

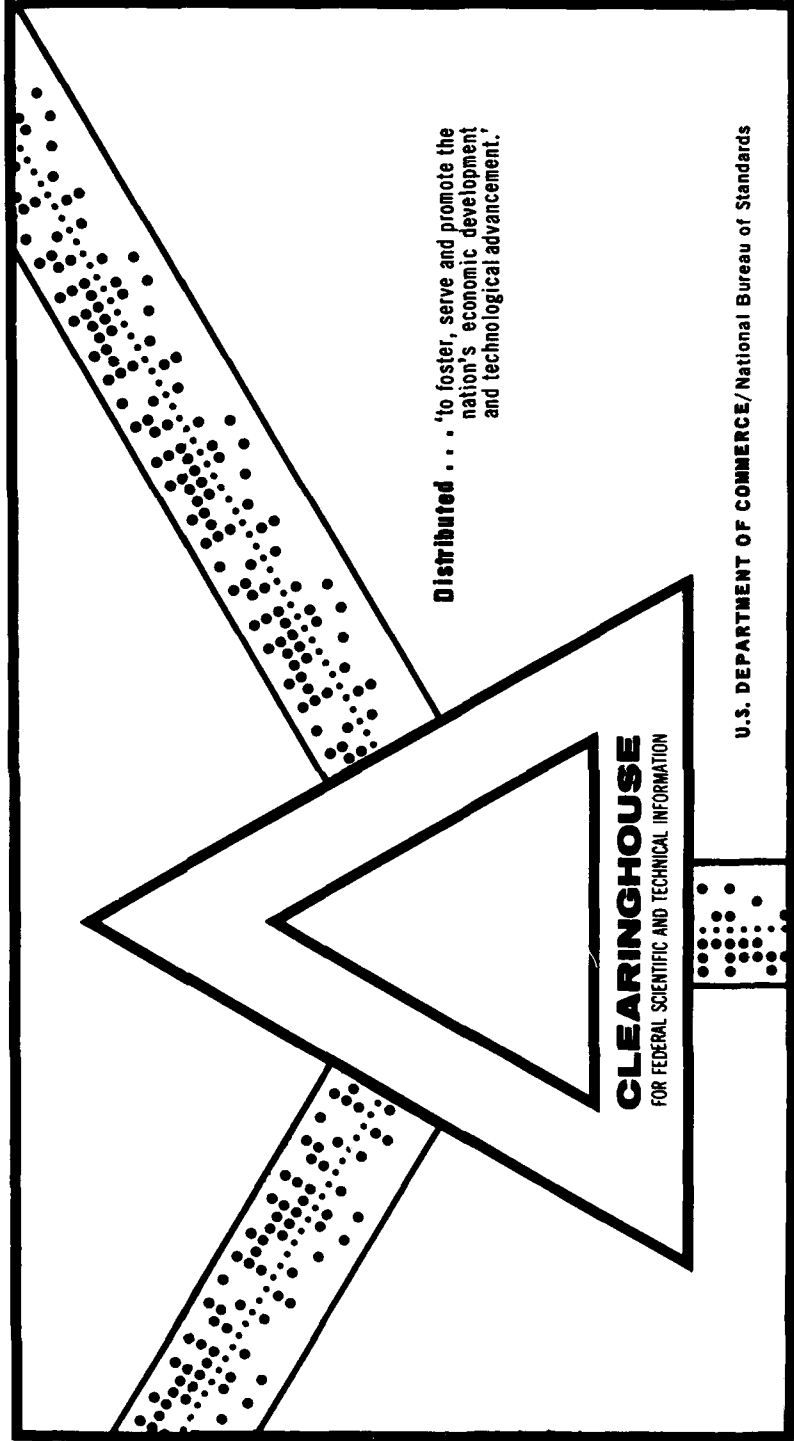
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THE FUTURE ROLE OF THE SOVIET CENTRAL PLANNER

John P. Hardt

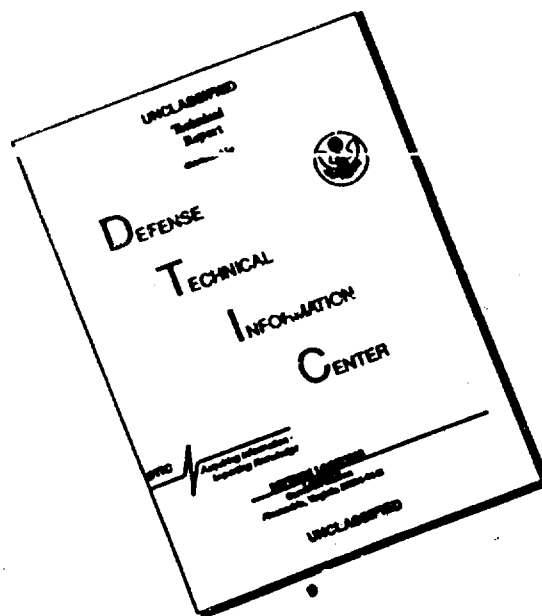
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_____ by John P. Hardt

