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A. G. Ashbrook Jr.

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THE ECONOMY OF COMMUNIST CHINA:
ITS PRESENT STATUS AND ITS FUTURE PROSPECTS

A lecture delivered
at the Naval War College
6 October 1960

by

Dr. Arthur G. Ashbrook, Jr.

(The views expressed here are those of the author, who is an economist with the U.S. Government, and are not necessarily the views of the government or any of its agencies.)

It is a great pleasure to be at the Naval War College and to have this opportunity to speak to you about the economy of Communist China. Today in the United States most of our attention is taken up with the Soviet Union and its rapid growth in economic, political, and military strength. This concentration of attention is, of course, quite proper since the Soviet Union is frankly dedicated to the destruction of our world power position. However, Communist China, the present junior partner in the Bloc, is moving forward so rapidly that in twenty-five years we will probably be faced with a second and in some respects equally powerful and dangerous challenge from the Far East.

It is my purpose to give you some idea of the economy of Communist China—where the economy stands today, and where it is going and how fast. I will start with a description of Communist China's economic goals. Then I will present a few of the major developments of the first eleven years of Communist rule—the Communists established their regime in mainland China on 1 October 1949. Next will come a description of the present position of China's economy and a look at the major economic problems facing the leadership. Finally

I shall gaze into my slightly chipped crystal ball and make a general forecast of the course of the economy over the next ten years.

Goals of the Economy

As to the goals of the economy. The Communist leadership has one overriding goal, that of bringing China out of the poverty and backwardness of the past into the status of a modern industrial nation, a nation on equal footing with the U.S. and the U.S.S.R. The ultimate aim is not economic power for its own sake, but economic power as the necessary underpinning for political and military strength. Perhaps one of your speakers has already quoted Stalin's speech of 1931 in which the Soviet dictator graphically described how successive invaders had taken advantage of the weakness of Mother Russia. Let me slightly change this quotation as it might be spoken today by Chairman Mao of Communist China:

"To slacken the tempo would be to fall behind. And those who fall behind get beaten. But we do not want to get beaten. No, we refuse to get beaten! One feature of the history of old China was the continual beatings she suffered for falling behind, for her backwardness. She was beaten by the British, American, and French imperialists, by the German capitalists, by the Japanese warlords. All beat her—for her backwardness: for military backwardness, for cultural backwardness, for industrial backwardness, for agricultural backwardness. She was beaten because to do so was profitable and could be done with impunity."

Along with the central goal of developing China into a modern industrial power, the Communist regime wishes to achieve complete independence from any other economy, including the Soviet economy. The regime wishes, as quickly as possible, to be self-sufficient

in the production of all types of machinery and military goods and all important industrial raw materials, especially petroleum. The goal of self-sufficiency is a nationalistic rather than Communistic goal and is feasible over the long run given China's great land area, the variations in climatic conditions, and the abundant natural resources.

Communist System of Industrialization

Let me review for two or three minutes the nature of the traditional Communist system of industrialization, the system being applied in China today. That system has two major features. First, a Communist economy is a *command economy*. What is to be produced, how it is to be produced, and for whom it is to be produced is decided by the group of leaders at the top and is translated into action by a hierarchy of planning commissions. These commissions issue series of economics, plans and directives covering production, prices, wages, technology, and all other aspects of the economy. Orders go down through the structure of command down to the individual production unit, so that each factory and each collective farm has its goals and its plans for meeting these goals.

The second major feature of the Communist system is the emphasis upon the growth of industry, especially heavy industry. Priority is given heavy industry in the allocation of labor, materials, and managerial talent. This priority of industry means that a large and increasing portion of the economy's total output is plowed back into the economy as new productive capacity or, what is the same thing, that investment is being emphasized at the expense of consumption. Now any nation which is growing must be building up its productive capacity—this is an economic truism which applies to capitalistic and communistic nations alike. The point here is that the Communist nations are deliberately and energetically seeking growth through central planning and through central direction

of the allocation of resources. And, among the Communist nations, there is none which outstrips China in the intensity of its drive to industrialize and modernize the economy.

