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U.S.S.R. MILITARY-ECONOMIC STRENGTHS AND WEAKNESSES

A lecture delivered
at the Naval War College
on 14 October 1954 by
Dr. Demitri B. Shimkin

Admiral McCormick, Gentlemen of the Naval War College:

My objectives in this talk this morning are: *first* to survey briefly the resources pattern of the U. S. S. R. — human, agricultural, and mineral; *second*, to summarize the basic economic policies of the U. S. S. R.; *third*, to indicate the rate of economic growth achieved over the past years, and *fourth*, to outline the salient capabilities, limitations and vulnerabilities inherent in Soviet economic potential.

Let us now turn to the resources pattern. The *population* of the Soviet Union today aggregates some 210 million persons, concentrated primarily in European Russia. In fact, about three-quarters of the population lives west of the Volga River. Also, the population is still primarily rural; only 40 percent of the people of the Soviet Union live in cities or in industrial settlements.

The *labor force* of the Soviet Union numbers about 105 million persons, a considerably larger proportion to population than in this country, where it is little more than a third. The reasons for the larger labor force in the Soviet Union, relative to ours, are the following: first, as a result of the tremendous war losses of World War II, a very large number of single women is to be found in the population. These single women must perforce seek employment. Second, the proportion of persons fifteen and over who are in school in the Soviet Union is considerably smaller than in the United States. Third, child, part-time and other marginal labor is inherently more useful in an agricultural and rural eco-

nomy than in one highly industrialized and urbanized. And 55 percent of the Soviet Union's labor force is agricultural, compared to some 12 percent in the United States.

The structure of the labor force also presents some other differences from that of the United States. The nonagricultural labor force numbers about 40 million people, exclusive of about 5.5 million in the armed forces and 2 to 3 million in forced labor proper. This is only about two-thirds as great as in this country. But the number in manufacturing, 17 million, equals the American figure; in general, two-thirds of the 40 million Soviet non-agricultural workers are in manufacturing, construction and transportation. Only a third are in service occupations. These proportions are directly the inverse of those of the United States.

In consequence of these facts, the U. S. S. R. has an organization of labor which maximizes current output but which has relatively little fat and few reserves who could be redeployed in time of emergency from one occupation to another. This absence of fat is also intensified by a number of other circumstances. The Soviet Union has an immense shortage of able-bodied males in relation to the size of its population. The war induced a direct military loss of over 7 million males in the armed forces (direct military killed) and an additional indirect loss of 5 to 10 million. (Total Soviet losses from all causes — direct and indirect, including the fall of birth rate — ran about 25 million persons in World War II.) As a result of this deficiency in males, over half of the labor force of the Soviet Union today is female. In other words, the employment of women today is almost the same level of intensity as was reached in the Soviet Union at the peak of World War II. Furthermore, the work week in the Soviet Union was increased in 1940 from 40 hours to 48 hours. At the height of World War II, it rose to 66 hours. Since the end of the war, the minimum work week, excluding a very few hazardous occupations, has been 48 hours.

When we combine all of these factors, we see, again, a maximum of concentration on current output and a distinct limitation in reserves.

The final aspect of the labor force analysis is the problem of productivity. Here, we must note that the over-all productivity of Soviet labor has not advanced greatly over the last fifteen years. In agriculture, man-year productivity has increased about 5 percent since 1937. Today, agricultural productivity in the Soviet Union is not much more than a tenth as high as in the United States. In manufacturing, the picture has been rather varied. In the field of machinery and transportation equipment, the Soviets have realized their best progress, partly through increases in hours but, more largely, through improved factory transport systems, higher speeds of machine tools, and various technological gains of this sort. In the last fifteen years, their productivity has risen something like 55 percent, a little higher than the rate of growth in this country. On the other hand, in industrial fields outside of machine building — among 12 million miners, steel-workers, textile workers and others — productivity has either remained at the prewar level or dropped. For example: in consumers' goods, the man-hour productivity of labor runs about 15 percent below the prewar level.

Thus, in comparison with the United States, the Soviet Union has, by and large, had great difficulty in keeping up in productivity. Today, in manufacturing as a whole, Soviet productivity ranges from about 20 percent to 35 percent as great as the American; in agriculture, as I mentioned, only a tenth. These are fundamental differences in potential.