A paper read at Saint Antony's College
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INTRODUCTION

In 1920 the Austrian economist, Ludwig von Mises, argued that the new Soviet planned economy could not operate with the necessity for resolving all the simultaneous equations necessary in a modern economy.¹ Von Mises was particularly concerned about the rational pricing of producer goods without a market. The Soviet economy did operate and, in fact, over some 40 years has performed remarkably well in meeting those requirements the Soviet planners deemed important. But there was logic to von Mises' argument. The main reason it did not hold was that Lenin chose not to solve all the equations required for planning the economy as a whole but to concentrate on a small number of major sectors, his "commanding heights." Stalin, in turn, emphasized the rapid growth of certain key industrial sectors crucial to military development and the establishment of an industrial base.² Under both Lenin and Stalin, producer goods allocation for the priority sectors was handled by physical allocation rather than reliance on a price mechanism.

Now, some four decades later, Soviet leaders are concerned with more than the key sectors as the requirements for improvements in living conditions, including increased production of consumer goods industries, and in agriculture have focused their planning on a broader economic front. Moreover with changing technology the traditional key economic sectors for augmenting military power have become more complex. And finally, to continue their high economic growth rate, the industry based on coal and

steel is now giving way to a more modern industry with petroleum and non-ferrous metals increasingly supplying the energy and metal sources. These new factors also make the time dimensions in planning more significant, in that decisions made now more heavily commit future decisions and limit flexibility. Thus the planning process is now more broadly based, more complex in technique, and directed to a longer timeframe. Problems such as rational pricing for capital goods posed by Ludwig von Mises in 1920 are now relevant to Soviet planners in 1964.

Although rapid Soviet growth over the Five-Year Planning periods has provided an expanding supply of resources, they are not now adequate to meet all the felt needs of the Soviet leadership. Even though the Soviet GNP growth may return to a longer term trend of about 5 percent per annum³ -- somewhat under the record of the '50's but nonetheless impressive -- present Soviet national policy appears to require substantial resources for maintaining a military establishment comparable to that of the United States, a high industrial growth rate, and some significant improvement in the living conditions of the Soviet citizens.

To accommodate the new problems in economic planning, Soviet planners have focused attention on the introduction of electronic computers and the adoption of mathematical techniques in planning. Elsewhere Vladimir Treml has discussed the slowness of the adoption of these new techniques in Soviet planning. Herein we are concerned with the rationale for this failure to adopt the new techniques.⁴

Without denying the advantages that may accrue from the efficient use of these advanced techniques and equipment in Soviet central planning, it is important to realize that certain major allocation policy alternatives must be more clearly defined and consistently recognized before these more refined planning tools and electronic equipment can be effective. Moreover the planning role of Party policy makers must be redefined and delineated before the necessary guidelines can be set down for orderly implementation of planning for this more broadly based Soviet economy. An orderly planning process with a delegation of decision making from the politically-oriented Party to the economic planners would seem to be in order. Unless these certain preconditions are met, the Soviet planner will find himself caught in a continuing process of compromise with the political and military leaders, and his contribution to orderly future development consequently impaired.

Particular policy problems that have been highlighted by recent developments focus attention on (1) the relationship between defense claims on the economy and industrial sectors crucial to maintaining a high growth rate, and (2) the state of agriculture as it may provide not only a stable grain harvest but also the basis of improvement in the Soviet standard of living through improvement in the diet; a requirement which places new demands on the traditional Soviet industrial branches. These may be said to be two of the more important policy problem areas in which resource allocation alternatives are major considerations. Therefore each of these problem areas will be considered in the context of the choices involved and the

future role the Soviet central planner may play in allocating resources to meet these requirements.

MILITARY STRATEGY AND RESOURCE ALLOCATION

The economic importance of Soviet military spending is well accepted but seldom evaluated in any detail by Western analysts. To be sure, the Soviet Union has made it rather difficult to study this important area by her secrecy policy on her military budget and the production of items critical to military requirements, e.g., non-ferrous metals, certain petrochemicals, elements of machine building, etc. However, we can obtain some insights from such sources as the annual plans and performances, reconstruction and analyses of omitted sectors in published data in the form of input-output tables and aggregative industrial production figures, and analogous approaches to Soviet production using comparable factors from Western relationships.⁶ These methods of sketching out the allocation of resources to the Soviet military establishment are particularly revealing in periods of sharp change in policy such as occurred in 1961, when it was clear that a relationship between programs curtailed -- for which information is available -- and the announced policy for a substantial increase in military outlays -- for which data is not usually published -- were indeed closely related. It became clear after 1961 that increases in Soviet military outlays were competing with industrial investment necessary for continued growth. Not only is the defense burden greater in the USSR than in the West, in the sense that there is no

slack in the economy, but also the military establishment competes for resources with major industrial growth sectors.

This recent pressure of Soviet military outlays on resources critical to growth has coincided with considerable discussion on the future course of Soviet military strategy. Unresolved and possibly unresolvable, the strategic debate reveals no definitive guides to the future course of Soviet military policy or to the claims this policy would make on the economy. Rather it appears more likely that the nature of the competition between various military programs and economic growth requirements will help determine the military strategy ultimately adopted or the compromise reached.

