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8/19/54

SOVIET ECONOMIC TRENDS AND THEIR IMPLICATIONS FOR EAST-WEST TRADE

The purpose of this paper is to bring certain Soviet economic trends to focus on the future development of trade between the Soviet bloc and the free world. It is the thesis of this paper that the Soviet Union is in a rapid transition from an agricultural economy to a comparatively industrial economy, and that significant shifts in the direction and composition of East-West trade are likely to occur in the immediate future as a result of it.

"Predicting" the course of East-West trade depends on more than economic analysis. Both the conscious strategy and the unconscious bureaucracy of the Soviet Union will have at least as much to do with East-West trade developments as economic forces. The analysis of economic trends leads therefore to suggestions not to convictions, and serves mainly the purpose of emphasizing some important possibilities rather than certainties.

The principal conclusions reached are the following:

1. The Soviet Union will shortly become an exporter of capital equipment, even though imports of other types of capital equipment will continue.
2. Soviet imports of agricultural products, especially feedstuffs, and probably fibers, are likely to expand.
3. Agricultural exports from the Soviet Union or the satellites are unlikely to reach levels substantially higher than at present, and will be under pressure to diminish in the future.
4. Enlarged trade between the Soviet Union and the under-developed countries of Asia, the Middle East, and Latin America, is a likely resultant development, and will involve economic as well as political advantage to the Soviet Union.
5. While Western Europe can continue to trade with the East at about the present volume, no substantial sustained increase is likely, and the commodity composition of Soviet imports will continuously shift as investment and industrial expansion continue in the Soviet Union.
6. China's requirements for machinery and equipment are capable of being substantially supplied by the Soviet Union.

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and the satellites, and a substantial part of China's exports will be highly suitable to Soviet needs.

7. The Western countries would contribute more to the Chinese economy as markets for the remainder of China's exports than as sources of supply for China's imports; and control measures designed to reduce Western imports from China would be even more effective than export controls in retarding China's industrial growth. This is particularly true--and of significant quantitative importance--for the United States.

8. The challenge to U. S. economic defense will, more and more, be the challenge of Russia's economic initiative in Asia and other under-developed areas, a challenge that cannot be met except in a very partial degree by measures within the "economic defense" field of activity, but can only be met by the overall foreign and economic policy of the U. S. and its allies in these areas.

AGRICULTURE VERSUS INDUSTRY IN THE SOVIET UNION

Economic defense objectives, being centered on the concept of "strategic" retardation of the Russian economy, have focused attention on Soviet industry rather than agriculture, and have necessarily been concerned with the weaknesses rather than the strengths of Soviet industry.

Furthermore, in spite of disputes over the size of the impact of export controls on the Soviet industrial base, it has been evident that the Russian economy had important industrial deficiencies that could be supplied through East-West trade. Agriculture, being of less immediate importance to Soviet war potential, has not received a large share of attention in the economic defense program.

A study of the economic developments in the Soviet Union must, however, give emphasis to the agricultural side of the economy. Agriculture has been the most important source of Soviet exports in the past and of the exports of the U.S.S.R. and Eastern European satellites taken together. Agriculture has been a major source of manpower for Soviet industry over the last 30 years. And agriculture represents a major part of total consumption in economies with per capita incomes as low as those in the Soviet bloc.

Comparison between Soviet industry and Soviet agricul-

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ture over the last 30 years is striking. While industrial production has approximately quadrupled, agricultural production is barely above the level of 1927 or of the late 30's, and measured per capita is below the level of the late 30's and still further below the level of the early 20's. While industrial plant and equipment have grown enormously in the Soviet Union, livestock numbers--even aside from draft animals--are at best where they were in 1927. Soviet steel production in 1929 was less than that of Belgium-Luxemburg, only half that of France or Britain, and less than one third that of Germany; at present it exceeds that of Britain and Germany together, and may shortly equal that of Britain, Germany, and France combined. Thus Russian industry is not only relatively large compared with what it was in the 20's, it is substantial in an absolute sense and growing rapidly.

There are many reasons for this contrast between industrial growth and agricultural retardation. It is important, however, not to explain the difference entirely in terms of the comparative neglect of agriculture; and it is important not to assume that, once the Soviet planners turn their attention to agriculture, they can bring that sector of the economy up to the rate of progress shown in other fields. While agriculture has suffered at the hands of the Russian planners, its retardation cannot be explained in terms of simple neglect. According to estimates of RAND Russian agriculture has received a proportion of total Russian investment over the last 30 years approximately twice as high as the proportion of U. S. agricultural investment to total U. S. investment; and the Soviet figure for investment in agriculture has been over 1/6 of total investment and equal nearly to 1/2 of the value of total investment in Russian industry. By comparison with the United States, both industry and agriculture received doubled shares of total investment, the difference falling on housing, trade, municipal development, etc. Whatever the errors in these estimates, they certainly indicate that there is no easy explanation for Russian agricultural failure in terms of neglect at the planning and investment level.

THE RUSSIAN AGRICULTURAL PROBLEM

First, consider the facts (i.e. estimates) of current agricultural production in the Soviet Union.

Agricultural production as a whole is probably at just about the pre-war level, and its post-war recovery has been slow. Bread grains are at just about the level of 1935-40. Wool is slightly above the pre-war level but well below the level of the

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20's. Cotton is somewhat above the level of the late 30's, and well above the level of the 20's. Meat production is about where it was in the late 30's, and below the level of the 20's. Sugar is below the level of the late 30's. The trend is currently upward in practically all of these commodities; but the recovery in contrast to industry, or in contrast to agricultural recovery in Western Europe, has been exceedingly slow and the upward trend in many cases reflect only the recovery to pre-war yields.

There is additional evidence of a non-quantitative sort that agricultural production is unsatisfactory in the Soviet Union. The attention given by Soviet authorities to agricultural production, particularly meat and dairy production, in the last 18 months indicates serious preoccupation with the problem. This preoccupation is not confined to the Soviet Union but has been marked in the satellites of Europe as well. Not only is it preoccupation, but the Soviet planners are apparently willing to pay a "price" for increased production, as evidenced by improvement in the terms on which Russian farmers dispose of their produce.

Recent measures to induce greater agricultural production include tax reductions, higher farm procurement prices, lower forced delivery quotas, and efforts involving large movements of persons to bring new land under cultivation in south-central Russia. Increased emphasis has been given in the last twelve months to agricultural technology, with apparently large numbers of agronomists and machine technicians being directed to farms. These increases reflect both the disappointing progress of agricultural production and the importance of foodstuffs in any effort to improve consumption standards.

To some extent the expressed dissatisfaction with agricultural production may be related to the current concern with consumer goods in general, which in turn may prove to be transitory. But the concern seems real; and is unquestionably justified.

The recent composition of Soviet bloc trade with the West reflects internal difficulties with the production of food, especially "quality" foods. Meat, butter and fish imports have been recently increased and emphasized, while grain exports have been below expectations. Furthermore, imports from China include several hundred million dollars of foodstuffs, principally soy beans, peanuts, and their oils, but also meat, wool, fruits, etc.

Evidences of agricultural dissatisfaction in the Eastern European satellites have been numerous; meat shortages have recently been conspicuous in Poland and East Germany. Agricultural

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problems in Czechoslovakia are evidenced in the admission at the recent Party Congress that production increased by only 1/7 from 1949 to 53, compared with a planned increase of over 1/3, and that production remains well below pre-war output. The new Czechoslovakia plan evidently includes the movement of over three hundred thousand workers back to the farm, and indicates that such a shift will limit manpower available to industry.

As evidence of governmental concern and policy these facts may be of transitory significance; but they leave little room for doubt that the facts of agricultural production have been discouraging both in the satellites and in Russia itself.

All U. S. authorities seem agreed that a major obstacle to Soviet agricultural improvement (both in Russia and the satellites) is in the morale of the farmer and his response to the Soviet system of incentives and organization. The Soviet economic system has not yet discovered how to organize the agricultural economy in order to make farmers work productively. The importance of the individual farmer's reaction is evidenced by the fact that the severest problems and the strongest recent experiments and incentives are concentrated in the production of livestock products. This seems to confirm that Soviet "factory" methods are more conducive to the raising of grain than to the more individual processes of animal husbandry.

It is possible that the increased concern with, and improved incentives for, agricultural production in the Soviet Union will yield favorable results. But nothing in the experience of the last 30 years suggests much confidence in success. Furthermore, even improved agricultural yields obtained in this fashion will come at a real "cost" to the Soviet authorities, since the improved incentives for the farmers will represent a higher real income for them, and depends on both higher prices for what they produce and upon greater availability of consumption goods. Thus the "net" contribution of agriculture to industrial growth will not be increased by as much as gross output.