Let me now turn to a rapid survey of agriculture, the cardinal weakness in the Soviet economy. I will not discuss in detail the geographic problems of agriculture, but I want to re-emphasize to you the importance of the climatic limitations: the cold barrier which restrains effective agriculture north of the Leningrad-Urals-Irkutsk line and the drought frontier which elimi-

nates agriculture, other than with irrigation, east and south of the Batumi-Stalingrad-Barnaul line, from the Black Sea to the Altai. These limitations represent not only agricultural boundaries, but also limitations upon yields and upon the kinds of crops grown. For example: the Soviet Union must depend for its cotton production upon an extremely small area; two-thirds of all Soviet cotton is produced in the Fergana Valley in Central Asia, a region of only 5,000 square miles or the size of Connecticut.

Above all, however, the problem of agriculture is one of neglect, of a deliberate historic policy of squeezing agriculture as the fundamental source of investment for the rest of the economy. In addition to this, agriculture is organized in a fashion which maximizes control and which ensures the delivery of what the State demands, but at the same time which is devastating to production. The whole system of compulsory deliveries at nominal prices, all of the complex accounting, drag down the initiative of the farmers.

As a result of these facts, the progress of agriculture in the Soviet Union has been far short of the demands needed for the economy. Let me give you a few basic figures. Since the beginning of industrialization (the period between 1928-1953), the growth of the population of the Soviet Union, including annexation, has totaled about 40 percent. In contrast, grain output has increased only 30 percent. In livestock, there have been considerable gains made in swine numbers. But for cattle and sheep the picture is extremely adverse. Their numbers, as well as the number of horses, are actually lower than they were twenty-five years ago—lower in absolute as well as in relative terms. The increase in tractors and other mechanization since 1928 has little more than offset the decline in horse numbers. The shortage of power remains a major block to increased productivity in Soviet agriculture. The only sectors where the Soviet Union has really made progress have been cotton and sugar beets, where all of the mineral fertilizer and most of the agricultural investment have

been concentrated. Consequently, yields per acre, in most grain crops and in potatoes have actually been lower in recent years than they were before the beginning of industrialization.

The consequences have been many. The Soviet diet is today essentially on an Asiatic Standard. We know, from official data for 1950 that, even for the urban population and the armed forces, 85 percent of the diet, by weight, consists of bread, potatoes and coarse vegetables. Every other commodity — sugar, butter, milk products, meat — forms the other 15 percent. Of course this is a serious problem, particularly in regard to the health of the population. With the slim food margin available, the build-up of stocks for droughts or military emergencies is difficult. The expansion of livestock numbers is very slow and uncertain. Also, low peasant morale inevitably affects other segments of the population, especially the armed forces.

And finally, we have, within the distribution of agriculture itself, a serious problem. In the Soviet Union there are very distinct areas of food surplus and food deficit. In central and north-west Russia are some 60 million people who must import a very large share of their food from the North Caucasus and Volga regions. The Ukraine and the Urals, including the immediately adjacent Volga area, are about self-sufficient. In the Asiatic territories, including the Transcaucasus, we again find very marked differences. Western Siberia is a surplus area which must supply Central Asia and, to some degree, even the Transcaucasus. These areas do not feed themselves because so much of their arable land is taken up by cotton, tea, and other technical crops. The Far East also is not self-sufficient and it must generally import about 3 million tons of grain a year. Before the war, the fundamental base of supply was Western Siberia. At the present time this is being supplemented by shipments from Manchuria. Thus, the problems of distribution acerbate the difficulties in the agricultural situation as a whole.

In regard to mineral resources, the Soviet picture is far brighter. In general, the reserves of the basic ferrous metals—iron ore, manganese, chrome and nickel—are very strong, although there are scarcities in other metals, especially cobalt, molybdenum and tungsten. In addition, there are difficulties caused by the delayed and inadequate development of new deposits, the spotty adoption of new technology, and the excessive exploitation of the major working deposits.

This is especially serious in the Eastern regions where the most important iron ore deposit, Gora Magnitnaya in the south Urals, has been seriously depleted, and where the Soviets have been very slow in bringing in lower-grade deposits into production. Even for Krivoy Rog in the Ukraine, the richest and most important iron deposit in the Soviet Union, the strain has been severe because Krivoy Rog has had to supply not only the industry of the Ukraine, and in part that of Central Russia, but also that of the European satellites.