The Uneven Economic Development and Soviet Military Choices

The future trends in military spending, their economic impact, and the strategic military choices they reflect should be viewed against the very uneven development of the Soviet economy. Soviet economic development under Stalin was characterized by a concentration of resources on priority sectors referred to by the Soviets as heavy industry, which included particularly the traditional coal-steel-machine building-electric power base of industry. Stalin's conservative opposition in the industrialization debates of the Twenties argued that the rate of development of Soviet industry planned was impossibly high because of the inability to provide internal or external financing for the development. Stalin's solution, borrowing from the Trotskyite Preobrazhenskyi,

was to accumulate the necessary resources for expanding industry from within the economy, so-called primitive accumulation.⁷ Primitive accumulation particularly involved a low priority to agricultural development and related consumer light industries which could have, if made available, provided the goods to exchange through the market for the products of the Soviet rural economy. As a result, Soviet agriculture and consumer goods-oriented light industry did not benefit from the high rate of economic development in the Soviet Union. In fact, agriculture and consumer goods branches of industry may be said to continue to represent an economically underdeveloped economy within the Soviet Union.

At the other extreme of development, the Soviets have advanced sectors comparable to similar sectors of the economy of the United States. With the expansion of the technologically advanced strategic forces and other aerospace programs in the Soviet Union in the late '50's, a missile support industry was developed to meet the aerospace requirements.⁸ Also, in the late '50's, the Soviet leadership decided that they could no longer rely on the traditional economy predominantly based on coal and steel to provide continued industrial growth. A shift to the development of more sophisticated branches -- petroleum refining, non-ferrous metals, petrochemicals, chemicals, and certain branches of machine building -- was the result of this decision to modernize the sectors of Soviet industry crucial to a continued high industrial growth rate and necessary for meeting their technologically advanced military requirements. These twin developments of aerospace

military requirements and the industrial investment requirements for expanding certain growth sectors of advanced technology led to the emergence of a new advanced economy more comparable in its technological characteristics to US industry.

The traditional Soviet industrial base developed under Stalin still occupies an important position in the Soviet economy, and part of the burden of growth requirements falls on this sector. For example, the newly urgent modernization of Soviet transportation places requirements on Soviet industry for diesel and electric equipment for the railroads and pipe for construction of a vast network of petroleum and natural gas pipelines.

In this context of uneven economic developments, the specific resource requirements of the alternate future courses of Soviet strategy suggest specific rather than general resource constraints. The military requirements for continued expansion in the aerospace programs of Soviet strategic forces place their demands on the advanced economy and compete with investment for industrial growth. The theater forces, including the large Soviet ground forces, largely place their requirements on the traditional economy. These alternatives in military resource requirements may be viewed in the following schematic fashion.

The strategic forces -- offensive and defensive missiles -- compete with the advanced industrial branches primarily for initial investment. The capacity of a missile support industry cannot be readily converted to the production of chemicals, non-ferrous metals, and the other advanced