While incentives and organization are undoubtedly important, it is even more important not to ignore the physical obstacles to increased agricultural output in the Soviet Union. The current preoccupation with Russian policy and problems of organization tends to keep these physical problems in the background; in the long run, they are bound to prove even more intractable than the Russian peasant.

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PHYSICAL OBSTACLES TO INCREASED AGRICULTURE

In spite of the huge area of the U.S.S.R.--approximately equal to all of North America--the country is not wealthy in arable land. In terms of soil and climate, the agricultural potential of the Soviet Union is substantially less than that of the United States, perhaps no more than 70%. Most of the good soil in the Soviet Union was fairly intensely cultivated by 1930. While there is always room for some expansion of acreage (and in fact there was substantial expansion on marginal land in the 30's) expansion in the Soviet Union means the use of lower grade soils, the draining of swamps or uprooting of forests, high transportation costs, and a heavy investment in community development. While the increasing availability of tractors and other machinery have made some areas usable that would not otherwise have been, the general situation remains one of tight limitations on the expansion of areas under cultivation. Since these are limitations of soil, rainfall, sunshine and frost, aggravated by the factor of distance, they are not conquerable by policy reforms.

A number of dramatic attacks on this problem have been started. These include irrigation, the planting of forest belts, improved crop rotation, the more extensive application of fertilizer, and improvements in seed and technique. Few of these have been successful on any but a minor scale; and some of them suffer from calculable limitations.

Consider irrigation. A number of major projects have been initiated with a good deal of publicity. But even if all known plans are carried out (and there is evidence that some in fact may have been dropped or slowed down already) only about 4% of the total crop area would be irrigated, half of which was already irrigated under the Czarist regime, and practically all of the remainder of which has been in use for non-irrigated crops already. Complete success of all these projects might add from 3 to 5% to total grain output.

The projects are furthermore expensive to carry out. In many places they run the risk of spoiling the soil by increased alkalinity (as some has been spoiled under previous irrigation); and the water supply is not reliable in all cases.

Irrigation projects will consequently not revolutionize Soviet agriculture.

A second, and promising, possibility is the planting of shelter belts of forests in the dry, grain growing regions.

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There is apparently little question about the ultimate effectiveness of this if done properly, and in many large areas output may be increased by one quarter or more. Extensive afforestation will be very costly, however, and there are technical problems that have not yet been solved. Most important, trees grow slowly; and the effect within a decade would be negligible (or perhaps negative, since some tilled areas would have to be devoted to trees) and the effects at the end of a second decade would still be only a very few percent added to crop yields. Thirty or forty years would be required for substantial benefits to be obtained.

With respect to crop rotation, there is room for significant improvement but Russian experiments to date have not been remarkable. Some of the best results may have to await the development of forest protection mentioned above. Furthermore, some of the best results of crop rotation are only available if a high proportion of output is taken in the form of livestock rather than grain, and is not therefore readily accessible to an economy that cannot afford the luxury of substantial meat consumption.

Fertilizers are the most promising solution. Their use could advantageously increase several fold. Russia furthermore has very substantial natural deposits of mineral fertilizer. While it will take many years to develop fertilizer extraction on an adequate scale, this is an important potential source of improvement.

Improvements in farming technique, livestock, strains, seed, etc., could be of real importance, but the Russians have not shown striking success. Part of the problem is bureaucratic and organizational, and is inherently soluble.

The conclusion reached is not that agricultural improvement is out of the question, but only that it will be difficult, expensive, and somewhat uncertain. Agriculture, by comparison with industry, suffers from serious physical limitations as well as from organizational and bureaucratic difficulties that seem much less readily overcome by Soviet planning and discipline. Especially in view of the growing population of the Soviet Union (at a rate of at least 1.5% per year) the problem of food production is going to remain difficult and perhaps become progressively more difficult.

It is particularly worth noting that Soviet agriculture will continue to require large allocations of investment in the future. Extensions of acreage will require transport and community development as well as machinery, storage facilities, etc.

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Development of fertilizer will require installations of transport as well as equipment. And continued application of machinery on existing acreage will presumably become progressively less productive in terms of output, as highest priority uses become satisfied.

In judging the prospects for increased output per acre, it must be kept in mind that Soviet yields per acre are not strikingly low. What is strikingly low in the Soviet Union is output per man, rather than output per acre. Investment in agricultural machinery is--and apparently has been--highly effective in reducing the manpower requirements for producing given yields on existing acreage; it is much more difficult to raise acreage yields by the application of machinery. There are important exceptions to this, such as soil conditioning by machines that cannot be duplicated by hand methods; and the availability of machines may often shorten certain processes to reduce the danger of crop damage, etc.; nevertheless the principle effect of farm mechanization is to release labor rather than to raise yields per acre. (It should be borne in mind that agriculture is generally a high investment type of production. In the U. S. the fixed capital--including barns, sheds, and other buildings and improvements exclusive of farm residence, as well as machinery--on farms, per dollar of output, is substantially greater than the fixed capital per dollar of output in such industries as vehicles, aircraft, shipbuilding, etc.)

This distinction would not matter if agricultural land were abundant in Russia. In that case, increased mechanization would make possible an extension of land under cultivation, leading to higher output with a given, or even reduced, labor force. But under the circumstances of limited land area, the difference is crucial.

It is this difference that undoubtedly explains the failure of agricultural investment to raise output during the last two decades. The very substantial investment in agriculture, referred to above, had probably had two main effects. First, it has offset a large reduction in draft animals (which should somewhat reflect itself in release of produce equivalent to the feed of animals replaced by motor power.) Second, it has permitted the release of labor for work in the industrial sector. While these have not been the only effects, they help explain the absorption of machinery without appreciable increase in output.

We should therefore distinguish two different objectives in Soviet agriculture for the coming years. One is continued displacement of agricultural labor in favor of the industrial labor force; this is achievable by continued mechanization but

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undoubtedly at a slower rate than in the past. The second is raising agricultural output at least in proportion to population preferably in much greater proportion; by any standards this would be a difficult situation, and by comparison with Soviet achievements in other economic fields it will be extremely difficult.

In the near future, the pressure of population against food and fiber consumption may be less important than the need to increase per capita consumption. The public attention deliberately given the consumer goods by Soviet authorities in the last 18 months has to be taken seriously--not as a major change in philosophy but at least as a public commitment for the short-run, and a commitment that would hardly have been undertaken unless it was seriously intended to be followed by tangible results. Furthermore industrial production of consumer goods is in fact undergoing rapid increase, and production and imports of textile machinery suggests increases in textile capacity as well as replacement of obsolete and worn-out equipment. The official plan for shoe production in 1955 is 150 million pairs per year higher than the estimated actual production of 1951, which itself was double the peak level reached before the war and four times the level sustained during the war. The high rate of construction of urban dwellings is good evidence that there are technical as well as morale reasons for improving the availability of consumer goods and services. While a few consumer durables may provide important window dressing, fibers, hides, and better quality foodstuffs are the things that will really matter.

Increasingly, the growth of Soviet production will depend on labor productivity rather than recruitment in the industrial labor force or the establishment of basic plant and equipment; and positive incentives in contrast to negative discipline will become more important to Soviet industrial success. There is consequently a good basis for supposing that increased living standards in the Soviet Union are receiving serious attention rather than just verbal acknowledgement.

It should be kept in mind that Soviet investment is of sufficient size so that if a determination were made to expand consumer goods production rapidly, this could be done. Furthermore, if serious attention is really given in the Soviet Union to raising living standards it may have a strong self-perpetuating effect. Dramatic successes in certain lines could undoubtedly be achieved. Bureaucratic momentum would be established, and so would popular expectations of further increases. A shift of power, authority, and prestige to those officials whose business is raising living standards and whose success is measured by the

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output of consumer goods, would not be easy to withdraw or hold in check.

In summary, while the logic of increased per capita consumption is by no means compelling, there is a strong possibility that the effort to increase consumption will press hard against the output of foods, cotton, wool, hides, and agricultural production of industrial raw materials.

THE PROSPECTS FOR EAST-WEST TRADE

The natural conclusion to be drawn from the above picture is that Russia will not--and probably the Soviet bloc will not--become again a large supplier of food and foodstuffs to the West. The cost advantages of producing grain and other foods in exchange for industrial products will be limited, and will probably become progressively more limited. Russia will more easily expand shipyards than maintain a food surplus in exchange for ships.

If this conclusion is true, a corollary is the following. East-West trade will remain of no more than marginal significance for the countries of Western Europe (with the usual allowance for Finland, Norwegian fish, etc.) The prospect of a large market for industrial production, and a long-run source of foods and agricultural raw materials, is a false one. East-West trade is not an important key to the viability of Western Europe or Western prosperity.

