

INTRODUCTION

seem to lie in ruthless publicity. Those who present statistical series on long-term economic change must offer the reader an unobstructed look into the statistician's laboratory. Accordingly, this writer's indices of Italian and Bulgarian output (Chapters 4 and 8) are supported by rather complete statements on sources, nature of the raw data, and methods of computation, which the reader will find in Appendices I and II.²

The general importance of these statistical problems must not be underrated. But in the present context they also serve to emphasize the fact that such unity as this volume possesses lies not only in the affinity of the themes treated but also, even though less conspicuously, in the methods of research that have been applied.

² So far these appendices have been available only in mimeographed form.

Alexander Gerschenkron, *Economic Backwardness in Historical Perspective: A Book of Essays* (New York: Prederick A. Praeger, 1962), Introduction

I

Economic Backwardness in Historical Perspective

A HISTORICAL approach to current problems calls perhaps for a word of explanation. Unlike so many of their predecessors, modern historians no longer announce to the world what inevitably will, or at least what ideally should, happen. We have grown modest. The prophetic fervor was bound to vanish together with the childlike faith in a perfectly comprehensible past whose flow was determined by some exceedingly simple and general historical law. Between Seneca's assertion of the absolute certainty of our knowledge of the past and Goethe's description of history as a book eternally kept under seven seals, between the *omnis erit sum* of the one and the *ignorabimus* of the other, modern historical relativism moves gingerly. Modern historians realize full well that comprehension of the past — and that performe means the past itself — changes perpetually with the historian's emphasis, interest, and point of view. The search is no longer for a determination of the course of human events as ubiquitous and invariant as that of the course of the planets. The iron necessity of historical processes has been discarded. But along with what John Stuart Mill once called "the slavery of antecedent circumstances" have been demolished the great bridges between the past and the future upon which the nineteenth-century mind used to travel so safely and so confidently.

Does this mean that history cannot contribute anything to the understanding of current problems? Historical research consists es-

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essentially in application to empirical material of various sets of empirically derived hypothetical generalizations and in testing the closeness of the resulting fit, in the hope that in this way certain uniformities, certain typical situations, and certain typical relationships among individual factors in these situations can be ascertained. None of these lends itself to easy extrapolations. All that can be achieved is an extraction from the vast storehouse of the past of sets of intelligent questions that may be addressed to current materials. The importance of this contribution should not be exaggerated. But it should not be underrated either. For the quality of our understanding of current problems depends largely on the broadness of our frame of reference. Insularity is a limitation on comprehension. But insularity in thinking is not peculiar to any special geographic area. Furthermore, it is not only a spatial but also a temporal problem. All decisions in the field of economic policies are essentially decisions with regard to combinations of a number of relevant factors. And the historian's contribution consists in pointing at potentially relevant factors and at potentially significant combinations among them which could not be easily perceived within a more limited sphere of experience. These are the questions. The answers themselves, however, are a different matter. No past experience, however rich, and no historical research, however thorough, can save the living generation the creative task of finding their own answers and shaping their own future. The following remarks, therefore, purport to do no more than to point at some relationships which existed in the past and the consideration of which in current discussions might prove useful.

THE ELEMENTS OF BACKWARDNESS

A good deal of our thinking about industrialization of backward countries is dominated — consciously or unconsciously — by the grand Marxian generalization according to which it is the history of advanced or established industrial countries which traces out the road of development for the more backward countries. "The industrially more developed country presents to the less developed country a picture of the latter's future."¹ There is little doubt that in some

¹ Karl Marx, *Das Kapital* (1st ed.), preface.

Speed
Productive
and
Organizational
Structure
Industrial
Relationships

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broad sense this generalization has validity. It is meaningful to say that Germany, between the middle and the end of the last century, followed the road which England began to tread at an earlier time. But one should beware of accepting such a generalization too wholeheartedly. For the half-truth that it contains is likely to conceal the existence of the other half — that is to say, in several very important respects the development of a backward country may, by the very virtue of its backwardness, tend to differ fundamentally from that of an advanced country.