In nonferrous metals—copper, lead, zinc, aluminum and tin—the Soviet position is much less favorable. Soviet progress has been most marked in lead and zinc; for these metals, mid-1953 output represented 70 and 50 percent gains, respectively, over 1950 levels. Completion of the Ust Kamenogorsk hydroelectric plant and allied smelting facilities, which permitted improved refining of the Ridder ores of northeast Kazakhstan, underlaid this gain. (It must be noted, however, that the Soviet *reserves* of lead and zinc are quite limited.)

Copper output is a different matter, with ores available in Kazakhstan, the major reserve area, presenting constant difficulties to the Soviets. In the last year and a half, production has actually dropped. Since both Soviet and satellite electrical capacity is being vigorously expanded, the copper situation must be very tight.

In regard to aluminum and in regard to the most important of the nonferrous metals, uranium, the Soviet Union is above all, dependent upon the satellites. At the present moment, over 60 percent of the bauxite consumed by the U. S. S. R. comes from Hungary. At the same time, Hungary produces almost no aluminum. The shipments of bauxite have to be made to the Ukraine, to the new aluminum smelters in the Transcaucasus, and to the Volkhov region near Leningrad. The Urals plants run primarily upon local bauxite as does the plant in Stalinsk, in the Kuznetsk Basin. All in all, the aluminum situation of the Soviet Union is respectable so long as free transportation from Hungary is ensured.

In regard to uranium, a few points may be made. From a theoretical standpoint, and from the standpoint of the technology practiced in the United States, uranium is no longer a scarcity. For example: we are, today, using not only such ores as the carnotite of the Colorado plateau but also almost trace quantities of uranium from Florida phosphate rock. The development of uranium from the by-product gold tailings of South Africa is also significant. But this does not mean that we can translate such technology into Soviet practice. As far as I know, the fundamental resources still are complex low-grade cobalt-bismuth-uranium ores of the Erz Gebirge in Germany and Czechoslovakia and the carnotitelike ores of Central Asia — particularly in the Fergana Valley region, which is also the scene of one of the major hydroelectric developments in the Soviet Union.

Finally, a word or two about fuels. The U. S. S. R. has great natural resources in coal, petroleum and in natural gas; but, also, poor development, and, in part, mal-distribution. The Soviet Union is peculiar in the fact that 90 percent of the iron reserves are located west of 60 degrees east and 90 percent of the coal reserves are to the east of this line. In regard to coking coal there is a very real problem. The Donets Basin in the Ukraine is the sole producer, in most of European Russia, of coking coal, and

this coking coal is extremely poor. There is 3 percent sulphur in run-of-the-mill Donets coking coals, an absolutely unacceptable proportion from our standpoint. The other supplies of coking coal must come from the Pechora region (north of the Arctic Circle), or else from the Karaganda Basin in Kazakhstan, or from Western Siberia. The Urals do not have significant supplies of coking coal; neither does Central Russia. As a result, gentlemen, according to information from no less a person than Lazar Kaganovich, in 1953 the Soviet Union was sending some ten million tons of coal from the Kuznetsk Basin as far west as Moscow — and even beyond.

In regard to petroleum, the problems are parallel. The fundamental development of petroleum is localized, first of all, in the oil fields of the Caucasus; and, second, in the area of the Volga Basin (the so-called "Second Baku"). Smaller fields are found in Central Asia — Guryev and Krasnovodsk; some in the Fergana Valley and, to a very limited degree, at Sakhalin. Elsewhere, although the geology is extremely favorable (as it is in all of Western Siberia), so far as we know commercial production has never been achieved. As a result of this, there has to be wide distribution of petroleum products. This distribution is primarily by tank car. Less than 15 percent of Soviet petroleum is sent by pipeline, for Soviet pipelines are limited essentially to a number in the Caucasus, connecting with the Ukraine, and some in the Volga area. Outside of this, they are extremely short and of little account.