While this conclusion is probably a correct one, it is important not to assume that Russia can not export large amounts of grain. Russia did it in the early 30's under conditions a good deal more stringent than are likely to occur in the future; and Russia has exported grain since World War II at severe costs to Russia and satellite consumption (particularly consumption of animal products.) If Russia wants to export grain, it can do so; and if it wants to export several million tons per year it certainly can do so. We cannot rule out the possibility that they will; what is ruled out is a good economic motive for it.

There are, however, certain advantages to Russia in continuing some grain exports. First, the markets and marketing procedures are a good deal more familiar and certain for grain than for industrial products that may be newly expanded. Second, grain output can be substantially expanded if the Russians are willing to incur the costs; and expansion of grain production on marginal land is the kind of agricultural project that yields

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to Soviet organizational technique. If the Russians want reliability rather than economy, they may push ahead with expanded grain production. Third, present Russian wheat targets suggest an export surplus even though one might expect them to devote the resources to alternative foods or industrial markets. Fourth, crop variations due to weather may cause the Russians to take out some insurance by keeping their average grain production above normal, opportunistically, disposing of the frequent surpluses abroad. Finally, from the point of view of strategic self-sufficiency, collectivized grain farms are more reliable than meat and dairy production, being more amenable to control and less subject to damage from disorganization.

It is also important not to identify grain with agriculture. The Russian agricultural problem may indicate grain exports and imports of meat, butter, cheese, and other foods that prove less responsive to Russian governmental techniques. Our conclusion, therefore, should be interpreted to refer to net agricultural exports rather than to grain exports. Thus the longer-term prospects may be more favorable to the Danish butter trade than to the British and Italian shipyards and engineering industries. (The dark cloud to Danish butter producers is more likely margarine produced with Chinese soy beans and peanuts.)

Lumber and timber and their products also seem unlikely of greatly expanded export in the future. Production is barely recovered from the war now; expanded production would require heavy investment in transport and other facilities. Furthermore, construction demand within Russia is large and will stay large with the growth of urban populations, and improvement and expansion of railroad track mileage will also make heavy demands. Location in relation to transport will continue to account for some export of timber products, but no serious enlargement of East-West trade seems likely on the basis of expensive increases in timber extraction.

Since overall Russian trade with the West is currently small in relation to Russian production, significant percentage increases cannot be ruled out. Miscellaneous raw materials and industrial production, as well as some production of agriculture, could account for several hundred millions of dollars of additional exports in the future. But with the exception of capital goods to be discussed below, the present structure of Russian resources and Russian production suggests no dramatic increases in trade; and even if Russia is to emerge eventually as an exporter of industrial products there is a dry spell ahead for many years in which the economic advantages of greatly enlarged trade will not be great. A stable Russian market for machinery and equipment should not be expected. The Bloc will import items of advanced technology, items desired in too small numbers to warrant domestic

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production, items needed during an interim in which Russian production is expanding, etc.; but it will not for long import such items as ships, which require resources of the kind becoming comparatively more cheap and less scarce in the Soviet Union.

(The demand for imports of advanced technology is only very partly met by information and blue-prints alone. Prototypes are not mainly important for copying, they are important for experimental use, testing, adaptation and modification, design of ancillary equipment, and further research and development. If prototypes are obtained these related processes can proceed at the same time as the new item is being developed for indigenous production; if only blue-prints are obtained, experience and further design has to await completion of the first model. The importance of jet aircraft engines imported by the Soviets several years ago is probably best understood in these terms. What was needed was probably not some physical models to copy, but a sufficient number of engines to permit the Russians to proceed with airframe design and all the other processes that require continuous experiment and testing with live engines. Redesigning the engines themselves would be a major reason for having physical models on hand. We should consequently expect a continuous demand for items embodying new technology, even when complete specifications are freely available.)

SOVIET SELF-SUFFICIENCY

The Soviet objective of self-sufficiency is frequently adduced as a continuing limitation on East-West trade, as well as a limitation of the effects of export controls to weaken the Soviet economy. The distinction is not generally made between wartime self-sufficiency as a strategic objective and peace time self-sufficiency as a political or bureaucratic objective; presumably both are intended. In projecting these objectives into the future, several important qualifications should be kept in mind for East-West trade purposes.

First, strategic self-sufficiency in the sense of maximum preparedness for isolation or war does not imply a lack of trade and may even imply the opposite. This point is often recognized with respect to imports for stockpile; but it goes beyond that. War time requirements differ from cold war or peace time requirements, and war time ability to use certain goods differs from the peace time ability. Preparation for war suggests overbuilding the kinds of industries that otherwise have to expand in case of war, and relying on outside sources for the goods that would not or could not be consumed in time of war. Thus a posture

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of preparedness might contain a deliberate pattern of permanent trade.

Second, imports are not the same thing as "reliance" on imports. It may, for example, be cheaper to build production capacity or extractive capacity for certain raw materials and hold them in stand-by while importing, than to use fully the facilities that are built for strategic purposes. It is time enough to mine the low grade ores when war comes, without expensively mining them for practice during peace time.

Third, with an appropriate degree of insurance in the form of stockpile, some risks of unexpected war may be justified by the economies of continuing trade. Reliance on trade as a marginal source of certain commodities can be afforded as long as imports remain a manageable fraction of total consumption.

These considerations may not have been of concern to the Russians at a time when they were underbuilt in the industries most relevant to war. They are now on the threshold of the opposite stage and their attitude may change accordingly. Furthermore, the exploitation of satellites may be teaching the Russians how to take advantage of trade with an augmentation rather than diminution of their internal economic strength. The fear of reliance on foreign countries can now--as far as economics is concerned--give way to a desire for tributary sources dependent on the Soviet Union. What remains may be a doctrinal or bureaucratic prejudice against trade but not one that is bolstered by strategic, economic, or political necessity.

Soviet doctrine has not been favorable to the active use of trade for economic ends, except the ultimate end of independence of trade. Is it likely that this traditional and strongly embedded doctrine will be overcome? The important question here is not whether external propaganda will be flexible enough to make the Soviets appear as constructive and peaceful traders, but rather whether continuous external trade will be viewed in a new light by the Soviet authorities themselves. Perhaps even more important is whether a change in the doctrinal approach to trade will actually work itself into the methodology of Soviet planning and the bureaucracy of Soviet economic controls.

Two factors in the present situation are likely to ease the problem of revising traditional doctrine. One is simply the growth of Russian industrial power, which substantially reduces the sense of industrial inferiority that must have embarrassed Soviet authorities since the beginning of the regime. The Russians have been parading both their technological and their industrial strength for some years now, and are even talking of

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inviting tourists in the near future. The urge to isolation that was inherent in an economic inferiority complex is apparently breaking down, and it is not unlikely that an urge for industrial prestige will take its place. Russian interest in recent trade fairs around the world certainly suggests this.

Second, the economic trend in the Soviet Union will be toward increased trade with the underdeveloped areas of the world, where economic "reliance" would at least not involve reliance on serious potential enemies. This trend is furthermore consistent with the strategic argument mentioned above.

In any event, a change in doctrinal attitudes is required, and the change will have to be explicit if it is to work itself into Soviet economic planning. Indications of changes in internal doctrine would be more significant than external propaganda in indicating the likely importance of Russian intentions to make a permanent place for trade in their economic plan.

THE LONG-TERM IMPACT OF TRADE CONTROLS

Assuming that a prejudice continues against trade--except as a political weapon--to what extent will the Russians progressively eliminate the specific shortages in their own production that make trade desirable? Recent estimates of the impact of trade controls have stressed the ability of the Russian economy, in the space of three or four years, to develop the capacity to produce nearly everything that they now import and could not readily do without. This conclusion applied both to machinery and equipment and to metals and most other raw materials.

What that estimate left out of account, and what seems worthy of considerable research, is the future tendency of the Russian economy to generate new shortages as it grows in both volume and diversity. Today's equipment shortages may well be filled from indigenous production within a very few years if they cannot be filled from outside sources; what other kinds of equipment will be scarce in the Russian economy that results when Russian industrial growth is projected another half dozen years ahead? What raw material shortages will occur in the next half dozen years if Russian industrial production rises by another 40% as the ORR projections show it rising between 1951 and 1957?

The question is not one of the absolute bottlenecks to develop; there is a presumption that the severest shortages are manageable with advanced planning. The question is rather one of how great in magnitude are the potential gains from trade, as

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distinguished from complete self-sufficiency, as Russian industrial momentum carries it to higher and higher consumption levels of raw materials and as hitherto neglected industries attempt to expand? Even a country that is bent on the rapid attainment of self-sufficiency may--if it grows rapidly in size, diversity, and technology--generate new imbalances as rapidly as it eliminates the old ones.

This is an area that seems insufficiently studied. Perhaps there has been too much tendency to search for an Achilles' heel which probably does not exist, and too little attention to trends that may have important implications for Russian commerce with Asia, Africa, Latin America, as well as with the industrial countries of the West.

