reorganization is designed to overcome both of these shortcomings by eliminating the barriers that we spoke of earlier. It is worth while, I think, to quote from the speech that was made before the Supreme Soviet in February of last year by Khrushchev. He said:

"The new direct administration of radio enterprises by the regional councils will spark a tempestuous growth in new techniques, better production techniques, improved development of integrated mechanization and automation, and better specialization and cooperation in production."

Under the reorganization, production of equipment by radio plants is to be increased through the local administrations by developing--again quoting from Khrushchev--". . . direct connections among the plants, factories, and building sites on the one hand, and their immediate supplies of raw materials and parts as being the best method of supplying and marketing output, and avoiding the tremendous amounts of time wasted on paper work going through administrative channels."

Under the Ministry of Radio Engineering Industry, liaison between producing plants and radio research institutes was criticized as being poorly organized. One of the chief reasons for this was pointed out in an article on research institutions. An extremely weak spot in the system of scientific establishments is their concentration in the capitals, a situation in which almost 40 percent of the scientific establishments of the RSFSR--that is Russia itself--are situated in Moscow and Leningrad, and cannot be tolerated any longer.

Under the new reorganization, two measures are being made to change this situation. Research and design organizations are being transferred from the Leningrad-Moscow area to the centers of population in the East, and the majority of research and design organizations are being subordinated to the local councils. Thus, under the new reorganization, radio plants in each of the economic regions are to have their own research institute and design bureau. To get an adequate number of research and design organizations, they are to be transferred from Moscow and Leningrad and the other central areas.

Now, during this brief period we have considered some of the factors which are behind the forced draft industrialization of the Soviet Union. We have tried to relate the drive for production to Communist plans and purposes, and we have described some aspects of the Soviet industrial system. We have then described the recent developments which, although not yet proven, will possibly result in improvement and further production capacity.

Our purpose was to consider the potential, but we have included some information on problems which may seriously affect the Soviet plans. We took the electronics industry as an example of a Soviet industry vital to armament production.

We have not mentioned at all a host of problems which directly affect any comparison of production of the USSR with the United States--education, research, and development, the state of the art in various fields and, what is probably more important and probably least understood, the fact that, while Great Britain has created the sterling area and we have the dollar area, the Soviet Union is now busily engaged in creating a ruble area; in other words, an economic segment of the world, geographically, which they will control economically or politically, if not both.

Finally, you have been supplied with a statistical abstract of production and labor force information which I hope will be useful.

There is one table I would like to call to your attention. This is the second table on the second page--a comparison of Soviet industrial growth over a selected five-year period. This is an annual increase in percentage. The column that I want to call to your attention is the period between 1958 and 1972. These are Khrushchev's announced goals for the year 1972.

Gentlemen, I hope that this will be of some assistance to you, and I hope that in the question period which follows, if there is time for it, we will be able to consider some personal experiences, which I hesitated to bring out without bringing out this basic data first. But I'll be glad to stay as long as you wish, and talk, and we can make that a classified period, if you like. All that I have said has been unclassified.

CAPTAIN WRIGHT: Colonel Taylor is ready for questions.

QUESTION: Colonel, do we have any authentic information on how the industrialization of China is affecting production in the Soviet Union?

COLONEL TAYLOR: I am not sure that we have in concise form. I think we have a lot of authentic information, but I am not so sure we have come to any conclusions. There is one thing that troubles the ordinary Russian citizen. I remember that I talked to a railroad communications engineer. He asked me if I thought that it was immoral for the Russians to sell military materials to the North Koreans during the Korean War. Of course I told him I thought it was. The thing that was interesting to me was that he had seen a great deal of communications on this subject of traffic in armaments and it was disturbing to him to realize that the USSR was engaged in a practice reserved in Communist legend to capitalist nations. I think it is unusual for the Russians to ship materials outside of the borders of the Soviet Union at least in 1958. On the other hand, if it was presented in the light of helping "the socialist camp" and was a further stimulus to their production, it might in the end help them to increase their production still more. As to affecting it negatively, by decreasing materials available for their own armed forces, I don't think it has reached that point at all.