Developments of the Past Eleven Years.

Now I wish to survey briefly the economic developments of the past eleven years, the years of Communist control of China. This eleven-year span may be divided into three periods: the period of reconstruction, 1949 through 1952; the period of the First Five Year Plan, 1953 through 1957; and the first three years of the Second Five Year Plan, which is scheduled to run 1958 through 1962.

First, the period of reconstruction. When the Communists completed their seizure of power on 1 October 1949, the economy was in a chaotic state after several decades of intermittent civil and international warfare. The central task of the new Communist regime was to restore law and order and normal productive activity. This task was achieved with remarkable success. The following was accomplished: (1) inflation was halted and an effective tax system imposed on the nation; (2) production in industry by 1952 was restored to the highest levels achieved under previous governments—production in 1952 included 1 million tons of steel, 60 million tons of coal, and 7 billion kwh of electric power; (3) the railroad system was restored to operation and a good beginning made in leveling out the distribution of food supplies over the whole nation.

Second, the period of the First Five Year Plan, 1953 through 1957. In the next five years, the regime's task was to build up productive capacity and output in basic industrial products—especially in steel, coal, and electric power. Again it can be said that the task was achieved with remarkable success. This rapid advance of industrial production from 1952

through 1960 is shown in the table on page 37. Overall industrial production more than doubled, the geometric rate of increase being about 16 per cent per year. In 1957, the last year of the plan, the output of steel was 5 million tons; coal, 130 million tons; and electric power 19 billion kwh. At the same time that the industries producing basic industrial materials were being expanded at a tremendous rate, the regime was laying the groundwork for the development of higher-level industries producing machinery and military goods. I might say here, as a generalization, that the whole pattern of Chinese economic development has been marked as one might suspect by a tremendous expansion of the output of existing products and a simultaneous determined advance into new products of greater technological complexity. But back to the developments during the First Five Year Plan. The first point to remember is the rapid expansion in basic industrial production. The second point is the rapid and thorough collectivization of economic activity under the state, a process which had been started during the period of reconstruction but which really got going full blast during the First Five Year Plan. The familiar pattern of Communist control over all economic activities was repeated. The Communists had inherited control of many large industrial enterprises from the Nationalists. These and other industrial enterprises were taken over and operated through central government ministries. Handicraft enterprises were grouped in cooperatives, whose direction was firmly in state hands. Peasants were given land seized from large landholders, and in turn were forced first into mutual-aid teams and later into agricultural cooperatives, with a progressive increase in state control.

Besides the expansion of industry and the collectivization of all economic activity, I think one other point is worthy of mention in this brief survey of the First Five Year Plan, namely, the position of agriculture. The regime was concentrating on building up industry; agriculture's role was subordinate. The

regime conducted a holding operation in agriculture. Agriculture had to (1) supply enough food for the large and growing population including the population of the expanding industrial cities; (2) supply cotton and other raw materials to industry; (3) supply goods for export to pay for the import of machinery and industrial raw materials. Not much capital equipment could be supplied to agriculture, so increases in capacity and output had to come from intensive efforts in cultivating fields and in restoring and expanding irrigation and flood control projects. Output of agriculture over the whole 5 years rose about 14 per cent, and output of grains increased about 10 per cent, as compared to an increase in population of perhaps 12½ per cent, illustrating the pressure of population on food supplies and the necessity for strict economy in the distribution and consumption of food.

As to the third period, 1958 to date, we have the continuation of the same fundamental forces—rapid expansion of industry, tightening of government control over economic activity, and maintenance of the agricultural sector at a level barely sufficient to meet its obligations. In 1959, the second year of the plan, output of steel was up to 13 million tons, coal to almost 350 million tons, and electric power to 42 billion kwh. Production continued to be pushed into new areas in industries such as machine-building, chemicals, and armaments. Three special developments of the Second Five Year Plan period—which have been superimposed on the three fundamental forces—warrant specific mention.