THE DYNAMICS OF CAPITAL GOODS PRODUCTION

It is one of the paradoxes of capital goods production that, when a backlog deficiency of equipment is filled, the bigger the backlog to begin with the greater the excess capacity that may result at the end of the process. The key to this paradox is the durability of capital goods; while food production, for example, is related to current food consumption, production of durable equipment is related to the growth of the stock of capital.

When a severe deficiency exists for a particular kind of equipment, it may be essential to double the stock of equipment in a very few years, after which it will grow at a more "normal" rate. The industry using the equipment will show rapid increases followed by a slower increase; the industry producing the equipment will show an absolute decline in production once the backlog is made up.

In general, the drop off to a normal growth rate will be the greater, the greater the initial backlog, the faster it is made up, and the more durable the equipment (i.e. the lesser the eventual replacement rate in relation to the total stock). Careful planning could prevent the drop off, by stretching the deficiency over a long enough period of time; this would reduce the facilities required during the interim. But this would not be good planning, if the deficiency is a serious one to the economy; in that case, the cost of overbuilding the particular equipment industry would be justified by the urgency of requirements.

This principle is the same one that gave rise, in the United States during World War II and the Korean War, to "rapid amortization" of facilities for tax purposes. When a deficiency of military equipment is to be made up rapidly, production levels

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must be expanded to a rate that cannot be indefinitely sustained, and the resulting excess capacity is justified by the urgency of demand for short-run output.

This phenomenon is not only related to initial backlog deficiencies but also to disproportionately high growth rates in individual industries. If electric power, or petroleum refining, or metals production, is to grow at a disproportionately rapid rate for a temporary period and then proceed in a proportion to the rest of the industrial sector, the demand for equipment by that rapidly growing industry may drop off in absolute terms when the industry itself simply shifts to a lower growth rate. Growth of electric power output by 15% for several years and 7% thereafter implies a 50% reduction in the demand for new generating equipment.

The principle is seldom clear cut in practice. Replacement of obsolescent equipment can usefully occur when the rate of expansion falls off. In some industries, continued application of equipment saves costs and replaces labor. And in most cases, the facilities producing equipment can be converted to the production of something else that continues in strong demand. Thus the question is not a sharp one of whether completely idle capacity appears at a certain date; it is whether production for export becomes fairly suddenly economical right after a period of fairly acute domestic shortage. British experience in the engineering industries during the last three years presents an illustration. The question is whether the Soviet economy is beginning to present, or will shortly present, a similar picture in important lines of capital goods production.

Certainly the conditions are present in Russia under which one would expect this. Huge backlogs of particular kinds of durable equipment existed after the war; many industries are rushing ahead at a disproportionate rate of growth that can obviously not be sustained indefinitely to any advantage. And it must be stressed that planned economies are not immune to this phenomenon, since the objective of planning is usually not to avoid excess capacity but to get equipment in a hurry even at the expense of overbuilding an equipment industry in relation to subsequent demands on it.

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EVIDENCE OF EMERGING EXPORTABLE SURPLUSES OF HEAVY CAPITAL GOODS IN THE SOVIET UNION

There is already evidence that exportable surpluses are developing in certain lines of Soviet capital goods production. By "exportable surpluses" is meant, of course, potential output for export; the likelihood of actual export decisions cannot be deducted from production estimates alone.

The clearest case of production capacity beyond current Soviet needs is in the field of railroad equipment, both locomotive and railroad cars. This equipment is, of course, extremely durable; annual replacement requirements are necessarily small in relation to the requirements for rapid expansion. Furthermore, limitations of track and maintenance facilities are limits on the cumulative demand for locomotives and cars.

The Russians ended the war with a large backlog requirement for railroad equipment. Production was virtually absent during four years of war; and traffic requirements are greater at the present time than they ever were before the war, particularly with the increase in coal and steel production. But as a result of the backlog demand and the importance of transportation in the Soviet economy, production of locomotives and freight cars has been exceedingly high during the last few years. Present production levels could not usefully be sustained for any length of time in the absence of a major expansion of track mileage, and no comparable expansion is taking place.

Russian production of railroad cars in 1951 reached 2/3 of the highest production rate registered in the United States after the close of World War II (calculated in terms of railroad car capacity; in number of cars it is substantially greater than any U. S. production of the last 30 years.) This production rate is above the average U. S. production of railroad cars for the last thirty years; and the U. S. has nearly four times the track mileage of Russia. Not only is Russian production high in relation to U. S. production, and tremendously high per mile of track compared to U. S. production, but it looks as though it would lead to a storage problem for unused cars within a matter of years. A somewhat similar picture seems to be true for locomotives. Traffic actually carried is estimated for 1951 at 50% above the pre-war (1941) peak.

As a matter of fact, there is evidence that production of railroad cars began an absolute decline in Russia by 1951, indicating by that time the emergence of some excess capacity. There is some evidence that locomotive plants were being converted to other uses during recent years.

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It seems therefore beyond question that production capacity for locomotives and freight cars currently exists beyond the needs of the near future. The capacity could of course be converted to other use, or could be left practically idle and the man power and materials switched to other uses. Nevertheless there are conversion costs in switching to alternative production; and a substantial part of production costs are already sunk in existing plant and skill; there is consequently considerable advantage in continuing production with part of the output going into export. In value terms, the order of magnitude involved in exportable surpluses may well be 100 million dollars per year.

There is similar evidence with respect to trucks. A simple comparison of trucks on hand in the Soviet Union with trucks on hand in the United States suggests demand in the U.S.S.R. capable of absorbing several times current production indefinitely. But this simple comparison ignores the extreme limits imposed on trucks in the Soviet Union by absence of roads, the difficulty of developing roads, the organization of trade, the lesser role of consumer goods, etc., in the Soviet Union, and the tendency for existing plants to be served by railroad sidings. The present output of some four hundred thousand trucks per year may be the most that Russia can usefully absorb, even with a high replacement rate due to adverse driving conditions and lack of maintenance facilities.

There is an interesting piece of evidence to support that view. Compared with an estimated realized 375 thousand trucks in 1951, the present Soviet plan is only to produce 420 thousand in 1955. The implied annual growth in production is only about 2½% per year. Capacity considerations in the vehicle industry could hardly be a reason for holding production to such a gentle rise. In the five years previous to 1951 production rose approximately four fold, to an output approximately double the pre-war rate production. The strong suggestion is that (a) production could be increased substantially beyond the plan as far as any specific limitations in the vehicle industry are concerned, and (b) domestic absorption beyond current levels is not strongly desired by Soviet planners.

In view of the fairly short service life of vehicles in the Soviet Union, and the fact that road development will probably move forward rather than backward, production for domestic use will surely not fall off and in fact will continue to grow. Nevertheless there seems to be no specific limitation on the export of vehicles, and the development of an export of 50 thousand units per year at a value of over 100 million dollars would seem achievable if the Russians were interested.

It is interesting to notice the same comparison between realized 1951 production and planned 1955 production for tractors. Estimated production in 1951 was 116 thousand units; planned production in 1955 is 126 thousand units, an annual increase in the rate of production of about 2%.

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Whatever the accuracy of the production estimate, there is clearly a trend toward tapering off toward a production plateau after a rise from zero production during the war years to a level approximately equal to the peak pre-war production. The coincidence of this plateau with the pre-war peak might suggest the effect of pre-war capacity limitations on the production plan. But this seems a doubtful explanation. The original pre-war capacity was all developed within the space of six years, and investment requirements for expansion are not large in the truck or tractor industry.

What, though, in the case of tractors would limit useful absorption by Russian farms? Is there anything analogous to the railroad track limitations or the road limitations that prevents indefinite useful expansion of railroad equipment and trucks?

No such limitations are apparent; all the evidence is that substantial tractor requirements exist in the Russian countryside without bottlenecks to their use, and that replacement requirements are heavy as the result of poor care and maintenance. But there are two explanations left. One is that the Russians are counting on an inventory of, say, a million tractors with a life span of eight years and calculate the present production rates will achieve that progressively over the next five or six years, and that additional tractor production now, though shortening that period, would be excessive to replacement and growth requirements thereafter. The second is that tractors serve mainly the purpose of displacing farm labor, and that the ability of the industrial sector of the Russian economy to absorb additional labor is sufficiently limited to make such displacement a relatively low priority objective. If the second condition exists, the plausibility of the first is increased.

These figures on trucks and tractors do not, of course, directly suggest that the Russians are thinking of substantial exports. What the figures do demonstrate is a certain ease of making trucks and tractors available for export without serious interference with Russian plans. The truck and tractor industries are expandable; trucks and tractors seem from the figures to be ~~being~~ accumulating at a satisfactory rate from the Soviet planning point of view; and either increased production or reduced domestic absorption seems readily able to make room for exports.