Finally, the Soviets continue to have very real difficulties in cracking and refining, particularly in regard to the treatment of high-sulphur crudes and in the treatment of low-volatility crudes, like those of Sakhalin. They do not have proper desulphurization and proper decarbonization units. As a result, in 1953 a very large proportion (around 10 percent) of all Soviet crude was involved in very long cross-hauls. On the one hand, the Volga refineries could not use Volga crudes for high-quality products and had to import crudes from the Caucasus. On the other hand, the high-

sulphur fuel oil of the Volga region flooded the local market, so that fuel oil was being sent from this area back to the Caucasus out to the Ukraine, and into Central Asia. It was the same way in the Far East. Here, petroleum products were being shipped from the refineries in the Urals all the way out to the Pacific, while crude from Sakhalin was being shipped out as far as Western Siberia. These problems, of course, accentuate the load on transportation that is developed both through maldistribution of basic resources, and through incomplete development and lagging technology.

To summarize the minerals picture: The resource base is essentially strong, although there are very definite gaps in a number of metals such as tin, cobalt, molybdenum, etc. The development is uneven, with technology often inadequate — particularly in such fields as heavy-media separation. There is an important supplementation of Soviet resources by those of the satellites, ranging from the uranium of the German-Czech area to the iron ore and coking coal (essential to the Far East) available from Anshan in Manchuria. And, finally, the distribution of the resources in relation to the urban population and manufacturing capacity is not altogether satisfactory.

Let me say a few words about Soviet economic policies. As you know, the continued emphasis of the Soviet Union has been upon a maximum strengthening of its military-economic potential. To implement this strengthening, the Soviet Union has developed a large amount of machinery typical of a nation at war. There is, of course, the centralization of planning and operational controls throughout the economy. There is a very large use of direct controls: first, in regard to labor, where movement is regulated by labor passports, where jobs cannot be left except by permission of the plant director, where minimum hours are enforced, and where all sorts of penalties are attached to underproduction. There are also direct controls in critical materials, which are allocated on a basis very much like our Controlled Materials

Plan of Korea and the later phases of World War II. Indirect controls are of tremendous importance on the consumers' side. Here, the basic system is that of enormous sales or turnover taxes, which, in general, take 60 percent of the consumers' rubles. In such basic commodities as bread, the tax forms 90 percent of the sales price. This is a very effective way of holding down "unnecessary" demand.

The system of coercion and of incentives has been fairly well developed and it is also tied in with another essential element: that of tolerated illegality. In other words, gentlemen, the fixer, the black market, the speculators, are essential parts of the Soviet economic machinery because it is only thus that plants can get that missing spare part which another plant is hoarding. Only through falsification can a plant director keep his nose above water when the politicians decide that production should be upped 50 percent in three months. All of these practices combine to form a type of political cynicism and opportunism which is both basic to and dangerous to the Soviet totalitarian state.

With this machinery, the Soviets have combined methods well known to Western economists to effect economic progress. These methods include a reallocation of resources. Over the last fifteen years, for example, the share of consumption (including health and education) in the gross national product of the Soviet Union has dropped from about 67 percent in 1938 to 50 percent today. The share of investment has risen from about 10 percent to 25 percent, or possibly a little higher. The share of government — including, especially, armaments — has risen from 14 percent to 25 percent of the gross national product. Labor has followed these resource allocations. Today, the armed forces' strength of the Soviet Union is over three times as great as it was in 1938. Manufacturing now has two-thirds again as many people as it did in 1938.

Another factor has been the simplification of designs; the continuation in production, in sectors of secondary importance,

of obsolete models. The 1928-model Ford is still in production in the Soviet Union. It suffices for certain purposes. Again, the Soviet Union has seen fit to neglect large areas, such as maintenance, and to concentrate on current production.

The intensified use of human and capital resources has also been vital. To illustrate it, I want to cite a case given by Kaganovich, the Boss of the Transportation System. Speaking this spring, he said that the Soviet Union concentrates about one-third of its ton-mileage on the Donets Basin, the Urals and the Western Siberian networks. On these networks the ton-mileage of freight transportation in 1953 was about 80 percent higher than in 1940. "But," (and I quote him), "the trackage had risen only 12 percent — station trackage only a matter of some 6 percent — while centralized traffic controls were actually 6 percent under the 1940 level." He then goes on with a laconic statement that the rate of growth of capacity is not keeping up to demand.

The final mechanism of growth in the Soviet Union has been the merciless drain of the satellites. Gentlemen, until the last few months it was not fully realized how significant and how crucial, even, the tribute exacted from the satellites has been as a margin of Soviet strength. In 1952, the Soviet Union exacted a tribute amounting to about 15 percent of the gross national product from Eastern Germany, and about 10 percent of the gross national product from Poland. The exactions from other satellites have been of a comparable nature. They have given an addition of 5 percent or 6 percent to the resources produced by the U. S. S. R. itself — about the relative addition provided by Lend Lease during World War II. It has been this margin which has been critical for military strength and for the maintenance of a high level of investment. China, of course, has been a drain — a serious one during the Korean war — rather than an economic asset.