In 1958, the leadership launched the Leap Forward program, a program which was designed to work every man, every machine, every railroad car, and every piece of farmland at an intensive pace, almost regardless of human and economic costs—the emphasis on breaking through to new high levels of physical production by mobilizing every possible source of labor power—farmers in the off-season, soldiers,

housewives, children—and working all hands at an almost frenzied pace. The emphasis on physical output resulted in great increases in production, but sometimes quality of output suffered, sometimes crops went unharvested because peasants were off building dikes, and sometimes tie-ups resulted on the railroads. All these excesses forced revision of the Leap Forward, which has continued over into 1959 and 1960 in a milder and more sensible form.

Another development of 1958, which is tied in with the Leap Forward, is the commune. The commune was introduced into the rural areas in mid-1958 as a higher, more revolutionary form of collective organization than the existing agricultural cooperative. Approximately 20 times as large as the agricultural cooperative, the commune was supposed to be a tightly-knit, all-purpose organization that would cover all facets of rural life—agricultural production, irrigation and flood-control, rural industry, retail trade, and the training of militia. Chinese Communist propagandists hailed the commune as a giant step forward to pure communism—where each should receive according to his need rather than according to his output. In 1959 and 1960 the more radical features of the commune were abandoned, and the commune lost most of its powers to the next lower unit—the production brigade, which is approximately the same in size and function as the old agricultural cooperative. The retreat from the original blueprint was brought about because the commune form of organization proved unwieldy. The Soviets have been very skeptical about the Chinese commune, asserting that China must go much further in its economic development before communes will prove practical. The Soviets have also been quite upset by the Chinese Communist claims that the commune put China in the vanguard of the march toward pure Communism.

A third development of the Second Five Year Plan is related to the first two, namely, a changed attitude toward the agricultural sector. A 10-year program

for the modernization of agriculture, announced last October, indicated that the Chinese planners are now willing to reduce industry's almost absolute priority over resources. Agriculture now is finally being recognized as a major long-term economic problem, which cannot be solved by Leap Forward measures. The plan for modernizing agriculture envisages that by 1969 China will have achieved (1) the expansion of mechanical cultivation to cover all land that can be cultivated by machine; (2) the use of motor vehicles for nearly all rural transport; (3) mechanical processing of farm produce, and (4) production of seven to eight times as much chemical fertilizer as is being presently applied.

The Present Situation

Let's sum up at this point the general status of the Chinese Communist economy today. In industrial capacity and in industrial production, the gains of the past decade have been amazing. Even though it must be emphasized that China has still a long way to go before becoming a modern industrialized power, the will to achieve and the means to achieve this goal are there. The secret is a hard-driving leadership, a hard-driven labor force, and an investment program that plows an ever-increasing proportion of output back into new, productive capacity. Secondly, control over production, prices, the distribution of output, and the whole range of economic decisions is firmly held by the central leadership, which has demonstrated not only energy and ruthlessness but also a willingness to retreat one step today in order to take two steps tomorrow. Thirdly, the agricultural sector has only barely maintained its own and how to stimulate substantial growth in agricultural production is the most important general problem facing the regime.

Before we get into detail on the current problems of the Chinese Communist economy, I'd like to make some comparisons with other economies to give you some

perspective on China's rate of growth. The general measure of economic performance is the total output—or gross national product—of an economy. China's gross national product has grown from forty-four billion dollars in 1952 to eighty-two billion dollars in 1959, or at an average annual rate of about 9 per cent. India's GNP has grown from thirty-six billion dollars in 1952 to forty-eight billion dollars in 1959, or at an average annual rate of 4 per cent. India's GNP has slipped during the period from being about 80 per cent of China's GNP to being about 60 per cent of China's GNP. Over the same period 1952 to 1959, Soviet GNP rose at a rate of 6.5 per cent per year and U.S. GNP at a rate of about 3 per cent per year. One caution, however, is necessary. Communist China's pricing system gives heavy weight to industrial goods, whose output is rising faster than the average, and thus Communist China's rate of growth is somewhat overstated compared to a growth rate calculated by use of U.S. or Soviet prices. (Figures in this paragraph are in 1958 U.S. dollars.)