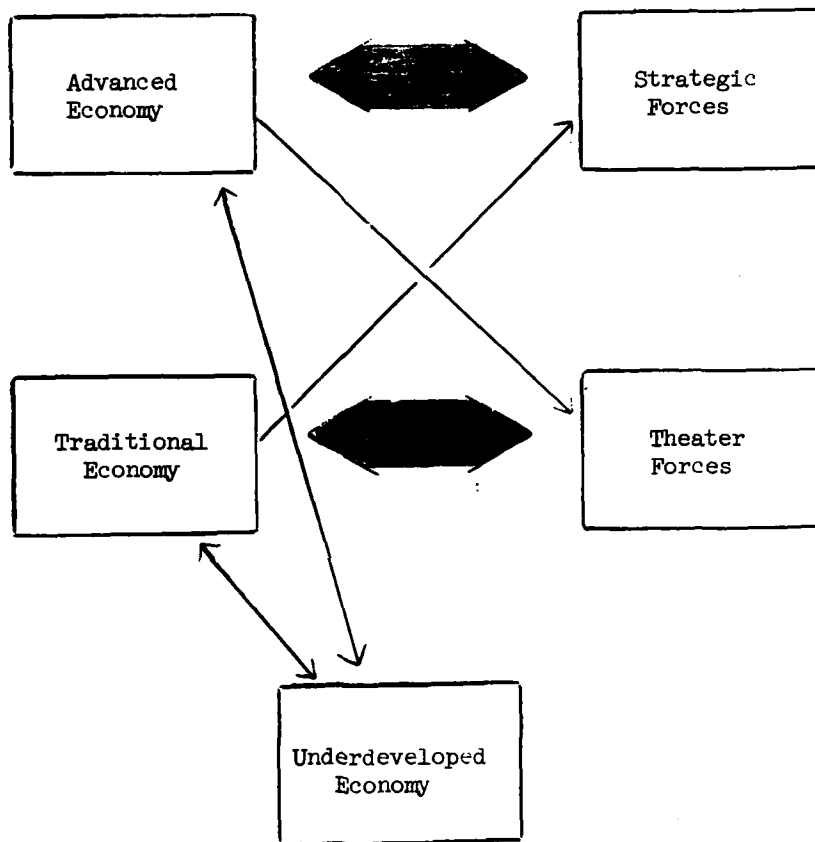


Figure 1. Economic Relationships to Strategic Alternatives

industrial branches. A reduction in the requirements for strategic force development would be more likely to lead to the increase of other aerospace programs. For example, if the production requirements for missiles designed for West European targets diminishes, that productive capacity is likely to be converted to other missile, or at least aerospace, programs rather than to production capacity in sophisticated industrial branches. Similarly, the resource demands for the sophisticated industries are, in turn, competitive with those for expanding aerospace programs but do not represent capacity readily convertible to supplement the missile support industrial capacity. Chemical industry and missile programs are thus largely competitive for the investment necessary for expansion. The lack of ready convertibility also carries over to the skilled and scarce labor force in each of the competitive aerospace and sophisticated industrial branches. To be sure, a chemical engineer may eventually become valuable either in the field of rocket propulsion or plastic production, but the effective transition would take some time.

Theater forces still draw primarily on the traditional branches of the Soviet economy. Moreover, the capacity to produce for either civilian or military production is open in a way not characteristic of the trade-offs between strategic forces and the advanced economy. The agricultural equipment and automobile factories can still be converted; whereas, as noted above, the petrochemical plants and missile support industries are not readily convertible.

If, for joint reasons of military strategy and manpower constraints, the military manpower in the Soviet Army is reduced, the resource requirements of the theater forces may continue, albeit with more requirements for hardware than manpower. Moreover the forces may be augmented by emphasis on modernization of the Soviet theater forces which may take the form of increased mobility of available forces for use in Western Europe, in contiguous areas including the Chinese border, and noncontiguous areas. For this latter purpose, more air and sea transport for troops would be emphasized.

The Military Strategy-Resource Debate in the USSR

There is growing evidence of pressures to change priorities in Soviet resource allocation within and among all the sectors of the economy from the stable past pattern of favoring heavy industry -- especially branches supplying military requirements -- to the provision of more goods for modernizing the Soviet economy and improving the levels of living. These pressures have apparently been instrumental in bringing about a shift in priorities away from the past dominance of national security considerations in Soviet economic planning.⁹ However these shifts have not been stable, as on at least two occasions in the current Seven-Year Plan, there has been a resurgence of the priority for military requirements and heavy industry. There is some evidence that these shifts have been responsive to changes in the international situation, but domestic considerations in the Soviet Union also appear to have a central influence. The Party debate on economic priorities has a direct

bearing on the size and composition of the military budget which conditions the military strategy that can be implemented in the USSR.

The first phase in the debate may be placed generally in the 1958-1961 period. In 1959, the priority to heavy industrial-military requirements appeared to be losing ground as the emphasis at the initiation of the current Seven-Year Plan in 1959 was shifting more to investment for economic modernization and improvement of living conditions. However, this shift in priorities was reversed when, in apparent response to the increase of the military budget in the United States, coinciding with Soviet aggravation of the Berlin situation, Premier Khrushchev announced in July 1961 that the Soviet budget was being substantially raised and that the earlier orders for demobilization in the armed forces were being rescinded. Later we learned that, when in 1961 the military budget was raised and the armed forces were not reduced as planned, the plan for industrial investment was reduced, and the growth of industrial production was slowed. Thus, even heavy industry along with production for consumer needs bore a heavy impact from this shift in policy.

A second phase in the debate on resource allocation priorities may be dated from late 1962 through early 1963. From the announcement of the annual plan for 1963 in December 1962, it appeared that the priorities again emphasized, at least in part, investment for expanding such economically advanced critical industries as chemicals, petroleum, and machine building. This annual plan, announced by the newly appointed chief of the State Planning Commission, Mr. Dymshits, appeared to represent a

return to the policy of shifting the resource allocation pattern away from a military-heavy industry priority.¹⁰ But, by the end of February 1963, Mr. Khrushchev was again talking as he was in July 1961, when the defense budget was substantially increased and demobilization terminated.¹¹ And in March 1963 a new organization, a Supreme Council of the National Economy of the USSR, was established with D. F. Ustinov as its head and placed over the Gosplan. Mr. Ustinov, who was also named Deputy Chairman of the Council of Ministers, has a long history in administration of defense production industries. Moreover, it became evident that many of the investment projects planned for 1963 were not receiving adequate supplies. In the past this kind of reported overextension in investment projects has often been a screen for a change in priorities favoring classified military projects. At the same time the very severe winter of 1962-63 may have been partially responsible for the lagging pace of the 1963 plan.