Machine tools should reflect this same phenomenon in the near future if not already. The production of machinery and equipment is limited not by the current production of machine tools but by the inventory of machine tools on hand, i.e., by the accumulated total of machine tools produced in the past. Some allowance must be made, of course, for replacement needs, for machine tools located in the wrong places, and for specialized tools that have served some original purpose

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and cannot be transferred to other uses. But in general machine tools are extremely durable, reasonably transferrable, and highly versatile.

The rapid rise in the Soviet output of machinery and equipment in general was accomplished during the last few years by the use of machine tools that must have been on hand during those years. With some allowance for replacement, it could be expected that the same rate of increase could continue with the machine tools capacity on hand. For example, according to ORR, machinery and equipment production rose by approximately 120 index units between 1947 and 1951. (An index unit refers to 1% of 1948 production.) 1947 production was itself nearly at the peak level reached in the 1930's; and the increase over 1947 was nearly 200%. In other words, during that four year period, machinery and equipment production rose each year by an amount equal to approximately 25% of 1948 production. The projected increase to 1957 is a lesser increase per year than was realized during the four years preceding 1951.

The implications for machine tool demand cannot of course be derived with any accuracy from such a composite total of machinery and equipment production. Nevertheless, the following calculation is of some illustrative value. Assuming that machinery and equipment production requires a proportionate inventory of machine tools, the lesser rate of increase in production of the former projected for the period 1951-7 would mean an absolute decline in machine tool production. In other words, the decreasing annual increment in the level of production of machinery and equipment would imply decreasing annual additions to the stock of machine tools and hence (with allowance for replacement) decreasing annual production of machine tools. And, incidentally, the decreasing production of machine tools would tend to be somewhat greater than implied by the diminishing rate of increase in machinery and equipment production because of the elimination of demand by machine tool industries for part of their own output.

Somewhat the same should be true of metal working machinery in general.

These comparisons are much too crude to prove anything. But they suggest something important. It is instructive to recall what happened to the demand for machine tools during the period from 1950 to 1953. All through 1951 and 1952 production of the metal goods industry in the U. S. and Western Europe was expanding rapidly, and the demand for machine tools caused an immediate severe shortage. This instantaneous demand for an enlargement in the stock of machine tools on hand caused order books to be filled for up to 24 months ahead. But by 1953 distress was being felt in machine tool industries both here and abroad, and this distress became substantial in 1954. The same phenomenon occurred during World War II in this country. The general history--perfectly consistent with the logic of machine tool demand--has been one of machine tool

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shortage whenever metal goods productive capacity underwent a disproportionate expansion relative to the rest of the economy; and machine tools became surplus when the industries using them leveled off at a higher plateau or a reduced rate of expansion.

It is interesting now to notice what has happened to estimated machine tool production in the Soviet Union. According to ORR it rose fairly rapidly until 1949, at which time it was 1/3 higher than the peak reached in 1939; then it rose slightly less rapidly to 1950; and then strikingly less to 1951. After increasing by 28 index units in 1947, 19 in 1948, and another 19 in 1949, it rose by 14 index units from '49 to '50, and it only rose by 4 index units between 1950 and 1951.

A number of explanations for the sudden cessation of rapid growth of this industry would be possible, of course, including simple errors in the estimates. Nevertheless, levelling off (or even an absolute decline) is precisely what one would expect by looking at those other production indexes that relate to machine tool requirements. (Incidentally, the substantial continued growth of the machine tool industry projected by CIA would be contradicted by the conclusion reached here about the demand for machine tools, but would not be in conflict with the implied capacity for further machine tool production.)

Unquestionably there are many kinds of machine tools whose production is still unsatisfactory in the Soviet Union and machine tools are not so homogeneous as to permit reliable analysis based on an index of the total. But it is hard to escape the conclusion that a very substantial range of basic machine tools are in reasonably easy supply in the Soviet Union.

The above examples cover only a part of Soviet capital goods output. Many kinds of agricultural machinery might fall in a similar category. But, too much stress, however, should not be placed on this tendency for a rapidly growing economy to generate specific surplus capacities. These provide the more dramatic possibilities of export production, but perhaps tend too much to imply that surpluses of some sort are a condition for exporting. What is more generally pertinent is the fact that equipment and machinery output in the U. S. S. R. has been growing at a rate out of proportion to the growth of the economy as a whole, that this disproportion is logical for a limited period, or perhaps an extended one, but that a result of it is a steady increase in the advantage of hard goods production for export, relative to the effectiveness of labor devoted to other kinds of production. Production of construction and earth-moving equipment, for example, is unlikely to become excessive to Russian needs in any absolute sense; but the rapid expansion of this industry, coupled with the realized rate of construction in the Soviet Union suggests that recent offerings for export could be fulfilled without special difficulty to the Soviet Economy, and also that further increases in production for export would

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not be difficult to achieve. Obviously the rate of construction cannot increase at anything like the rate of increase of the construction equipment industry; and high priority needs for the equipment cannot last long.

The credibility of the proposition advanced here, and an assessment of its quantitative importance, requires a much more comprehensive survey than has been possible to undertake in connection with this paper.

Two kinds of analysis must go into any such attempt at a more comprehensive survey. First, estimates of production and present stocks must be made. These estimates would be neither new nor peculiar to the present problem, although the orientation of analysis toward the export question might involve some shifts in emphasis or attempts at breakdowns that have not been considered warranted so far. The second kind of analysis is inherently more speculative, related to the "demand" side of the equation. This kind of analysis probably requires not only "projection" of various sectors or industries of the Soviet economy but also comparative studies of other countries that have displayed similar characteristics on which substantially better information is available. Study of post-war recovery of certain Western European countries, particularly West Germany, should be able to provide not only some indications of the kinds of items whose supply in the Soviet Union will ease appreciably in the next few years but also a notion of their quantitative importance, of the ease or difficulties of converting facilities, etc.

Additionally, up-to-date study of the composition of Soviet bloc trade, both actual trade and what is contemplated in trade agreements, will undoubtedly yield a number of specific indications of commodities deserving analysis from this point of view.

No amount of analysis will make it possible to forecast the volume and composition of Soviet trade with any accuracy. That cannot be done even for a Western country on which we have adequate information--not even for the United States. What can be hoped for is an informed judgement of the magnitudes likely to be involved, and a sufficient identification of the most important items themselves to permit country analysis of the most important potential trading partners to see the likely extent of the Soviet appeal.

In summary, the most that the present paper has been able to present is--it is hoped--provocative evidence that "capital shortage" in the Soviet Union is not necessarily an obstacle to capital goods exports, and that the latter is a highly promising candidate for Soviet export activity in the immediate future.

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THE MEANING OF EXPORTABLE SURPLUSES

Whenever an industry's productive capacity is expanded beyond current demand for its output, it is tempting to say that an exportable surplus exists. And when it appears that an industry could readily be expanded for export, it is tempting to say that an exportable surplus could easily be achieved. The concept of an exportable surplus is deceptively simple.

Excess capacity does not have to be used. Even if it exists, say, in the locomotive industry, locomotive production for exports still require labor, fuel, steel and other materials, electric power, transportation, and all the other costs that go into production. Furthermore, a little bit of excess capacity may allow a margin of economy, permitting less intensive use of plant and equipment, disuse of the most obsolescent equipment, better maintenance of equipment, etc. Thus the use of excess capacity to produce for export not only involves all the costs other than overhead costs but may even be more costly than the average cost of production. The desirability of producing for export is consequently far from obvious.

Furthermore, the "demand" for output is not likely to be sharply defined even in a rigidly planned economy. The remaining demand becomes progressively less urgent if the higher priorities are met, but there is seldom an abrupt limit to the economy's ability to absorb further output usefully.

Finally, facilities can be converted. Locomotive factories can produce tanks or tractors; tractor factories can produce trucks, etc.

Nevertheless, the relative advantages of exporting substantially increase as excess capacity begins to appear. Or, to put it negatively, the reluctance to export, which may be strong when requirements are urgent and capacity is strained, may disappear when production for domestic use begins to slacken off. The desirability of exporting still depends on comparison of export costs with the internal value or usefulness of what can be imported with the earnings (plus, of course, any non-economic factors involved in trade policy); but when production begins to slacken off, there is some presumption in favor of exporting, since the overhead costs of export production are largely sunk, since conversion of the plant for some other use involves extra cost, and since there are certain disorganizations and lapses in production involved in either switching the plant to alternative production or moving some of the labor out and diverting materials to other uses.

What can be concluded, then, from these emerging trends in Soviet capital goods production is a strong and suggestive possibility

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of export. Taken together with continuing difficulties in agricultural production and a possible desire for increased imports of consumption goods, some of these possibilities become strong probabilities.