QUESTION: Sir, would you comment on the capability of the Soviet transportation net--highway, rail, water, and air--to meet the requirements of the Soviet Armed Forces and of their economy?

COLONEL TAYLOR: We said earlier that the Soviet Union was on a war footing, practically speaking, now. It is true that they would convert a lot of their industry directly to armaments production in the event of war.

But I would consider that the transportation system is much nearer the saturation point than, say, ours is at the moment, or western Europe. I would also consider that transportation is the most vulnerable part of the Soviet Union. I am quite sure they are aware of it. The lack of a highway system, an adequate highway system, is not so much a result of not having the macadam or the machinery to build roads as it is an attitude. Why build roads when much of their heavy production has to go to something other than automobiles and trucks? So far they are building trucks which are capable of cross-country movement. This might be the influence of the Soviet Army on the whole automobile industry.

The growth in air transportation has been phenomenal, and this is one of the ways that the Party is depending upon, I am sure, to break out of the moral quarantine that it has been in for the last few years.

QUESTION: We have heard that in Russia there are lots of very fine machine tools and production facilities and equipment that many of the workers are not properly trained to use efficiently and safely; that they don't really seem to care very much to acquire the ability; and that, if this weren't so, production in Russia would be a lot higher than it is already. How does this correlate with the opinions you have?

COLONEL TAYLOR: I am quite sure this is true. I am quite sure that this has been a special subject for the Communist Party, and the industrialists and managers in Russia, for many, many years. I think that they are probably making progress. But the truth of the matter is that the ordinary Russian citizen--well, just let's say--had a lot longer way to go than the German or the American. There's the nature of the fellow. He's kind of lazy, and he is really not concerned with things outside of the border of the Soviet Union. It has been difficult to get him interested in production for Communist purposes, the way they want to produce.

As far as the quality of work is concerned, I am sure that he can be trained, under proper circumstances, to work as well as anybody else in the world. He has native intelligence and the educational system stresses the industrial arts. As the country solves the problem of his living accommodations and his personal well-being, I think they will find him much more amenable to technical training and production.

This is the great weakness of the Russians. They have for a long time been well known for their theoreticians, their mathematicians, and their engineers, in the top level. When they get below that it begins to fall off rapidly. Seems that a Russian is either a brilliant character or he's a lazy,

no-good bum. There's something in between, of course, but there is a much greater spread.

Of course the rewards that the Party has for good work and for training are considerable. That is quite an incentive. Because, if anybody likes to acquire personal wealth, it is a Russian.

QUESTION: Can you give us an evaluation of whether these people you associate with think they ever will go beyond the present socialist state which is using incentives probably more so than the capitalistic system as we know it here? Do they ever feel that they will move on into the Communist theoretical area of living where a man works according to his ability and receives according to his need? I wonder if you had a chance to evaluate this.

COLONEL TAYLOR: My opinion is that the ordinary Russian citizen couldn't care less. I think it would have to be a very exceptional Communist who felt any other way. I think if you take a balanced Communist (if there is such a thing), his private opinion is that the Communist method and the Communist thesis is for the purpose of acquiring a power which he will use for his own aggrandizement or to advance the Russian nationality. I don't believe that he is too idealistic.

Of course you find people, particularly the younger types, who are fanatics and who probably sincerely believe the slogans. We in the United States cannot quite understand the constant hammering on these themes, day after day, every waking hour, the music, the literature, the plays. Everything is on these Communist propaganda themes. This would be all right, if the citizens had a choice, but they have no choice. There is nothing else. They are somewhat like Pavlov's dog by this time. They salivate when they are told to, particularly when they contemplate a better life under the party.

QUESTION: Colonel, what, if anything, are they doing in the defense industries to reduce vulnerability to nuclear attack?

COLONEL TAYLOR: This is undoubtedly of great concern to them. They are letting industry disperse itself. Let's say, as it grows, they are putting it in dispersed locations. They are building up the Urals, which started in the last war and has been accelerated and continued. In addition to having it close to the sources of supply, this vulnerability enters into it very heavily.