Soviet Assistance

In my description of economic developments in Communist China, I have not yet touched on the assistance provided by the Soviet Union. This aid has been vital to the successes achieved by China and continues to be of high though declining importance. The subject of the Soviet role in China's economic growth could easily take up our whole period of discussion, but I will attempt to narrow down my remarks to three important concepts.

In the first place, trade between the Soviet Union and Communist China is conducted on terms that are reasonable when we make comparisons with world market prices. I mean that in general the goods are traded at prices that are fair to both the U.S.S.R. and China. If we look, not at the terms of trade, but at the advantages accruing to each side because each

is specializing in what it can produce most easily, then the benefits of this trade are far greater for Communist China than for the U.S.S.R. Let me elaborate. The Chinese are trading pork, soybeans, rice, wool, silk, tobacco, and tin for Soviet machinery, petroleum, and other manufactured products. Soviet need for these Chinese goods is not vital. The resources used in the U.S.S.R. to produce goods exported to China could, if trade were halted, be shifted into the production of those goods now imported from China. The exception is tin, which the Soviets could readily buy on the world market. In contrast, China is receiving from the U.S.S.R. goods which are critical to China's economic development. In the absence of trade China could not produce these goods at all or could produce them only at tremendous cost.

Now for my second point about Sino-Soviet trade. For the past several years an important part of Communist China's imports from the U.S.S.R. has been the machinery to equip 291 large Soviet-aid plants. These 291 plants are the core of China's industrialization effort. They include steel mills (expansion at Anshan, also Wuhan and Pao-tao), the Lanchow oil refinery, cement plants, a tractor factory, the #1 automobile plant at Chang-chun, electric power stations, a heavy machine-tool plant (Wuhan), and heavy electrical equipment plants (Harbin and Shanghai). About one-half of these projects are now finished and in operation. The shipments of equipment for these plants have amounted in value to roughly \$250,000,000 per year for the past few years. Along with the machinery, the U.S.S.R. has supplied thousands of technical experts, who have supervised construction of plants, installed the machinery in the plants, trained Chinese managers and workers, put the plants in operation, and have acted as trouble-shooters and advisers once production has begun. No exact figure on the number of technicians is available, but my guess is that since the Soviet assistance began, 15,000 technicians have had a tour of duty in China. During the First Five

Year Plan the Chinese became competent in operating and expanding capacity in basic industries. In order to push ahead, however, into more complicated phases of basic industries—for example, into alloy steels or aviation fuels—and in order to move into new industrial fields, the Chinese are still very much dependent on Soviet help. Soviet assistance today constitutes the *cutting edge* of China's industrialization program. If Soviet assistance were suddenly withdrawn, China could probably pick up the pieces in basic industries but progress in more complex fields would be greatly delayed.

My third point about Sino-Soviet trade is that the U.S.S.R. has made no outright grants to its junior partner and that, even more striking, Communist China has kept her borrowing at such a low level as to constitute essentially a pay-as-you-go policy. The Chinese indebtedness to the U.S.S.R. never amounted to more than 1.2 billion dollars—two thirds of this for military purposes—and is now being paid off at a rate which will wipe out the debt by the end of 1964. My own feeling is that the Chinese could have borrowed more from the Soviets and that their pay-as-you-go policy is a result of the strong desire for economic independence.

The Railroad System

I would like now to say a few words about the Chinese railroad system. Like the Soviets, the Chinese have run their railroad system very intensively. Forced draft industrialization and the Leap Forward have put great strains on the railroad system. It is easy to imagine the problem of increasing the volume of traffic 15 per cent or more each year on a system that is already bursting at the seams.