It is the main proposition of this essay that in a number of important historical instances industrialization processes, when launched at length in a backward country, showed considerable differences, as compared with more advanced countries, not only with regard to the speed of the development (the rate of industrial growth) but also with regard to the productive and organizational structures of industry which emerged from those processes. Furthermore, these differences in the speed and character of industrial development were to a considerable extent the result of application of institutional instruments for which there was little or no counterpart in an established industrial country. In addition, the intellectual climate within which industrialization proceeded, its "spirit" or "ideology," differed considerably among advanced and backward countries. Finally, the extent to which these attributes of backwardness occurred in individual instances appears to have varied directly with the degree of backwardness and the natural industrial potentialities of the countries concerned.

Let us first describe in general terms a few basic elements in the industrialization processes of backward countries as synthesized from the available historical information on economic development of European countries² in the nineteenth century and up until the beginning of the First World War. Thereupon, on the basis of concrete examples, more will be said on the effects of what may be called

² It would have been extremely desirable to transcend the European experience at least by including some references to the industrialization of Japan. Unfortunately, the writer's ignorance of Japanese economic history has effectively barred him from thus broadening the scope of his observations. The reader must be referred, however, to the excellent study by Henry Rosovsky, *Capital Formation in Japan, 1868-1940* (Glencoe, 1961), in which the validity of this writer's approach for Japanese industrial history is explicitly discussed.

"relative backwardness" upon the course of industrial development in individual countries.

The typical situation in a backward country prior to the initiation of considerable industrialization processes may be described as characterized by the tension between the actual state of economic activities in the country and the existing obstacles to industrial development, on the one hand, and the great promise inherent in such a development, on the other. The extent of opportunities that industrialization presents varied, of course, with the individual country's endowment of natural resources. Furthermore, no industrialization seemed possible, and hence no "tension" existed, as long as certain formidable institutional obstacles (such as the serfdom of the peasantry or the far-reaching absence of political unification) remained. Assuming an adequate endowment of usable resources, and assuming that the great blocks to industrialization had been removed, the opportunities inherent in industrialization may be said to vary directly with the backwardness of the country. Industrialization always seemed the more promising the greater the backlog of technological innovations which the backward country could take over from the more advanced country. Borrowed technology, so much and so rightly stressed by Veblen, was one of the primary factors assuring a high speed of development in a backward country entering the stage of industrialization. There always has been the inevitable tendency to deride the backward country because of its lack of originality. German mining engineers of the sixteenth century accused the English of being but slavish imitators of German methods, and the English fully reciprocated these charges in the fifties and sixties of the past century. In our own day, Soviet Russia has been said to have been altogether imitative in its industrial development, and the Russians have retorted by making extraordinary and extravagant claims. But all these superficialities tend to blur the basic fact that the contingency of large imports of foreign machinery and of foreign know-how, and the concomitant opportunities for rapid industrialization with the passage of time, increasingly widened the gulf between economic potentialities and economic actualities in backward countries.

The industrialization prospects of an underdeveloped country are frequently judged, and judged adversely, in terms of cheapness

of labor as against capital goods and of the resulting difficulty in substituting scarce capital for abundant labor. Sometimes, on the contrary, the cheapness of labor in a backward country is said to aid greatly in the processes of industrialization. The actual situation, however, is more complex than would appear on the basis of simple models. In reality, conditions will vary from industry to industry and from country to country. But the overriding fact to consider is that industrial labor, in the sense of a stable, reliable, and disciplined group that has cut the umbilical cord connecting it with the land and has become suitable for utilization in factories, is not abundant but extremely scarce in a backward country. Creation of an industrial labor force that really deserves its name is a most difficult and protracted process. The history of Russian industry provides some striking illustrations in this respect. Many a German industrial laborer of the nineteenth century had been raised in the strict discipline of a Junker estate which presumably made him more amenable to accept the rigors of factory rules. And yet the difficulties were great, and one may recall the admiring and envious glances which, toward the very end of the century, German writers like Schulze-Gaevernitz kept casting across the Channel at the English industrial worker, "the man of the future . . . born and educated for the machine . . . [who] does not find his equal in the past." In our time, reports from industries in India repeat in a still more exaggerated form the past predicaments of European industrializations in the field of labor supply.