STRATEGIC CONSIDERATIONS IN CAPITAL GOODS EXPORTS

It would be to the strategic advantage of the Soviet Union to develop exports of machinery and equipment. First, this is the kind of production that is most relevant to war potential. Balanced production in relation to the country's own consumption needs is less conducive to war-time self-sufficiency than unbalanced production. The strategic policy for the Soviet Union should be to overbuild the hard goods industries, using them for export, and underbuild its production potential in those kinds of goods that would not be consumed anyhow in case of war. If, for example, consumption is to be increased in the absence of war, the occurrence of war would certainly lead to a cutback in consumption levels. Partly this would reflect the austerity that goes with war, and partly it would reflect the inability during war to use certain kinds of consumer goods because of transportation bottlenecks or unavailability of necessary auxiliary goods.

The exchange of construction equipment for tea, tobacco, fruit, meat, and industrial raw materials for consumer goods, would be a strategic policy for the Russians to follow, by comparison with diverting investment resources to enlarged output of quality foodstuffs or the extra raw materials that would go into enlarged production of consumer goods.

Second, the prestige and propaganda effect in under-developed countries of capital goods exports from the Soviet Union would be appreciable. It would strongly suggest that Communism in Russia was "over the hump" and that Russia had become a mighty industrial nation capable now of supplying heavy capital goods to other parts of the world.

Third, if Russia is interested in developing close commercial relations with the under-developed countries of Asia or the Middle East or even Latin America, exports of machinery and equipment would find a much better market than most of Russia's traditional exports. The relation of these developments to the problems of China is dealt with below.

LIMITATIONS ON CAPITAL GOODS EXPORTS

The Russians have not been exporters of capital goods and generally lack experience in selling machinery and equipment abroad.

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It takes more than available supplies to be a successful exporter. Contacts and confidence must be obtained, quality must be satisfactory, and design must be suitable. It seems likely that in most areas the Russians would have to overcome substantial skepticism about Russia's ability to fill the orders with quality products and provide spare parts, replacements, etc., in the future. Furthermore, in quality terms Russian equipment will probably be substantially less attractive than American or West European products.

Nevertheless, the Russians have certain advantages over their competitors in their trading techniques. The ability to negotiate imports against exports is one that the Western industrial countries have been progressively giving up during the last several years, with steady diminution of economic controls, trade and payments discrimination, etc. Furthermore, the Russians have fewer administrative, legal, or philosophic objections to outright dumping techniques, tie-in sales, etc., and could engage in very effective price competition if they once decided it were necessary in order to establish themselves in export markets.

The Russians must also reach decisions and incorporate them in their plans, and in some cases take a risk that their own needs may rise unexpectedly and compete with their export commitments. There is nothing necessarily difficult about this, and nothing that seems incapable of being overcome by the granting of appropriate authority and priorities to the appropriate ministries. Nevertheless, a change in attitude would be required and might be slow and laborious in taking place.

RUSSIAN TRADE WITH THE NON-INDUSTRIAL COUNTRIES

The most important implication of the trends discussed above is the likelihood for enlarged trade between the Soviet Union and the undeveloped or agricultural countries of the world. Several trends converge on this likelihood.

The development of capital goods exports clearly aims in the direction of the underdeveloped countries.

The industrial countries of the world are unlikely to provide satisfactory markets for machinery and equipment for a number of reasons, including the quality and design disadvantages that would attach to Russian products. While some prejudice exists in the underdeveloped countries in favor of latest models of equipment, the technological advantages of modern improvements are of comparatively less importance in those areas where labor is cheap, comfort and safety are of less value, and complexity of design causes maintenance problems. Furthermore, many underdeveloped countries have

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a sufficient prejudice against colonial dependence on the traditional exporters of capital goods to make an alternative source of supply rather welcome. And in those areas the Russians could follow a pricing policy of a highly competitive sort without incurring protectionist opposition.

On the import side these are the areas where many foodstuffs and industrial raw materials (fibers, hides, vegetable oils, etc.) are to be obtained. If consumption levels are to be allowed to rise in the Soviet Union, one of the most effective and economical ways for the government to bring this about is to permit enlarged consumption of tea, tobacco, cocoa, fruits, and other tropical and semi-tropical foodstuffs that can be grown in the Soviet Union only with difficulty if at all--unless they are considered dangerously "habit forming" by Soviet authorities. Even more important will be imports of meat, fats, and oils. These are the kinds of items in which Russian consumption is most deficient; and livestock products have been least amenable to Soviet production efforts. Furthermore, expansion of textile production would necessarily constitute a major part of any increased production of consumer goods, and if it occurred in the near future would almost certainly outstrip wool and cotton availabilities in the Soviet Union. (Incidentally, if Russia were to raise consumption of tea, coffee, cocoa, spices, fruits, etc., to the levels of the poorest Western European countries--Greece and Portugal, or Italy and Austria--literally hundreds of millions of dollars of additional imports would be required.)

In this connection the recent Soviet-Argentine trade agreement seems particularly significant. Argentina imports substantial quantities of capital goods and can export substantial quantities of meats, wool, hides, and vegetable oils. It practices sufficient control of its trade to permit conclusion of long-term agreements. Even if only for bargaining purposes, it undoubtedly would like to develop trade with a competitor of the British. Finally, in spite of apparent ideological differences, the development of close commercial ties with an important Western Hemisphere country would be of political advantage to the Soviet Union.

The provision in that agreement for Soviet financing of 30 million dollars worth of capital goods on credit looks like the first in a series of logical steps by the Russians to capture a part of world markets for machinery and equipment. The credit device is a familiar competitive one among non-Soviet capital goods exporters. While there is a lack of any evidence yet that this line of credit is being successfully used, skepticism on the Russian willingness to make machinery and equipment available seems optimistic. On the contrary, the Soviet-Argentine trade agreement may signal the entry of Russia into a new phase of world trade.

Most recently, the financial agreement signed a few weeks ago by the USSR and Uruguay is reported to contemplate \$20 million per year of Soviet import of meat, hides, and wool, with Soviet

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exports including machinery and equipment as well as other industrial goods and fuels.

Aside from the degree of complementarity that may exist between Russia and the less developed countries in relation to external trade, there would be strong political advantages to Russia in enlarged commercial relations with countries like Egypt, India, Argentina, etc. Trade is ordinarily a vehical for closer political relations; negotiated trade including long-term commodity arrangement and Russian determination to make the most of commercial relations may be even more potent. The development of a routine pattern of trade consultation, the exchange of trade missions, the development of vested interests in the countries depending on either import or export trade with Russia, the opportunity and excuse for greater propaganda activities, etc., all seem to be attractive to Russian foreign policy. In fact, a strong effort to provide capital goods, a willingness to sign some long-term import agreements, and perhaps a technical assistance program of modest cost, might serve to transfer a good deal of economic initiative in those areas away from the United States and Britain toward Russia. Russian willingness to sign long-term import contracts for raw materials, such as rubber, cotton, jute, etc., may be a key to preferential treatment for Russian exports of hard goods.

From an economic warfare point of view, the danger is not that Russia will damage its trading partners. The danger is exactly the opposite, that Russia will establish trade relationships that are quite satisfactory to the trading partners that reduce or partially replace, or at least offset, the commercial and other ties between those countries and the major western countries. (Whether such a development deserves to be called a "danger" is discussed below.)

A "trade offensive" of this sort may not be the most expeditious way for Russia to bring underdeveloped countries into the Soviet bloc; but it is a highly effective way of keeping them neutralized, of "normalizing" relations with them, of increasing the basis for political and propaganda activity, and developing some economically advantageous trade at the same time.

No single one of these arguments by itself is very conclusive. It is far from sure that the Russians will want to develop capital goods exports. It is not certain that higher consumption levels in Russia will include the kinds of foodstuffs and other raw materials that Asia, the Middle East, and Latin America produce, even though that is what the Russian consumer might want most badly. And Russian plans for the conquest or neutralization of Asia, the Middle East, and Latin America, may envisage nothing so patient and civilized as the progressive development of trade. But together these factors seem to point toward a strategy which must consequently be judged highly probable.

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IMPLICATIONS FOR CHINESE TRADE AND DEVELOPMENT

The above analysis implies two conclusions about the position of China in relation to the Soviet bloc and to the West. The first is that a substantial degree of complementarity exists between the Chinese and the Russian economies, with wide scope for economically advantageous trade between them. The second is that China will probably depend on the West more for markets in which to sell Chinese exports than for the supply of capital goods needed in Chinese industrial development.