The railroads carry 80 per cent of Communist China's freight, exclusive of small-scale native transport. China has a territory which is somewhat

larger than that of the U.S. (not counting Alaska), and with approximately the same east-west spread. Yet, when the Communists gained control, they inherited a railroad system only 14,000 miles in length compared to the 220,000 miles of main-line track in the U.S. Over the last eleven years, the Chinese have revamped and modernized the entire railroad system, adding 6,000 miles of new routes, pushing the railroads westward into the remote interior and frontier area, and adding to the capacity of existing lines through extensive double-tracking and other improvements. Because of the scarcity of petroleum, coal-burning engines will continue for some time to be used on China's railroads.

Statistical Problems

One of the questions most frequently asked about the Communist Chinese economy is, How reliable are the statistics? In general, the Chinese Communists, like the Soviets, make it difficult for foreign observers to get complete information about the economy. There are the usual tricks—presenting huge percentage increases without giving the base figure on which the percentages were calculated; presenting only favorable data and omitting the unfavorable; including in the figures a large volume of activity that was not formerly counted; or announcing index numbers without revealing the method of calculation. In addition to these general difficulties with Communist data, Chinese data have some special difficulties of their own. For example, there are far too few trained statisticians and statistical workers to cover a huge economy, like China's. There is a great deal of petty handicraft activity that is difficult to account for under the best of circumstances. But the greatest of the special Chinese statistical difficulties is related to the Leap Forward of 1958.

During the First Five Year Plan (1953-57) the Chinese Communists had made substantial gains in their

efforts to develop a modern statistical system. In 1958, however, under the Leap Forward the slogan became "Let politics lead economics," and the new statistical system lost some of its ability to report what was actually happening, especially in the case of agriculture and handicraft production. The function of statistics as a tool to aid planners in allocating man power and raw materials effectively was subordinated to the function of statistics as an aid to propaganda. Emulation campaigns, in which people were urged to better bogus production figures or inflated crop yield figures of other areas, are a case in point. Party officials at lower levels were forced under the Leap Forward to set high production goals and they were fearful of not meeting these goals—at least on paper. The central statistical bodies lost control over their subordinates in the field—many of whom had been drafted for manual labor—and dared not investigate figures that appeared far out of line. One result was that in early 1959, the regime broadcast the claim that grain production in 1958 had been 375 million tons, or 103 per cent above the 1957 figure of 185 million tons. This claim seemed far too high, on the basis of information about weather, sown acreage, and level of agricultural technology. It appeared no more than 220 million tons had been produced. In this case, we later had dramatic proof that this estimate was probably very near the mark, for in August 1959 the regime announced that grain production figures had been reassessed and revised downward to 250 million tons. The spokesmen for the government blamed the poor statistics on inexperienced subordinates, naturally enough. It is believed that the revised figure of 250 million tons is still far too high, and the revised estimate is 212 million tons.

In contrast to the generally bad state of agricultural statistics, statistics on industrial production have stood up fairly well under detailed and skeptical examination. Problems of definition, of coverage of the figures, and of quality of product

have by no means been eliminated, but once the claims are understood, the production figures check out very well against such related magnitudes as (1) available plant capacity, (2) available raw materials, (3) available labor, and (4) consumption by the users of the product. There are also supplemental checks, such as the analysis of reports of travelers in Communist China and the analysis of information on China published in the other countries of the Communist Bloc.

Can a centrally planned economy run without detailed and accurate statistical data? The answer is "not for long." Otherwise, the planners will be producing axles for trucks that aren't being built or sending railroad cars for grain that isn't there. In the case of Communist China, the deterioration of the statistical system has been confined largely to the agricultural and handicraft sectors of the economy. The central modern core of the economy has suffered little damage. As long as the state procures enough grain for the urban areas and for export, the *exact* amount remaining in the rural areas is not too important. In the second half of 1958, however, it appears that the authorities really did believe that grain production had expanded tremendously and it seems that the rural population was allowed to eat a great deal more grain than normal with the result that inventories carried over to the next harvest were pitifully small. Thus, the food crisis of early 1959 is an example of how important accurate data are to the proper running of a centralized planned economy.