All in all, what have been the achievements of the Soviet Union in comparison with the West? Over the last fifteen years

(from 1938-1953), the gross national product of the Soviet Union in fixed prices (essentially, 1937 rubles) has risen almost 70 percent. The rise of the American and the Canadian product over the last fifteen years has been 120 percent (in 1939 U. S. prices). In other words, the gap between the Soviet Union and the United States has widened rather than narrowed over the last fifteen years. The Soviet Union is at present making an intense drive to regain as narrow a margin as it had in 1938.

Within components of the economy, the picture has been rather different. For example: the gross output of manufacturing in the Soviet Union has risen, since 1938, nearly 130 percent. In the United States, the rate of manufacturing growth has been a little less than 100 percent. In other words, they are growing faster in manufacturing than we. Of course their weakness has been in agriculture. Here is a maximum of some 15 percent growth since 1938 while in the United States the growth has been extremely substantial.

When we compare further the entire picture of the East and the West, a comparable picture obtains. Among the free countries of Europe and Asia the one with the greatest gain has been Turkey, where there has been about a 70 percent increase in national product since 1938. Over-all for the countries of the proposed Western European Union — the United Kingdom, Benelux, France, Italy, Germany — the median rise from 1938 to 1953 has been 35 percent (in gross national product at fixed prices). In several European countries it is somewhat higher: Sweden's increase from 1938 to 1953 being 49 percent; Norway's, 52 percent. In a few cases it is rather lower: Greece is only 10 percent above the prewar level, and Ireland, about 20 percent.

Among the European satellites the greatest growth has been in Poland — a growth, incidentally, which was largely achieved through a change in boundaries through which the Poles acquired substantial German industrial capacity. In Poland, the

rise of national product has been 36 percent since 1938. Today, Czechoslovakia and Hungary are certainly not more than 20 percent above the prewar level. What the situation is in Rumania and Bulgaria is hard to say, but it is likely that they, like Eastern Germany, are less than 10 percent above prewar level.

So, from the standpoint of the best measurements that we have, the West is not losing ground to the East. Certainly the Soviet Union is growing faster than Western Europe, but the aggregate of the West so far is holding its ground, or doing a little better than that.

But this is not the whole picture because it is a problem not only of achievement but of getting a message across. The Soviet Union is today conducting a very serious cold war of statistics. It is attempting to convince its people and those abroad that the West is doomed; that only the armaments race holds the Western economies together; that the desperate condition of the starving workers of the West practically assures early internal strife and revolution. To the extent that this propaganda remains undisputed, regardless of the actual facts, neutralist elements in Asia, within Western Europe and even in the United States are sustained and can exercise a serious, adverse influence upon the political strength of the West. This is a political phenomenon of the greatest importance, as we have seen to our sorrow in Indochina and has been threatened in regard to E.D.C. and its potential successor, W.E.U.

Gentlemen, I have remarked upon a number of occasions about Soviet 'hot war' capabilities. As I see them, they have remained unchanged in substance over the last few years. Essentially, the Soviet Union has a number of important — though limited — assets: A high readiness of armed forces backed by substantial stockpiles; forward bases, especially in the satellites of Eastern Europe; a capacity for rapid mobilization and deployment, fundamentally directed to Western Europe, secondarily directed to the Balkans, to the Caucasus, up into Scandinavia and, to a much

more restricted degree, to the Far East. The capacity of the Far East, as far as I can determine, has not changed substantially from a level of about 35 or 40 Soviet divisions in action, or their equivalent in a larger number of Chinese or other satellite troops. Another important aspect is the increasingly effective Soviet air force — although great caution must be taken in substituting a picture of one plane, no matter how advanced, for the reality and the complexity of a well-balanced and operating strategic air force. Potential guerrilla action in Western Europe — particularly in France and Italy — cannot be disregarded in Soviet capabilities. Finally, the Soviets have the advantage of high secrecy.