Under these conditions the statement may be hazarded that, to the extent that industrialization took place, it was largely by application of the most modern and efficient techniques that backward countries could hope to achieve success, particularly if their industrialization proceeded in the face of competition from the advanced country. The advantages inherent in the use of technologically superior equipment were not counteracted but reinforced by its labor-saving effect. This seems to explain the tendency on the part of backward countries to concentrate at a relatively early point of their industrialization on promotion of those branches of industrial activities in which recent technological progress had been particularly rapid; while the more advanced countries, either from inertia or from unwillingness to require or impose sacrifices implicit in a large investment program, were

more hesitant to carry out continual modernizations of their plant. Clearly, there are limits to such a policy, one of them being the inability of a backward country to extend it to lines of output where very special technological skills are required. Backward countries (although not the United States) were slow to assimilate production of modern machine tools. But a branch like iron and steel production does provide a good example of the tendency to introduce most modern innovations, and it is instructive to see, for example, how German blast furnaces so very soon become superior to the English ones, while in the early years of this century blast furnaces in still more backward southern Russia were in the process of outstripping in equipment their German counterparts. Conversely, in the nineteenth century, England's superiority in cotton textile output was challenged neither by Germany nor by any other country.

To a considerable extent (as in the case of blast furnaces just cited), utilization of modern techniques required, in nineteenth-century conditions, increases in the average size of plant. Stress on bigness in this sense can be found in the history of most countries on the European continent. But industrialization of backward countries in Europe reveals a tendency toward bigness in another sense. The use of the term "industrial revolution" has been exposed to a good many justifiable strictures. But, if industrial revolution is conceived as denoting no more than cases of sudden considerable increases in the rate of industrial growth, there is little doubt that in several important instances industrial development began in such a sudden, eruptive, that is, "revolutionary," way.

The discontinuity was not accidental. As likely as not the period of stagnation (in the "physiocratic" sense of a period of low rate of growth) can be terminated and industrialization processes begun only if the industrialization movement can proceed, as it were, along a broad front, starting simultaneously along many lines of economic activities. This is partly the result of the existence of complementarity and indivisibilities in economic processes. Railroads cannot be built unless coal mines are opened up at the same time; building half a railroad will not do if an inland center is to be connected with a port city. Fruits of industrial progress in certain lines are received as external economies by other branches of industry whose progress in

turn accords benefits to the former. In viewing the economic history of Europe in the nineteenth century, the impression is very strong that only when industrial development could commence on a large scale did the tension between the preindustrialization conditions and the benefits expected from industrialization become sufficiently strong to overcome the existing obstacles and to liberate the forces that made for industrial progress.

This aspect of the development may be conceived in terms of Tynbæc's relation between challenge and response. His general observation that very frequently small challenges do not produce any responses and that the volume of response begins to grow very rapidly (at least up to a point) as the volume of the challenge increases seems to be quite applicable here. The challenge, that is to say, the "tension," must be considerable before a response in terms of industrial development will materialize.

The foregoing sketch purported to list a number of basic factors which historically were peculiar to economic situations in backward countries and made for higher speed of growth and different productive structure of industries. The effect of these basic factors was, however, greatly reinforced by the use in backward countries of certain institutional instruments and the acceptance of specific industrialization ideologies. Some of these specific factors and their mode of operation on various levels of backwardness are discussed in the following sections.

THE BANKS

The history of the Second Empire in France provides rather striking illustrations of these processes. The advent of Napoleon III terminated a long period of relative economic stagnation which had begun with the restoration of the Bourbons and which in some sense and to some extent was the result of the industrial policies pursued by Napoleon I. Through a policy of reduction of tariff duties and elimination of import prohibitions, culminating in the Cobden-Chevalier treaty of 1860, the French government destroyed the hothouse in which French industry had been kept for decades and exposed it to the stimulating atmosphere of international competition. By abolishing monopoly profits in the stagnating coal and iron produc-

tion, French industry at length received profitable access to basic industrial raw materials.

To a not inconsiderable extent, the industrial development of France under Napoleon III must be attributed to that determined effort to unite the strait jacket in which weak governments and strong vested interests had inclosed the French economy. But along with these essentially, though not exclusively, negative policies of the government, French industry received a powerful positive impetus from a different quarter. The reference is to the development of industrial banking under Napoleon III.