They are also, of course, positioning their defense forces in such a way that they provide the best protection that they can. But I believe that the Communists' estimate at the moment is that, if they went to war, they would be attacked in their industrial production areas, and I believe they are counting on not having to go to war until they acquire an overwhelming ICBM-nuclear capability or an invulnerable missile and air defense system or something like that. They would like to win the game in other ways at the moment.

CAPTAIN WRIGHT: Colonel Taylor, I regret that we have to stop this very interesting discussion. On behalf of your audience I would like to thank you for coming here and giving us this very interesting morning.

(21 July 4, 100)O/dc:mjs:ekh

PRODUCTION OF SELECTED INDUSTRIAL ITEMS 1913-56

--TOTAL OUTPUT--

	<u>1913</u>	<u>1928</u>	<u>1950</u>	<u>1956</u>
Steel (million tons)	4.3	4.3	27.3	48.6
Coal (million tons)	29.2	35.5	261.0	419.0
Petroleum (million tons)	10.3	11.6	38.0	83.8
Electric power (billion kilowatt-hours)	2.0	5.0	91.2	192.0
Cotton cloth (million meters)	2,672.0	2,678.0	3,899.0	5,500.0
Woolen cloth (million meters)	108.0	87.0	155.0	268.0
Leather footwear (million pairs)	60.0	58.0	203.0	290.0

--OUTPUT PER CAPITA--

	<u>1913</u>	<u>1928</u>	<u>1950</u>	<u>1956</u>
Steel (kilograms)	27.00	26.00	148.00	239.0
Coal (kilograms)	184.00	214.00	1,418.00	2,064.0
Petroleum (kilograms)	65.00	70.00	207.00	413.0
Electric power (kilowatt-hours)	13.00	30.00	496.00	946.0
Cotton cloth (meters)	16.80	18.20	21.10	27.0
Woolen cloth (meters)	.70	.50	.80	1.3
Leather footwear (pairs)	.38	.35	1.10	1.4

NOTE: Population figures: 1913, 159 million; 1928, 166 million; 1950, 184 million. 1956, 203 million.

SOURCES: Narodnoe kbozyaistvo SSSR v 1956 godu (The National Economy of the USSR in 1956), Moscow, 1957.

On the basis of these figures the index of growth for these years is as follows (1913 = 100):

	<u>1928</u>	<u>1950</u>	<u>1956</u>
Steel	96	548	885
Coal	129	771	1,122
Petroleum	108	318	635
Electric power	231	3,815	7,276
Cotton cloth	108	126	160
Woolen cloth	71	114	185
Leather footwear	92	289	368

CHANGES IN THE 1957 PRODUCTION FIGURES

	<u>Original 1957 target*</u>	<u>Revised 1957 target</u>	<u>Expected 1957 output</u>
Pig iron (million tons)	41.1	38.10	37.0
Steel (million tons)	54.5	51.50	51.0
Coal (million tons)	472.2	446.20	462.0
Petroleum (million tons)	96.4	97.00	98.0
Electric power (billion kilowatt-hours)	232.2	211.20	210.0
Cement (million tons)	35.5	28.50	29.0
Woolen cloth (million meters)	296.0	278.00	280.0
Leather footwear (million pairs)	338.0	309.40	315.0
Sugar (million tons)	4.7	4.76	4.5

*Based upon an annual growth of one-fifth of the total increase for the five-year plan.

SOURCES: Narodnoe kbozyaistvo SSSR: Statistichesky sbornik (The National Economy of the USSR: A Statistical Compilation), Moscow, 1956; Pravda, February 6 and November 7, 1957.