The significance of the changes in administration and policy for the specific priorities of military over investment and consumer-goods production is difficult to deduce from the limited information provided by Soviet sources. Announcements covering the annual plan for 1965 and the new Five-Year Plan for 1966-1970 may provide more information. The absolute defense expenditures are probably increasing but not as rapidly as the overall rate of economic growth. The fluctuations in recent years probably vary between maintenance of the absolute level of military budgets and the relative share that military outlays have in the national product (GNP).¹²

Although it is difficult to identify individuals representing various policies, some tentative association is possible. Mr. Dymshits, on the one hand, and Marshal Malinovskiy, on the other hand, are enunciating policies which could lead to a lower or higher military budget, respectively. As it does not appear that the arguments put forth by each of these individuals will be easily met or silenced, the debate may continue without resolution.

If one were to interpret Marshal Sokolovskiy's book as an indication of a new Soviet strategy, such a new policy would have to be implemented either by increasing the level of the military budget or by changing the composition within the budget. The level of the Soviet budget in the future may well be constrained by the newly urgent pressures from other programs, as well as by a continuing slowdown in the overall Soviet economic growth rate. The pressure for modernizing certain elements of Soviet industry, transportation, and agriculture apparently may no longer be postponed without running the risk of retardation of the economic development in the USSR. Likewise, substantial quantitative and qualitative improvements in Soviet living conditions apparently can no longer be deferred without serious consequences. If these pressures continue to be recognized by the Soviet leadership, the implementation of a substantially increased military budget does not seem likely.

Civil-Military Relations

It may be argued by those who see in the current Soviet-American relations the development of a meaningful detente, that a significant reduction in the overall Soviet defense effort is likely. Although the Soviet Union may, in fact, slow the expansion of her strategic forces and the military manpower in her ground forces in response partly to economic pressures, her effective capability may continue to increase with modernization of her theater forces. The image projected of a nation willing to negotiate internationally in some aspects of strategic forces and the size of its army on the basis of a predetermined policy of reduction for domestic reasons may be persuasive but deceptive, as the increasing or stable Soviet defense budget may be directed to the less obvious modernization of her theater forces.

But why not a reduction in the theater forces and the military budget too? This partly depends on US and NATO policy, and it should be noted that the official United States forecasts through 1970 show a reduction in annual defense spending of just 4-5% through the end of this decade.¹³ This small percent change could be easily offset in time with the introduction of new programs as 1970 draws closer. Without a reduction in US and NATO expenditures, the rationale for the Soviets to change their defense policy because of a different international climate is not a strong one. So our attention should be focused on a domestic rationale deriving from civil-military relations in the Soviet Union. It should be noted that the military is

probably the most influential group acting within, but somewhat independently within, the Party guidelines. It would be too much to suggest that the Soviet military have or will have policy making power. But the Soviet military establishment does appear to exercise an important constraint or veto on changes in policies which affect them, and they may be effective in resisting a reduction in the defense establishment.¹⁴

The influence of the military in the making of national policy decisions, particularly as concerns the allocation of resources, seems to have paralleled its success in resisting Party domination in the administration and operation of the military establishment.¹⁵ Professor Nemzer argues that the officer corps has become increasingly a force that the civilian politicians must respect in national security matters. Moreover, the ruling elite must be aware that in the past (e.g., 1939, 1941-42), Party interference in the armed forces has had a negative effect on military efficiency and dare not permit the situation to reach such a point again. It must continue to seek a balance between political control and military effectiveness. There is, moreover, no persuasive evidence that the Party has neglected the material prerequisites for military effectiveness. It can be expected that the military leaders will continue to press vigorously for greater autonomy for themselves and for higher allocations of resources to military purposes. Their success in these endeavors will, of course, depend in no small degree on international events and domestic developments in other spheres. Relaxation of international tensions will tend to weaken

their influence, and urgent economic problems at home may override military considerations.

Most significant, perhaps, is the possibility of a prolonged post-Khrushchev leadership crisis. If Khrushchev's successor is determined with little delay, the new regime will probably be able, and may consider it desirable, to impose strict controls on the military. If, however, the leadership struggle lasts for several years, there may well be opportunities for the rise of a military clique with considerable power.

At the same time a new generation of Soviet military leaders will emerge with the passing of the current leaders, who were trained in the ground battles of World War II. The new leaders, matured in the age of aerospace, will not owe their positions to similar experiences on the ground against the Germans. They, therefore, may generate differing views on the alternatives in military strategy and the budgets to support these alternatives. But it does not seem likely that given their professional commitment to arms, they will argue for arms limitations or a substantial reduction in the military budget. As a result the military requirements may well continue to overburden the Soviet economy attempting to modernize and regain a high industrial growth rate, and add a political constraint to changes in the central planning procedure.

IMPROVED LIVING CONDITIONS

Domestically, Nikita Khrushchev and the top Party leadership have been responsive to pressures from the Soviet populace for significant or identifiable improvements in the living conditions. The reasons for this concern probably stems from a combination of economic and political factors. Economically, adequate production incentives may be felt to require significant changes in available resources for consumer satisfaction. Politically, the leadership, now unwilling or unable to resort to methods of coercion and terror employed under Stalin, may be seeking a greater degree of consent from those they govern. For whatever reasons the declaratory policy of the Soviet regime and the evidence from programs initiated support a conclusion that the leadership is more concerned about consumers' welfare. It also may be of some importance to Premier Khrushchev in the struggle with the Chinese leadership for the control of the Communist elements throughout the world for the Soviets to make more credible their claim that more "goulash and ballet" are hallmarks of the Soviet brand of Communism.