The importance of that development has seldom been fully appreciated. Nor has it been properly understood as emanating from the specific conditions of a relatively backward economy. In particular, the story of the Crédit Mobilier of the brothers Pereire is often regarded as a dramatic but, on the whole, rather insignificant episode. All too often, as, for instance, in the powerful novels of Emile Zola, the actual significance of the developments is almost completely submerged in the description of speculative fever, corruption, and immorality which accompanied them. It seems to be much better in accord with the facts to speak of a truly momentous role of investment banking of the period for the economic history of France and of large portions of the Continent.

In saying that, one has in mind, of course, the immediate effects of creating financial organizations designed to build thousands of miles of railroads, drill mines, erect factories, pierce canals, construct ports, and modernize cities. The ventures of the Pereires and of a few others did all that in France and beyond the boundaries of France over vast areas stretching from Spain to Russia. This tremendous change in economic scenery took place only a few years after a great statesman and a great historian of the July monarchy assured the country that there was no need to reduce the duties on iron because the sheltered French iron production was quite able to cope with the iron needs of the railroads on the basis of his estimate of a prospective annual increase in construction by some fifteen to twenty miles.

But no less important than the actual economic accomplishments of a few men of great entrepreneurial vigor was their effect on their environment. The Crédit Mobilier was from the beginning engaged

in a most violent conflict with the representatives of "old wealth" in French banking, most notably with the Rothschilds. It was this conflict that had sapped the force of the institution and was primarily responsible for its eventual collapse in 1867. But what is so seldom realized is that in the course of this conflict the "new wealth" succeeded in forcing the old wealth to adopt the policies of its opponents. The limitation of old wealth in banking policies to flotations of government loans and foreign-exchange transactions could not be maintained in the face of the new competition. When the Rothschilds prevented the Pereires from establishing the Austrian Credit-Anstalt, they succeeded only because they became willing to establish the bank themselves and to conduct it not as an old-fashioned banking enterprise but as a crédit mobilier, that is, as a bank devoted to railroadization and industrialization of the country.

This conversion of the old wealth to the creed of the new wealth points out the direction of the most far-reaching effects of the Crédit Mobilier. Occasional ventures of that sort had been in existence in Belgium, Germany, and France herself. But it was the great eruptive effect of the Pereires that profoundly influenced the history of Continental banking in Europe from the second half of the past century onward. The number of banks in various countries shaped upon the image of the Pereire bank was considerable. But more important than their slavish imitations was the creative adaptation of the basic idea of the Pereires and its incorporation in the new type of bank, the universal bank, which in Germany, along with most other countries on the Continent, became the dominant form of banking. The difference between banks of the crédit-mobilier type and commercial banks in the advanced industrial country of the time (England) was absolute. Between the English bank essentially designed to serve as a source of short-term capital and a bank designed to finance the long-run investment needs of the economy there was a complete gulf. The German banks, which may be taken as a paragon of the type of the universal bank, successfully combined the basic idea of the crédit mobilier with the short-term activities of commercial banks.

They were as a result infinitely sounder financial institutions than the Crédit Mobilier, with its enormously swollen industrial portfolio, which greatly exceeded its capital, and its dependence on favorable

developments on the stock exchange for continuation of its activities. But the German banks, and with them the Austrian and Italian banks, established the closest possible relations with industrial enterprises. A German bank as the saying went, accompanied an industrial enterprise from the cradle to the grave, from establishment to liquidation throughout all the vicissitudes of its existence. Through the device of formally short-term but in reality long-term current account credits and through development of the institution of the supervisory boards to the position of most powerful organs within corporate organizations, the banks acquired a formidable degree of ascendancy over industrial enterprises, which extended far beyond the sphere of financial control into that of entrepreneurial and managerial decisions.

It cannot be the purpose of this presentation to go into the details of this development. All that is necessary is to relate its origins and effects to the subject under discussion. The industrialization of England had proceeded without any substantial utilization of banking for long-term investment purposes. The more gradual character of the industrialization process and the more considerable accumulation of capital, first from earnings in trade and modernized agriculture and later from industry itself, obviated the pressure for developing any special institutional devices for provision of long-term capital to industry. By contrast, in a relatively backward country capital is scarce and diffused, the distrust of industrial activities is considerable, and, finally, there is greater pressure for business because of the scope of the industrialization movement, the larger average size of plant, and the concentration of industrialization processes on branches of relatively high ratios of capital to output. To these should be added the scarcity of entrepreneurial talent in the backward country.