Ironically, if the Chinese Communists over the past decade had told the world the truth about their achievement, the story would have been most impressive. By claiming the moon, and by glossing over failures, the regime has only succeeded in making observers skeptical of every claim coming out of Peiping.

Population vs. Food Supply

One of the most important and intriguing aspects of the study of Communist China's economy is the relationship between population and the food supply. I can remember my first introduction to Chinese population statistics when, many years ago, I read in Ripley's "Believe It or Not" the story of the "Marching Chinese." Ripley said that if the Chinese were lined up in a column of four and were marched past a reviewing point, they would march forever (based on U.S. Army marching standards). There was a dramatic cartoon illustration of the mighty column of sandled, straw-hatted coolies, a column stretching out to the horizon on both sides.

The huge population of Communist China is indeed an important factor in the assessment of China's chances of becoming a first-class industrial power. We estimate the population of mainland China to be about 700 million (specifically, 692 million at mid-year 1960) and the rate of growth to be a fairly steady $2\frac{1}{2}$ per cent per year.

The situation with respect to population has changed markedly since the Communists came to power. During the period of Communist control, the death rate has dropped from about 30 per 1,000 to about 18 per 1,000 because famine and pestilence have been brought under control. The birth rate, however, has remained above 40 per 1,000 because the social institutions which produced high birth rates have not been greatly altered. The death rate is not expected to decline much further unless there is a major investment program for public health facilities and for training of doctors and other medical personnel. The crux of the population situation, in summary, is that the death rate has been markedly reduced with no change in the birth rate, resulting in a very high rate of growth. The $2\frac{1}{2}$ per cent rate of growth, if continued, would mean a doubling of population every 28 years, that is to say, every generation.

In 1957, the Chinese Communist leaders were concerned enough about the population problem to launch a nation-wide birth control campaign complete with lectures, pamphlets, and posters which were reported to have been the last word in realistic graphic art. The campaign died away after a few months, having no effect on the population situation, but even if the campaign had been pushed vigorously for several years, it would have had to overcome the great difficulty of teaching a largely peasant population to use modern techniques of birth control.

A major political obstacle also stands in the way of any program to limit the growth of the population. The name of the Western political economist, Thomas R. Malthus—who wrote about 1800—is always associated with the problem of population pressures. Malthus believed that rapidly increasing population would normally press on slowly increasing food supplies and would of necessity be checked at the margin by war, famine, and pestilence. Malthus is denounced in Communist China as a bourgeois economist. The Communist leadership professes to believe that the huge and growing population is an economic asset and that only under capitalism are the extra people doomed to the misery predicted by Malthus.

My own belief is that the pressure of population on Communist China's scarce agricultural land is a factor that will restrain, but by no means eliminate, economic growth. Methods of cultivation in China are already intensive; cultivation has already been pushed into areas that show any promise of reasonable yields; and it takes a long time for the results of improvements in agricultural techniques to show up. In order to feed the growing population and in order to bring the whole population safely back inside the line that separates bare subsistence from starvation, the regime must transfer some of the economy's resources away from industrial development over to agriculture. For instance, industry will have to produce more chemical

fertilizers, insecticides, and irrigation pumps and relatively less rolling mill equipment and machine tools. Instead of exporting foodstuffs for machinery, manufactured goods may have to be exported for food. Instead of putting all the best administrators and technical experts into heavy industry, the regime will have to give agriculture a large and increasing share. Let me repeat, I do not claim that Communist China's industrialization will be halted by the inexorable pressure of population on the means of subsistence; I am saying that the growth of population will cause an appreciable diversion of the energies and resources of the economy into the agricultural sector.