Chinese industrial development will require large amounts of machinery and equipment from outside China. Aside from the possibility of grant assistance from the Soviet Union, which does not seem to be forthcoming on an effective scale, China must mobilize an export surplus, largely of agricultural origin, in order to import machinery and equipment. China thus presents an analogy to the Russian position during the last three decades, in which machinery and equipment were acquired by the export of grains, timber, and raw materials. But this analogy falsely suggests that China and Russia continue to have similar problems, and that Russia would be unable to sell capital goods, having difficulty itself in obtaining them from the Western world. What the above analysis suggests is that Russia, though continuing to find imports of machinery and equipment advantageous, will find exports of certain kinds of machinery and equipment relatively easy and economically desirable. It seems likely--and the railroad equipment, trucks, tractors, etc. mentioned above partially confirm this--that China's present requirements are largely for the types of capital goods which have moved or are about to move into easy supply if not excess capacity in the Soviet Union. There would undoubtedly be important exceptions; but the considerations discussed above suggest the possibility of at least substantial trade, in capital goods against foodstuffs, with mutual advantage to Russia and China, even if a significant portion of Chinese requirements fall outside this category.

Not only will China have substantial requirements for the kinds of capital goods that will be available in Russia, but a large portion of Chinese exports appear highly suitable to Russian import needs. In 1936-38 substantially more than half of China's exports were agricultural; nearly fifty percent were foodstuffs. Exports now to other bloc countries are thought to be very largely agricultural, with a heavy emphasis on oil bearing seeds, beans, and nuts.

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The relevant question is not whether the Russians are willing to trade capital goods for an improvement in diet. The question--answered affirmatively by the above analysis--is whether Russian requirements for such foodstuffs can be more readily met by producing tractors, railroad equipment, machinery, etc., than by allocating manpower and investment to livestock and dairy production at home. (There is also the question whether Russia would consider an overbuild hard goods industry and a deficit in domestic production of luxury foodstuffs to represent a superior situation of "self-sufficiency" than a production structure in better balance with peacetime domestic consumption.)

Furthermore, the development of heavy Russian industry in Eastern Siberia and the enlargement of population in that area enhances the value of trade with China. Eastern Siberia will be a food deficit area in spite of any expensive efforts to develop local supply. And transport from China can take advantage of the tendency for railroad cars to return empty from East to West.

There is substantial scope for North-South traffic between China and the east coast of Siberia, as illustrated by shipments of coal and iron ore that have already taken place. China could be an important source of raw materials for the Far Eastern area of Russia.

Whether both China and Russia will wish to exploit these possibilities to the maximum cannot be answered on economic grounds; but the possibility of such continuing enlarged trade should seem attractive.

This complementarity should not be pushed too far as a basis for predicting the profitability of trade between Russia and China; the main point contained in it is the ease with which Russia could make available much of China's capital goods requirements, and the probable gain to Russia of accepting agricultural production in exchange. The magnitude of non-military hard goods that the Chinese might manage to import with their export earnings has been estimated by OIR at about \$400 million per year; this overall magnitude hardly seems unmanageable for the Soviet Union to supply. So far, it must be admitted, there is evidence of Chinese dissatisfaction with the supply of capital goods from the Soviet Union.

Meanwhile, there remains a substantial part of Chinese exports that cannot usefully be absorbed by the Soviet bloc. Unless most of their value is to be lost to China, these must be sold to the West. The fraction is difficult to predict because of inadequate knowledge of China-Bloc trade (which accounts for 70% or 75% of China's trade today) and because China is in a rapid transition which began from a situation that had not been normal for 15 years. But a number of industrial raw materials of which bristles and tung oil are the most familiar examples could hardly find bloc markets comparable to those formerly enjoyed in the West.

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But exports to the West and imports from the West should not be too closely identified. The foreign exchange received by China would be highly useful to the rest of the Soviet bloc. Failure of China to acquire needed goods from the West could lead to Chinese purchases from the rest of the Bloc, the latter acquiring foreign exchange to procure additional goods for themselves.

The problem of denying China access to capital goods, metals, and other raw materials is therefore not just a problem of denying China access to Western supplies but also denying China access to supplies from Russia, Czechoslovakia, etc. This can only be accomplished by denying China useful foreign exchange to spend in the Bloc, i.e., by action against imports from China as distinct from action against exports to China.

The point may be illustrated by an artificial example. Suppose China were incorporated into the Soviet Union. If the Russians obtained several hundred million dollars of foreign exchange annually from exports grown or extracted in China, and if their plan called for installing an equivalent amount of capital goods in China, would they provide the capital goods from Soviet production and use the foreign exchange for their own requirements, or would they procure abroad the particular capital goods to be installed in China? The thesis of this paper is that they would largely do the former.

China is not, of course, incorporated into the Soviet Union and there are strategic, political, and bureaucratic reasons why the actual outcome will be substantially different. Nevertheless the hypothetical example indicates the economic pressures that will be operating.

Import controls against Chinese goods would be unnecessary if export controls against both China and the rest of the Bloc were sufficiently rigorous to take most of the value out of foreign exchange earnings. But as long as the controls allow either China or the rest of the Bloc substantial access to useful goods, it would be hard to keep the Chinese from acquiring the capital goods they need.

The political difficulty with import controls is that they are inherently unselective and must be based on a desire to suppress trade in general and not trade in particular commodities. But import controls do have at least three advantages when the political circumstances permit their consideration. First, they would be easier to enforce because of the distinctive nature of Chinese exports and because the policing of imports rests on the historical fact of origin rather than future intentions.

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Second, by being inherently and all-or-none-measure, they involve a degree of determination and finality that leaves no question as to intentions. They avoid argument over what goods are strategic and just how strategic they are. They avoid the administrative and political difficulties of selections.

Third, import controls against China represents about the only case in East-West trade in which unilateral U.S. action would be of some effectiveness. The U.S. as a source of supply for China is readily replaced by other countries; the U.S. as a market for 100 million dollars or more of goods is far more important. (For certain commodities, import restrictions may already have developed "infant industries" in the U.S. that permanently spoil the market for China. Tung oil seems to be an example.)

An import embargo is aimed, of course, at the whole Chinese economy and not at just a "strategic" portion of it. Whatever the validity of distinguishing strategic from non-strategic trade with the Soviet Union, that distinction has little value with respect to China. In the short run Chinese war potential depends on Russia. In the longer run, it depends on China's solution of its economic problem and the development of its entire economy. There is little sense in aiming at any target in China smaller than the whole economy.

CONCLUSION AND PERSPECTIVE

The foregoing thesis can be summed up as follows.

1. A comparison of industry and agriculture in the Soviet Union, and a study of the limits on agricultural expansion, suggests that Russia is rapidly leaving or has left the status of an agricultural economy and that its future potential is in the industrial field, and that this potential is being rapidly realized. The still low per capita level of total production, and the still primitive nature of many aspects of the Russian economy, do not contradict the relative dominance that industry is acquiring over agriculture in that country.

Enlargement of the area to include the European satellites does not alter this general conclusion.

2. If it were not for Soviet strategy, ideology, and bureaucracy, we should conclude that the country would soon emerge as an exporter of industrial goods and an importer of agricultural raw materials and foodstuffs, even though continuing to import particular kinds of machines and industrial products especially for temporary periods. But self-sufficiency considerations engrained in Russian planning make this development appear doubtful.

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3. The persistence, however, of the self-sufficiency objective should be questioned, since strategic self-sufficiency implies taking advantage of any export possibilities for hard goods and import possibilities for goods that would be dispensable in time of war.

4. The disproportionate growth of certain capital goods industries since the war, stimulated by backlog requirements and gaps in production, as well as by the continued policy of rapid industrialization, points to the likely emergence of production levels in many types of capital goods excessive or at least adequate to the priority needs of the economy. There is evidence that this is already occurring in certain lines. In those lines, any specific reluctance to export based on acute scarcity will soon have disappeared, and these goods will become comparatively soft commodities whose export in return for other goods would be profitable.

5. These trends point to enlarged Soviet trade with the non-industrial or under-developed countries. Any Soviet desire for political reasons to establish strong commercial ties with those countries would be compatible with, and reinforced by, economic developments within the Soviet bloc.

6. Recent developments in trade and payments are consistent with this analysis. They cannot be said at this time to constitute strong evidence, but they are certainly suggestive. Failure of the Russians to make capital goods available during the last few years throws some doubt on the thesis; on the other hand, a fairly rapid change in hard goods availabilities is what the analysis would lead us to expect.

7. With respect to China, the analysis points to substantial room for mutually profitable trade between that country and the rest of the Bloc, with China receiving capital goods in exchange for agricultural produce. Furthermore, the analysis indicates that China may be much more dependent on the West as a market in which to earn foreign exchange than as a source of supply. Export controls alone could be partly offset by triangular trade involving a Chinese import surplus from Russia, while an import embargo would directly reduce China's ability to procure in this fashion from the U.S.S.R. Incidentally, unilateral import embargo by the U.S. would be much more effective than unilateral export controls in respect to China. (This is not, of course, an argument against having both.)