All this adds up to the potential of a major threat particularly directed against Western Europe, with important efforts toward the isolation of that theater by the attack of the sea lanes and, to some degree, by the atomic bombardment and neutralization of ports of debarkation.

The limitations of the Soviet Union rest primarily in manpower. The effects of the war and a high degree of employment give a practical limit of around 15 million men under arms, which is about what we can sustain in this country. Soviet troop capacity is of course supplemented by the satellites. But, here, the Soviets run into serious problems of political reliability, training, communications, and other factors of this sort.

Another limiting aspect is the sheer difference in size between the Soviet industrial plant and the American. The Soviet plant is used to a high degree of capacity; by the measure of capacity, the margin between the Soviet Union and the United States is not a question of one-to-four, as in production, but closer to one-to-eight. For example, gentlemen, let us not forget that our entire munitions industry at the present time is operating exclusively on a one-shift basis. The U.S.S.R. also has specific bottlenecks, such as petroleum, cracking capacity, transportation, and aluminum.

There is another great problem: the absence of offensive sea power; the lack of ability to project power overseas on a

sustained basis. This absence gives the West certain potentials for the use of the island peripheries and of peripheries protected by water. It is an asset — and, on the Soviet side, a weakness — which must never be lost sight of.

Turning, finally, to weaknesses, I must stress the cancer of agriculture, which not only limits food supply (which can be remedied for the short run by stockpiling) but, more importantly, corrodes the morale of the peasant majority of the Soviet population. A vulnerability to air action is created by the heavy concentration of traffic and of output. In the Soviet Union today, 60 percent of the motor-vehicle production still comes from one plant. In the United States, the whole state of Michigan today produces only 30 percent of American motor vehicle production and Detroit, itself, produces around 15 percent — a tremendous difference in concentration. Another problem is the high degree of urban crowding. Here, the average density in the Soviet cities runs twice as high as in the United States, a very dangerous thing in the atomic age.

The Communist weakness in the Pacific must not be ignored, for that vast theater is bound to Soviet industry only by one ribbon of steel; there is no railroad north of Lake Baikal. Western exploitation of the weakness could mean the relief of Communist pressures all the way down to Australia, and directly against the heart of the United States. Too, the establishment of forward bases from the Pacific could introduce the fatal kind of shuttle bombing that led to the early demise of Germany.

All these basic weaknesses are magnified and added to by the uncertainty of the satellites.

Yet, the degree of concentration of Soviet power on effectiveness in being — and on armed strength in being — must not be forgotten. For all of these reasons the final estimate is this: The U.S.S.R. is a country of immense potential, with a large resource-base and a large population. It is a country which has effected

significant economic growth, primarily through the effective channeling of its resources rather than basic increases in efficiency, in productivity. Its goals are narrowly defined — particularly, the maximization of power-in-being. Its most dangerous capability, and one increasingly dangerous, is a short, heavy blow, particularly against Western Europe. But the time has yet to come when the Soviet Union can face with equanimity a battle of indefinite duration and indeterminate scope. So long as the West has its determination and its unity, so long as the West is not afraid to use the resources at its disposal, it is precisely that kind of a war which would be the fate of the Soviet Union in case of an all-out aggression.

Thank you, gentlemen!

BIOGRAPHIC SKETCH

Dr. Demitri B. Shimkin

Dr. Shimkin was born in Omsk, Siberia, on 4 July 1916. He received his education in the United States, including B.A. and Ph.D. degrees from the University of California.

Prior to World War II, Dr. Shimkin did research work at the University of California in anthropology and economic geography with emphasis on western North America. He entered the Army on active duty in September 1941, and served with the Intelligence Division, War Department General Staff, and U. S. Forces European Theater (1941-46), specializing in Russian Affairs. He was assigned to the National War College during 1946-47, and lectured at the Industrial College of the Armed Forces during 1947. He is a graduate of the Army's Command and General Staff School.

Dr. Shimkin was a member of the Institute for Advanced Study, Princeton, in 1947 and 1948. Since 1950, he has been consultant editor to the *Journal, Automotive Industries*. He has written numerous articles on Soviet economic geography and technology as well as a volume, *Minerals, A Key to Soviet Power*, published last year.

Dr. Shimkin was research Associate of the Russian Research Center and lecturer in Social Anthropology at Harvard University between 1948 and 1953. Since October, 1953 he has been Social Science Analyst on the Technical Advisory Committee, Bureau of the Census.