There are a number of available routes to proceed in meeting the rising expectations of urban and rural citizens: improved housing space and an increase in the consumer durables needed to equip that living space; improved quantity and quality of clothing including both apparel and shoes; improved transportation to facilitate the mobility and convenience of the average citizen; a significantly improved diet. Let us take each of these and review the likelihood or progress. Although other

aspects of living conditions such as entertainment and social welfare including medical services are relevant and perhaps deserve consideration, we will not direct our attention to them now.

The housing problem is probably most clearly illustrated by the failure to make progress toward attaining the level of housing space associated with the West European standards as a sanitary norm of some 9 cubic meters per dweller. The Soviet citizen has had to accommodate himself in approximately half that space and the promise for substantial improvement seems dim. Moreover, investment in residential construction has declined steadily.¹⁶ Beyond the physical volume of space available, the whole qualitative environment of the Soviet urban citizen in his dwelling space is even less likely to change substantially for the better. Modern kitchen facilities and electrical appliances for domestic entertainment will likewise probably not be available in significant amounts.

Soviet clothing, particularly shoes, may improve quantitatively with expansion of the production of textile material and the increasing livestock herds. In a country of severe climate such as the Soviet Union, clothing is still of the same vital importance it represented when Gogol's citizen lost his new top coat and froze to death. Still, the promise of significant improvement in the quality and quantity of shoes and apparel seems to be tenuous, at least until the chemical industry expansion comes to full fruition.

The entrance of the Soviet economy into the automobile age seems unlikely in terms of both the substantial resources that would be necessary and the rather explicit negative Soviet policy statements. As Nikita Khrushchev has said that the individual private automobile is inefficient and no improvement on communal-type transportation, no promise seems likely to be forthcoming. Moreover there is a political consideration raised by the private automobile in the question of controlling the movements of the citizens still influenced by internal passports.

By process of elimination, we deduce that a prospect of improved living conditions lies in the area of improved diet.¹⁷ A significant improvement in the Soviet diet must come from some change in the quality rather than just an increase in the supply of the currently available items. The Soviet diet based on bread, potatoes, beets, some low quality meat, and cabbage is surely not likely to be satisfactory as a measure of improvement in living conditions. Increased quantities and quality of animal products, vegetables, dairy products, and fruits are needed to indicate to the Soviet citizen an improvement of the dietary aspects of his living conditions.

Moreover, of the various routes to improved levels of living, changes in the diet seem to be most reasonable and economically attainable, even though the price paid would be high. This may be one of the reasons for the continuing emphasis on Soviet agriculture by the top Soviet leadership. It should be recalled that in the excellent harvest years, such as 1958, attention was directed toward improvement in the diet through

a campaign to increase the production of meat, eggs, and dairy products. That this campaign was not successful does not reduce its importance or logic for the future. The extremely poor agricultural crop years which followed the bumper crops of the late 1950's gave rise to an immediately pressing problem of maintaining adequate supplies of cereal grains to provide for minimum commitments. With good weather the hopes for qualitative change in the diet may again emerge.

Agricultural Production Problem: The Stable Harvest

The poor agricultural crop years of 1961-1963 raised the problem of ability of Soviet agriculture to meet minimum requirements. The first problem thus became that of ensuring an adequate harvest to meet current requirements even in bad weather years. The current requirements include the need for cereal grain not only for bread, but also for feed for existing livestock herds and for the foreign commitments for grain deliveries within and outside the Bloc. This immediate problem of increased agricultural production of cereal grains may well be manageable within the present institutional framework of the collective farm system by means of some increase in investment in agriculture and improved incentives. Chemical fertilizer, insecticides, herbicides, machinery, and equipment could lead to some modest increase in total output.¹⁸ Focus has been placed particularly on the increased production of chemical fertilizers which in some regions, if available and properly applied, could substantially increase the yield of grain per acre. Likewise some

increased investment can be expected in mechanical power for the collective farms, aimed also at reducing the percentage loss between the grain in the field and that in the barn. A resumption of plans to increase incentives to the collective farmers through higher incomes, lower consumer goods prices, and increased availability of consumer goods could also be very relevant.

With average weather years, Soviet agriculture can currently meet its essential food needs at present dietary levels and its other commitments for livestock and export requirements. The modest increase to ensure a sufficient harvest for these same needs even in bad weather years also seems attainable from current plans already underway.

Agricultural Production and Distribution Problems: More Meat, Dairy Products, Fruits, Etc.