	<u>Production goal for 1972</u>	<u>Estimated produc- tion for 1957</u>
Iron ore (million tons)	250-300	84.0
Pig iron (million tons)	75- 85	37.0
Steel (million tons)	100-120	51.0
Coal (million tons)	650-750	462.0
Petroleum (million tons)	350-400	98.0
Natural Gas (billion cubic meters)	270-320	20.0
Cement (million tons)	90-110	29.0
Electric power (billion kilowatt-hours)	800-900	210.0
Woolen cloth (million meters)	550-650	280.0
Leather footwear (million pairs)	600-700	315.0
Sugar (million tons)	9- 10	4.5

SOURCE: PRAVDA, November 7, 1957

COMPARISON OF SOVIET INDUSTRIAL GROWTH
OVER SELECTED FIVE-YEAR PERIODS

	<u>Actual increase 1951-55</u>	<u>Planned increase 1956-60</u>	<u>Increase for five-year periods between 1958-1972*</u>
Pig iron (million tons)	13.90	19.70	13.0- 16.00
Steel (million tons)	17.90	23.10	16.0- 22.00
Coal (million tons)	130.00	203.00	63.0- 96.00
Petroleum (million tons)	33.30	64.40	84.0-100.00
Cement (million tons)	11.90	32.60	20.0- 27.00
Electric power (billion kilowatt-hours)	76.50	153.20	196.0-230.00
Woolen cloth (million meters)	91.00	113.00	90.0-123.00
Leather footwear (million pairs)	57.00	158.00	95.0-128.00
Sugar (million tons)	1.02	3.11	1.5- 1.84

*Each item is one-third of the figure given by Khrushchev for the 15-year period.

SOURCES: KPSS v rezolyutsiyakh i resheniyakh sezdov, konferentsii i plenumov Tsk (The Communist Party of the Soviet Union in Resolutions and Decisions of Congresses, Conferences, and Plenums of the Central Committee), Moscow, 1953, Part II; Pravda, February 26, 1956, and November 7, 1957.

THE INCREASE IN SOVIET WAGES AND PRICES 1940-56

	<u>Average annual wage</u>	<u>Average monthly wage</u>	<u>Wage index</u>	<u>Real wage index* (1940=100)</u>	<u>Index of prices of goods and services (1940=100)</u>
1940	4,100	341.7	100	100	100
1950	--	--	--	126	--
1951	7,550	629.2	184	--	--
1952	8,079	673.3	197	--	--
1953	8,241	686.8	201	165	122
1954	8,446	703.8	206	174	118
1955	8,699	724.9	212	175	121
1956	8,960	746.7	219	182	120

*The relationship of wages to the index of prices of goods and services.

SOURCES: The table has been calculated on the basis of information of Soviet publications.

CHANGES IN THE STRUCTURE OF THE SOVIET WORKER'S
EXPENDITURE 1913-57

(PERCENTAGE OF TOTAL BUDGET)

	<u>1913</u>	<u>1927</u>	<u>1957</u>
Food	50.0	43.8	69.7
Rent and utilities	20.0	17.0	2.2
Clothing	10.0	22.4	18.2
Recreation	3.6	4.0	5.5
Other household expenses	7.0	4.2	2.6
Transportation	--	--	1.8
Aid to family	1.1	1.2	--
Miscellaneous	8.3	7.4	--

SOURCES: Satsialnoe obespechenie, No. 5 (1957), p. 22; S. N. Prokopovicz, Narodnoe khozyaistvo SSSR (The National Economy of the USSR), New York, 1952, II, 72-4

COMPOSITION OF THE FAMILIES OF SELECTED INDUSTRIAL WORKERS

IN PERCENTAGES

	<u>1952</u>	<u>1953</u>	<u>1954</u>	<u>1955</u>
Workers	49.00	48.60	48.30	48.10
Working pensioners	1.90	2.60	3.20	3.20
Nonworking pensioners	5.80	5.80	5.10	4.40
Students receiving grants	.60	.60	.60	1.00
Dependents	44.60	45.00	46.00	46.50
Dependents per worker	.91	.93	.95	.97

NOTE: This table is based on a Central Statistical Administration's sampling of a group of 14,800 workers' families.

SOURCE: Vestnik statistiki, No. 1 (1957), p. 86

	<u>Average size of worker's family</u>	<u>Number of dependents per worker</u>
1927	4.10	2.20
1932	3.93	1.73
1935	3.80	1.59
1952	3.60	.91
1955	--	.97

SOURCE: S. N. Prokopovicz, Narodnoe khozyaistvo SSSR (The National Economy of the USSR), New York, 1952, II, 122; Vestnik statistiki, No. 1 (1957) p. 86