Military Effort

There is still another problem in Communist China's economy that should be at least mentioned. This is the problem of Communist China's military effort, looked at from the economist's point of view. Sometimes in describing a Communist economy we talk about a high rate of investment being achieved at the expense of consumption, without bringing in the third factor competing for man power and resources, namely, the military establishment. An economy like Communist China's must to some extent choose between building up its armed forces in the short run or concentrate in building up its heavy industry so that the armed forces in the long run will have stronger economic support. I believe that the Chinese are doing the latter, namely, concentrating more on the expansion of industrial capacity and delaying for the long run a large-scale military build-up. (For a detailed discussion of the problem of military build-up vs. industrial expansion, see "Communist China and Nuclear Warfare" by Alice Langley Hsieh, *The China Quarterly*, No. 2, pp. 1-15.) I would exclude from this general conclusion the use of skilled man power and materials in military industries peculiarly involving national prestige—such as nuclear energy—where one would expect a substantial Chinese effort. An example of the

priority of economic development goals is the employment of the military forces in the construction of railroads, dams, and bridges and even in the harvesting of crops. The military leaders may grumble about the time lost from training, but the military forces will gain much in the long run.

The Next Decade

Up to this point we've covered the events of the past eleven years and a few of the current economic problems of Communist China. What are the prospects for the next decade? In making my forecast, I'm using the following assumptions:

1. No major war during the decade.
2. Continuation of the Communists' tight monopoly of political power.
3. Continuation of the program of forced-draft industrialization.
4. Average weather in agriculture.
5. An annual rate of growth of population of 2½ per cent.
6. Continuation of Soviet material and technical assistance—on a pay-as-you-go basis.

Given these assumptions, I predict (1) a continued rapid growth in industrial production, although at a gradually declining rate; (2) a steady mastery of increasingly complex fields of production; (3) a rise in agricultural production that will be barely sufficient to feed the growing population. Specifically, I believe that Communist China's industrial production in 1970 will be roughly three times as great as industrial production in 1960; that agricultural production will be about one-third larger than at

present; and that gross national product will be double the GNP of 1960.

Ten years from now Communist China will represent, if the assumptions hold, the third largest agglomeration of crude industrial power in the world. But China will still not be an industrialized nation. If we look, not just at crude aggregate industrial power, but at per capita industrial output, then China will still lag behind Great Britain, Germany, France, and Japan in many important products. China will still suffer by comparison in quality of product and diversity of product mix, and China will still be behind in ability to design and build certain kinds of machinery. China's population will continue to live at extremely low levels of consumption, and there will be a large part of the population whose daily lives are not intimately affected by industrialization to the degree people's lives are affected in, say, Great Britain, Sweden, Canada, or Japan.

One of my assumptions was that Soviet material and technical assistance to Communist China would be continued. The current Sino-Soviet dispute brings that assumption into question. If Soviet assistance were completely withdrawn, the impact on the machine-building, aircraft, and other technologically complex industries would be substantial, and China's growth in these fields would be seriously delayed, at least in the short run. The whole timetable for industrialization would be scrambled, and China would have to undergo a period of confusion and of realignment of programs and resources before industrial growth could be resumed.

A Final Note

You have no doubt heard the analogy of the United States and the Soviet Union as two scorpions in a bottle, capable of simultaneously inflicting a lethal sting. Communist China by 1970 will be well on its way to developing into a little scorpion—not as big as the other two, but a true scorpion.