There are three questions to ask about the above conclusions. First, are they valid? Second, if so, are they important? Third, if so, what should the U.S. do about it?

As to validity, the economic trends are much more convincing than the trade conclusions. The development of enlarged trade between the Soviet bloc and the under-developed areas requires Soviet policy decisions and required overcoming bureaucratic obstacles. The economic pressures may not be so strong as to force

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a "natural" development along the lines discussed above. The implied trade pattern may run sufficiently counter to the methods and prejudices of the Soviet bureaucracy, to make it depend on a decision that such trade is desirable on political grounds. Perhaps the best way to characterize the conclusion is the following:

If Russia were to consider the development of significant trade with the under-developed countries important, and were interested in developing formal commercial relations including commodity arrangement, etc., with them, the economics of Russian development are not a constraint but rather an inducement. Even if the political advantages of such a commercial development are not great or perfectly clear, the effort required would probably not be costly but rather economical. The obstacles are bureaucratic rather than economic. An effort would be required, and the Soviet Union would certainly have to accommodate itself to the demands of its trading partners with some pain or expense; nevertheless, the principle cost of such a trade development would be over-coming bureaucratic inflexibility. (To some extent these developments may occur gradually without an explicit decision. Again using the Argentine example, it is either a good example of a policy decision or an excellent example of a natural development.)

Nevertheless, it must be admitted that the foregoing analysis is overdrawn in favor of the general thesis, and consequently serves more to point out a strong possibility than to prove a case.

As to the importance of this development, in terms of the implied volume of trade, the speed with which it might develop, and the extent to which it would yield strategic advantages to the Bloc, it must be admitted that the effect will be more qualitative than quantitative. The threat of lost markets to the Western industrial countries in the medium term future is probably trivial in quantitative terms, as is any corollary danger of lost sources of raw materials (referring, of course, to loss by competition, not by conquest or subversion.) It is similarly unlikely that the Soviet Union will become the dominant trading partner of many, or even any, of such countries. Finally, the development of such trade is not something that will occur over night; a persistent sales and negotiations effort will be required by the Soviet bloc.

The source of concern to the West seems two-fold. First, if the Russians wish to select certain countries for the development of very substantial trade, they might succeed in becoming a major dominant trading partner. The political advantages to Russia, for example, of being the market for more than half of Egypt's cotton would be a case in point.

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Second, the difference between no trade and some trade, or between negligible trade and substantial trade, may provide political advantages out of proportion to the economic magnitudes. It presents the Russians an opportunity to be in constant daily contact with government officials; it helps put inter-governmental relations on a "normal" basis; it puts the Russians in contact with a number of citizens having a vested interest in "normal" relations with the Soviet Union; and it provides an enlarged basis for indigenous propaganda in their favor as well as subversive activities. While it would be alarmist to propose that many countries would develop an active favorable attitude toward Russia as a result of such trade, such commercial relations do help to allay unfavorable attitudes and can reduce the awareness of the Russian threat in such countries. In this respect it probably parallels one of the greatest advantages to the Soviet Union in developing "normal" trade and "formal" trade relationships with the countries of Western Europe; that is, it makes it easier for those countries to forget that a cold war exists.

In its purely economic effects, enlarged trade between the Soviet bloc and the under-developed countries could be substantially beneficial to the latter. It would improve their terms of trade and probably add a measure of stability to their foreign markets. Assuming that such trade would not reach proportions that would put great leverage in Russian hands, we must ask ourselves whether the Russians really are likely to undertake such a "constructive" step in furtherance of their foreign policy.

It is generally assumed that economic instability represents a threat to democratic forms of government and association with the Western allies, and that Communist influence is aimed at increasing such instability in order to exploit it. Is the U.S.S.R. likely to reverse itself and follow trade policies that promote economic stability instead; and, if so, wherein lies the danger to the West involved in Soviet success in this endeavor?

A comprehensive answer to this question would require individual analysis of each country that is a potential trading partner. As a general answer, however, it must be admitted that enlarged trade of the kind under discussion here is alternative to, rather than consistent with, the objective of early conquest or subversion. There is some degree of compatibility between them: trade missions, sales and purchasing agents, etc., can provide a cloak for propaganda or subversive activities. Mainly, however, the political advantages to the Soviets of expanded trade would be relevant to countries in which the prospects for more violent acquisition of influence were poor.

If, for example, the Soviet government believed conquest through subversion or uprising a practicable possibility in Indonesia

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within the next few years, it might abstain from any economic activity in that country that would tend to provide markets or otherwise contribute to economic progress. If on the contrary there is, in the Soviet judgment, little likelihood of early success along those lines, there remains the objective of developing the most favorable attitude on the part of the existing government toward the Soviet bloc and its activities. In that case the beneficial effects to the country concerned of any such expanded trade could benefit Soviet policy. It would be unduly alarmist to propose that trade alone would make Indonesia an ally of the Soviet bloc; it is not unreasonable to expect expanded trade to reduce suspicion and fear. A more precise estimate of the value that this modest objective would have for the Soviet Union in various different countries can only be determined by thorough political-economic evaluation of those countries. The potential advantages of such a policy, especially outside of the most inflammable areas, is sufficient to warrant thorough study, at least of particularly relevant or important countries. Egypt, Indonesia, and Argentina would provide useful case studies.

Finally, what can the United States do about it? Supposing the enlargement of trade between the Soviet Bloc and the non-industrial countries to be likely, and assuming it would carry political advantages to the Soviet Union, what policies are indicated for the United States?

Whatever the complete answer to this question, one thing seems fairly clear: the answer does not lie mainly in the field of "economic defense". Trade developments of the sort pictured above will not be countered by measures in kind. They will not be countered by measures aimed at the Soviet Union, but by measures aimed at the areas and countries concerned. The principal orientation of our policy should not be to prevent such a development of trade, but to assure that it does not achieve disproportionate psychological and political results.

Thus the main policy question raised is not what new control devices are needed but whether our policies altogether are adequate for those areas. In Asia, the most critical area immediately concerned, the question may best be posed as follows. In the race between Communist development of China and non-Communist development of India, the Soviet Bloc will be the main provider of capital equipment and the principal market for China; will Russia be able to exploit the promise of becoming the same for the rest of Asia?

IMPLICATIONS FOR FURTHER RESEARCH

Several specific research objectives are suggested by this paper. Additionally, general research beyond what lies behind this paper would be required in order to document it convincingly and thereby confirm it, or alternatively to contradict it with any finality. The specific lines of research that seem desirable are the following:

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1. Particular attention to the analysis of trade and trade agreements between the Soviet Union and the underdeveloped areas. Beyond that, an attempt should be made to identify those countries that, on political grounds, will be of most concern, in order that a particular watch be kept of trade developments there and some analysis of potential trade developments can be undertaken in anticipation of any actual development of serious trade with the Bloc. In general, what is implied is giving more attention to Soviet trade and trade prospects with the underdeveloped countries than might otherwise be warranted on ordinary economic defense grounds.

2. According to this paper, the degree of economic integration that is possible between China and the rest of the Bloc is somewhat greater than is generally assumed, and is possibly more triangular than is generally recognized. Analysis of the Chinese economy should be more closely tied in to analysis of the Soviet bloc economies.

3. The development of exportable surpluses of hard goods by the Soviet Union has rested in this paper on a sampling of evidence, and is based on research materials that have not been oriented toward this particular possibility. A more systematic and comprehensive review of this possibility should be undertaken.

4. A related line of inquiry would be a projection of the raw materials and other requirements of the Soviet economy if it continues to grow at present rates. Pre-occupation with the operating requirements of the export denial program has perhaps discouraged analysis of the longer-run costs to the Soviets of continued limitations on trade between East and West. The NIE's concerned with the immediate impact of trade controls are deficient in this respect, in their concentration on Soviet adjustment to existing shortages and inattention to Soviet development of new shortages in the future.

5. The agricultural limitations of the Soviet Union, and their implications for the future of East-West trade, deserve more complete analysis to serve as the basis for discussion with Western European countries. To some extent the current popular belief in Europe, in the importance of East-West trade to the long-run viability of Western Europe, could be dampened by education of the governments concerned to the insubstantial contribution that the Soviet bloc can make to the viability of Western Europe. Furthermore, substantiation and documentation of the thesis brought forth in this paper would indicate that Russian interest in such Western commodities as cargo ships and tankers and heavy capital goods generally is doomed to short life. Soviet bloc imports of machinery and equipment from the West will continue to be of substantial importance to the Soviet bloc but seem sure to be limited in overall volume; a persuasive presentation of this likelihood to the members of COCOM might lead to a somewhat more sober European attitude toward Eastern European markets.

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