The Soviet problem of improving living conditions through a significant increase in the diet, however, cannot be resolved by merely increasing grain production to insure against a recurrence of crises they faced in 1961-1963. In order to improve the diet, more animal products, dairy products, vegetables, and fruits are needed. The production of more meat may result from a substantial increase in the livestock economy of the Soviet Union. There are indeed areas in the Soviet Union within which a large and productive livestock economy could be developed. The climatic conditions in the area north of the Ukraine and west of the Urals, in the judgment of Professor Gale Johnson, could support a substantial livestock base. However, it is also the judgment of Professor

Johnson that this potential is not likely to be realized within the present institutional and organizational structure of Soviet agriculture. The fields tend to be very small, and land requires minute and detailed attention if it is to be productive, since "neither the collective nor state farms possess the necessary flexibility nor quality of management."¹⁹

Moreover livestock production requires additional attention to transportation, distribution, and storage facilities. The translation of wheat to kilos of meat available year round in substantial quantity on the table of the urban Soviet citizen is quite a different problem.²⁰ The investment in improved transportation, expanded distribution channels, and better storage facilities, as well as some substantial institutional changes in Soviet agriculture, would perhaps place a price tag on the meat route for improved Soviet diets too high for the Soviet leadership to accept.

Likewise vegetables, dairy products, and fruits currently in short supply through most of the year in the majority of Soviet cities are not solely a production problem. An organized small farm and special farm development could provide the Soviet cities with a substantially improved supply of fruits, dairy products, and vegetables. Here again, the institutional constraints are of considerable relevance, and facilities in intermediate channels from farm to market would require substantial investment.

Another potential solution to the Soviet problem would be to adopt the pattern of the United Kingdom and other West European countries in

resolving their dietary problems, namely, an importation of the necessary farm products from abroad. The Soviet Union, it might be argued, could find its own New Zealand, Denmark, etc. However, this break in the Soviet policy of autarchy would pose not only a political problem of reliance on foreign sources of supply but also a very serious foreign exchange problem. The Soviet Union is already hard pressed to earn sufficient exchange to buy those critically needed imports she is able to arrange, e.g., chemical equipment, shipping tonnage, etc. As is well known, she has recently dipped into her apparently small reserve of gold to finance some of these foreign economic activities as well as to relieve her temporary grain problem. As a result, the foreign agricultural import solution to the Soviet dietary problem does not seem likely to be an alternative chosen by the Soviet leadership.

In sum, the continued requirements of defense and industrial growth, and agricultural improvement to raise the living conditions seem likely to continue to overcommit the limited Soviet resources.

MODERNIZATION OF THE PLANNING MECHANISM

The Need for Delegation of Authority in Soviet Planning

What role can planning play in resolving the problem of allocating scarce resources among the major competing demands described above? Will Soviet leaders allow the effective use of modern planning tools, given the high degree of resource commitment? This involves initially a willingness to delegate from the Party to the economic planners some significantly greater degree of decision making.

Soviet leadership has always taken a very active role in the planning of the economy. It may be recalled that Lenin in 1921, turning to consolidate the revolution with a New Economic Policy, focused his personal attention in planning on such industrial sectors as electric power.

This leadership involvement in economic planning increased under Stalin in the Five-Year Plan period and led to attempts to mobilize the entire society behind the economic programs determined by the leadership. Leading literary figures, it may be recalled, had their energies directed to eulogizing hydroelectric projects and cement plants, while the boy-girl relationships were identified with tractors and agricultural goals. In addition, Soviet leadership adopted a policy of "storming" (shturmovshchina), perhaps to counter the traditional Russian affinity to Oblomovism (complete obliviousness to life around one). Periodically a storming effort was undertaken to attain a critical goal. The campaign or storming might be directed to the completion of a particular project or to the attainment of a physical production goal. The system was formalized within the labor force by incentive wage payments conducive to fulfillment and over-fulfillment of production plans -- the Stakhanovite system.

Now in 1964 the Soviet Union faces a new and complex family of economic problems. The identification of given targets easily defined and attained within reasonably short time periods has become difficult. The complex, modern Soviet economy does not lend itself to the storming techniques of the past. In fact these techniques may be highly disruptive to the orderly attainment of the various goals of the Soviet

economy. They may lead to a short-run overcommitment that further complicates the longer-term overcommitment of resources. The actual involvement of Soviet leadership in the detailed aspects of planning involved in the ratification and approval of the annual plan for production and investment may in itself be disruptive. No longer can a single political leader fully understand the implications of particular goals and their interrelationships. Where Stalin could examine the steel production expansion goals and relate them to production of tanks and construction of critical new factories, Premier Khrushchev has a complex of interrelated problems which require the knowledge of a professional economist or planning technician to comprehend. Merely by retaining control over decision making in detail, the Soviet First Secretary may impair planning efficiency.