PRODUCTION OF MAJOR INDUSTRIAL COMMODITIES AND GRAIN IN COMMUNIST CHINA, 1952-60
AND IN INDIA, USSR, AND US, 1959

COMMODITY	UNIT	1952	1953	1954	1955	1956	1957	1958	1959	1960 EST.	1959 PRODUCTION		
											INDIA	USSR	US
CRUDE STEEL	MIL MT	1.35	1.77	2.22	2.85	4.46	5.35	8.0	13.4	18.4	2.4	59.9	84.8
COAL	MIL MT	66.49	69.68	83.66	98.30	110.36	130.7	270.2	347.8	425	47.8	506.5	389.6
PETROLEUM	MIL MT	0.44	0.62	0.79	0.97	1.16	1.46	2.26	3.70	5.2	0.44	129.5	352.1
ELECTRIC POWER	BIL KWH	7.26	9.3	11.0	12.3	16.6	19.3	27.5	41.5	58.3	18.2	264.0	836.0
MCHN TOOLS ¹	1,000	13.7	20.5	15.9	13.7	25.9	28.3	30	33	38	N.A.	146.0	33.9
TRUCKS	1,000	0	0	0	0	1.6	7.5	15.0	19.2	29	24.7	370.5	1,137.1
TRACTORS	1,000	0	0	0	0	0	1	3	10	10	N.A.	213.5	304.5
CEMENT	MIL MT	2.9	3.9	4.6	4.5	6.4	6.7	9.3	12.3	16	6.95	38.8	60.4
TIMBER	MIL CU. M.	11.2	17.5	22.2	20.9	20.8	27.9	35.0	41.2	43	17.0	265.0	243.5 ³
PAPER (MCHN MADE)	MIL MT	0.37	0.43	0.55	0.59	0.74	0.92	1.23	1.70	2.13	0.3	2.3 ⁴	13.5 ⁴
CHEM. FERT. ²	1,000 MT	39	53	71	85	132	159	266	410	580	111.4	3,045	7,117
SULFURIC ACID	1,000 MT	190	260	344	375	517	632	740	1,050	1,400	280	5,100	15,893
COTTON CLOTH	BIL LIN. M.	4.16	5.0	5.54	4.51	5.88	5.85	5.7	7.5	7.6	6.1	6.2	8.74 ⁵
CIGARETTES	MIL CASES	2.7	3.6	3.7	3.6	3.9	4.5	4.8	5.5	6.0	0.63	5.1	9.6
SALT	MIL MT	4.9	3.6	4.9	7.5	4.2	8.3	10.4	11.0	14.0	4.2	6.1	22.8
GRAIN, INCL TUBERS	MIL MT	168	169	160	175	182	185	212	190	190-200 ⁶	75.1 ⁷	100.0 ⁷	168.8 ⁷

¹ MACHINE TOOLS WHICH APPROXIMATE INTERNATIONALLY ACCEPTED CLASSIFICATIONS FOR METALCUTTING MACHINE TOOLS. HOWEVER, A SIMPLE COUNT OF MACHINE TOOLS PRODUCED GREATLY OVERSTATES THE CHINESE COMMUNIST POSITION WITH RESPECT TO THE U.S., BECAUSE OF THE LOWER AVERAGE OF COMPLEXITY OF CHINESE MACHINE TOOLS.

² CHEMICAL NUTRIENT EQUIVALENTS BASED ON AMOUNTS OF NITROGEN, PHOSPHORIC ANHYDRIDE, AND POTASSIUM OXIDE.

³ 1958.

⁴ EXCLUDES PAPER BOARD.

⁵ INCLUDES MIXED FABRICS; PREDOMINANTLY OF COTTON.

⁶ CURRENT DIFFICULTIES IN CHINESE AGRICULTURE SUGGEST THAT THE FINAL FIGURE WILL LIE CLOSE TO THE BOTTOM OF THE RANGE.

⁷ EXCLUDES TUBERS.

BIOGRAPHIC SKETCH

Dr. Arthur G. Ashbrook, Jr.

Present Position: Central Intelligence Agency, Washington, D.C.

Schools:

Haverford College, 1941, B.S. in Economics.

M.I.T., 1941-42, 1946-47, Ph.D. in Economics.

Career Highlights:

1947-51 Assistant Professor of Economics, Duke University.

1951-53 Economist, Office of Price Stabilization, Charlotte, N.C.

1953-54 Assistant Professor of Economics, Carnegie Institute of Technology.

1954 Central Intelligence Agency.