It is the pressure of these circumstances which essentially gave rise to the divergent development in banking over large portions of the Continent as against England. The continental practices in the field of industrial investment banking must be conceived as specific instruments of industrialization in a backward country. It is here essentially that lies the historical and geographic locus of theories of economic development that assign a central role to processes of forced saving by the money-creating activities of banks. As will be shown presently, however, use of such instruments must be regarded as specific, not to back-

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ward countries in general, but rather to countries whose backwardness does not exceed certain limits. And even within the latter for a rather long time it was mere collection and distribution of available funds in which the banks were primarily engaged. This circumstance, of course, did not detract from the paramount importance of such activities on the part of the banks during the earlier industrialization periods with their desperate shortages of capital for industrial ventures.

The effects of these policies were far-reaching. All the basic tendencies inherent in industrial development in backward countries were greatly emphasized and magnified by deliberate attitudes on the part of the banks. From the outset of this evolution the banks were primarily attracted to certain lines of production to the neglect, if not virtual exclusion, of others. To consider Germany until the outbreak of World War I, it was essentially coal mining, iron- and steelmaking, electrical and general engineering, and heavy chemical output which became the primary sphere of activities of German banks. The textile industry, the leather industry, and the foodstuff-producing industries remained on the fringes of the banks' interest. To use modern terminology, it was heavy rather than light industry to which the attention was devoted.

Furthermore, the effects were not confined to the productive structure of industry. They extended to its organizational structure. The last three decades of the nineteenth century were marked by a rapid concentration movement in banking. This process indeed went on in very much the same way on the other side of the English Channel. But in Britain, because of the different nature of relations between banks and industry, the process was not paralleled by a similar development in industry.

It was different in Germany. The momentum shown by the cartelization movement of German industry cannot be fully explained, except as the natural result of the amalgamation of German banks. It was the mergers in the field of banking that kept placing banks in the positions of controlling competing enterprises. The banks refused to tolerate fratricidal struggles among their children. From the vantage point of centralized control, they were at all times quick to perceive profitable opportunities of cartelization and amalgamation of industrial enterprises. In the process, the average size of plant kept

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growing, and at the same time the interests of the banks and their assistance were even more than before devoted to those branches of industry where cartelization opportunities were rife.

Germany thus had derived full advantages from being a relatively late arrival in the field of industrial development, that is to say, from having been preceded by England. But, as a result, German industrial economy, because of specific methods used in the catching-up process, developed along lines not insignificantly different from those in England.

THE STATE

The German experience can be generalized. Similar developments took place in Austria, or rather in the western sections of the Austrian-Hungarian Empire, in Italy, in Switzerland, in France, in Belgium, and in other countries, even though there were differences among the individual countries. But it certainly cannot be generalized for the European continent as a whole, and this for two reasons: (1) because of the existence of certain backward countries where no comparable features of industrial development can be discovered and (2) because of the existence of countries where the basic elements of backwardness appear in such an accentuated form as to lead to the use of essentially different institutional instruments of industrialization.

Little need be said with reference to the first type of country. The industrial development of Denmark may serve as an appropriate illustration. Surely, that country was still very backward as the nineteenth century entered upon its second half. Yet no comparable sudden spurts of industrialization and no peculiar emphasis on heavy industries could be observed. The reasons must be sought, on the one hand, in the paucity of the country's natural resources and, on the other hand, in the great opportunities for agricultural improvement that were inherent in the proximity of the English market. The peculiar response did not materialize because of the absence of the challenge.

Russia may be considered as the clearest instance of the second type of country. The characteristic feature of economic conditions in Russia was not only that the great spurt of modern industrialization came in the middle of the 1880s, that is to say, more than three

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decades after the beginning of rapid industrialization in Germany; even more important was the fact that at the starting point the level of economic development in Russia had been incomparably lower than that of countries such as Germany and Austria.