The continued personal involvement of the top Soviet leader and the effect of campaign planning can be illustrated in the areas of defense expenditures and industrial growth in 1961 and the decision on chemical fertilizers for agriculture in 1964. In July 1961, for reasons noted above, Premier Khrushchev announced an increase in the defense budget of some three billion rubles -- approximately eight billion dollars by conventional ruble/dollar conversion methods. There is some question as to how much of this increase in the Soviet defense budget was spent in 1961 and for what purpose, but there is no question that substantial changes in the Soviet civilian economy occurred coincident with this decision. The slashing in the investment plans for priority industrial expansion in chemicals, metallurgy, petroleum and natural gas and

machine building coincided with this Soviet policy change in defense outlays. Clearly the sharp reduction in resources for completion of on-going industrial investment projects reduced the expansion of Soviet industry. There is, however, another factor in the industrial slowdown that followed -- the shock effect. As a tree that is drastically pruned may go through a period of shock and slow growth for a time subsequent to its pruning, so Soviet industry after the drastic 1961 curtailment in its priority investment sectors may have been shocked into slow advancement for a period beyond that dictated by the unavailability of necessary equipment. This may not be a psychological shock but a period of readjustment within which the ramifications and interrelations of a given change in policy work their disruptive way through the system.

Again in 1964, with a slower growing economy, stretched to meet the multiple needs of its many priority programs from its limited resources, Premier Khrushchev has initiated another campaign, this time to "solve" the agricultural problem through a substantial increase in chemical fertilizers. Khrushchev, to be sure, has directed considerable attention to agriculture during the time he has been in the top leadership circles in the Soviet Union. Under Stalin, it may be recalled, Khrushchev sponsored the program of agricultural cities "agrogorods." In the intervening decade Khrushchev has given more of his economic wisdom to the agricultural sector than to any other branch of the Soviet economy. To have the top Soviet leader direct his attention and the powerful leverage of his office to a particular problem certainly adds drama as well as priority

to the solution of that particular problem. However, the cost of these "solutions" may be becoming exorbitant. The implementation of the current chemical fertilizer program may draw heavily from already strained priority sectors of Soviet industry. The pre-emption of resources from many on-going projects may be more disruptive and retarding on Soviet economic growth than the benefit that might accrue in the form of increased agricultural production. If the familiar Soviet method of accumulating resources for particular preferred projects by terminating all investment projects in certain categories were resorted to, this could presumably have a shocking and far-reaching effect on the newly complex Soviet economic structure.

On the other hand, it should be acknowledged that by pressing for maximum growth, the Soviet economy does tend not only to rapid growth but to over-employment of resources or to bottlenecks. These bottlenecks and disruptions are in part a product of their success.

Computers and Mathematical Techniques in Planning

Soviet leadership may allow and encourage the increased availability of electronic computers to the economic planners and provide more funds and facilities for gathering and manipulating data.²¹ Moreover, the relaxation of ideological constraints against discussing various mathematical techniques, including input-output and linear programming, may facilitate the more efficient implementation of the broad political judgments made by the Soviet leadership.²²

However the new capabilities for marshaling and manipulating data may be of limited use in improving the efficiency of Soviet planning. The increasing complexity of the Soviet economy, faced with difficulties in the leadership circles to resolve the ambiguous and conflicting priorities among the basic programs requiring the scarce available resources, will be hard put to develop meaningful criteria for rationally allocating scarce capital goods by some sort of price mechanism. Moreover the lack of restraint by Soviet leaders in implementing crash or campaign programs to solve particular problems may continue to be so disruptive as to frustrate the development of an orderly planning technique.

The delegation of authority to intermediate planning levels, or from the Party to the economic planning apparatus, can be effective only if stable guidelines and criteria are set up. A tough core problem is that of the establishment of a policy framework that would reflect consistently planners' preferences and allow for the application of consistent policies of allocating scarce resources.

The promise of several years ago that wide-scale introduction of mathematic techniques and computers would basically change the Soviet planning mechanism has not come to fruition.²³ According to Professor Treml, the Soviets are now going through a painful reappraisal period.²⁴ Progress has been made in marginal ways, (e.g., in linear programming at factory levels, etc.), but the basic problems of Soviet policy on value, capital efficiency, and scarcity remain unchanged.

The Dilemma of Soviet Planning

The economic problem of improving the efficiency of Soviet planning seems resolvable with the introduction of mathematical techniques into the central planning process and the delegation of more authority to the Soviet planner for designing and operating the system. However political and perhaps ideological considerations enveigh against this development. It is conceivable that the same type party/planner relationship might be set up similar to the civil/military relations, but there is apparent Party reluctance to do this. The delegation of some substantial degree of decision making authority on economic planning to the planner comparable to the authority the military have in varying degrees over military matters does not seem likely at present. It may be that the special compromise with military professionalism dictated by the requirements of survival (e.g., against the Germans) does not find its counterpart in the economic crises the Soviets have recently been going through. Party control and democratic centralism may carry more weight than economic efficiency. And, although there may be recurring economic crises in the years ahead, it is difficult to perceive the drastic circumstances under which a resolution of the political economic dilemma may lead to a significant change in the planning mechanism. The emergence of the new Soviet technician/planner may be on the horizon, but his new form and the rationale for his development are not yet clear enough for this observer to perceive.

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12. This is at best a statement of an order of magnitude in view of the pricing problem in the USSR -- a ruble for Soviet defense is not a very accurate measure of either relative scarcity or economic burden.
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