The main reason for the abysmal economic backwardness of Russia was the preservation of serfdom until the emancipation of 1861. In a certain sense, this very fact may be attributed to the play of a curious mechanism of economic backwardness, and a few words of explanation may be in order. In the course of its process of territorial expansion, which over a few centuries transferred the small duchy of Moscow into the huge land mass of modern Russia, the country became increasingly involved in military conflicts with the West. This involvement revealed a curious internal conflict between the tasks of the Russian government that were "modern" in the contemporary sense of the word and the hopelessly backward economy of the country on which the military policies had to be based. As a result, the economic development in Russia at several important junctures assumed the form of a peculiar series of sequences: (1)

Basic was the fact that the state, moved by its military interest, assumed the role of the primary agent propelling the economic progress in the country. (2) The fact that economic development thus became a function of military exigencies imparted a peculiarly jerky character to the course of that development; it proceeded fast whenever military necessities were pressing and subsided as the military pressures relaxed. (3) This mode of economic progress by fits and starts implied that, whenever a considerable upsurge of economic activities was required, a very formidable burden was placed on the shoulders of the generations whose lifespan happened to coincide with the period of intensified development. (4) In order to exact effectively the great sacrifices it required, the government had to subject the reluctant population to a number of severe measures of oppression lest the burdens imposed be evaded by escape to the frontier regions in the southeast and east. (5) Precisely because of the magnitude of the governmental exactions, a period of rapid development was very likely to give way to prolonged stagnation, because the great effort had been pushed beyond the limits of physical endurance of the population and long periods of economic stagnation were the inevitable consequences.

the state, agent propelling the economic progress.

different instruments of industrialization

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The sequences just mentioned present in a schematic way a pattern of Russian economic development in past centuries which fits best the period of the reforms under Peter the Great, but its applicability is by no means confined to that period.

What must strike the observer of this development is its curiously paradoxical course. While trying, as Russia did under Peter the Great, to adopt Western techniques, to raise output and the skills of the population to levels more closely approaching those of the West, Russia by virtue of this very effort was in some other respects thrown further away from the West. Broadly speaking, placing the trammels of serfdom upon the Russian peasantry must be understood as the obverse side of the processes of Westernization. Peter the Great did not institute serfdom in Russia, but perhaps more than anyone else he did succeed in making it effective. When in subsequent periods, partly because of point 2 and partly because of point 5 above, the state withdrew from active promotion of economic development and the nobility emancipated itself from its service obligations to the government, peasant serfdom was divested of its connection with economic development. What once was an indirect obligation to the state became a pure obligation toward the nobility and as such became by far the most important retarding factor in Russia's economic development.

Government

Readers of Toynbee's may wish to regard this process, ending as it did with the emancipation of the peasantry, as an expression of the "withdrawal and return" sequence. Alternatively they may justifiably prefer to place it under the heading of "arrested civilizations." At any rate, the challenge-response mechanism is certainly useful in thinking about sequences of that nature. It should be noted, however, that the problem is not simply one of quantitative relationship between the volume of the challenge and that of the response. The crucial point is that the magnitude of the challenge changes the *quality* of the response and, by so doing, not only injects powerful retarding factors into the economic process but also more likely leads to a number of undesirable noneconomic consequences. To this aspect, which is most relevant to the current problem of industrialization of backward countries, we shall advert again in the concluding remarks of this essay.

To return to Russian industrialization in the eighties and the nineties of the past century, it may be said that in one sense it can be

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viewed as a recurrence of a previous pattern of economic development in the country. The role of the state distinguishes rather clearly the type of Russian industrialization from its German or Austrian counterpart.

Emancipation of the peasants, despite its manifold deficiencies, was an absolute prerequisite for industrialization. As such it was a negative action of the state designed to remove obstacles that had been earlier created by the state itself and in this sense was fully comparable to acts such as the agrarian reforms in Germany or the policies of Napoleon III which have been mentioned earlier. Similarly, the great judicial and administrative reforms of the sixties were in the nature of creating a suitable framework for industrial development rather than promoting it directly.

The main point of interest here is that, unlike the case of Western Europe, actions of this sort did not per se lead to an upsurge of individual activities in the country; and for almost a quarter of a century after the emancipation the rate of industrial growth remained relatively low. The great industrial upswing came when, from the middle of the eighties on, the railroad building of the state assumed unprecedented proportions and became the main lever of a rapid industrialization policy. Through multifarious devices such as preferential orders to domestic producers of railroad materials, high prices, subsidies, credits, and profit guarantees to new industrial enterprises, the government succeeded in maintaining a high and, in fact, increasing rate of growth until the end of the century. Concomitantly, the Russian taxation system was reorganized, and the financing of industrialization policies was thus provided for, while the stabilization of the ruble and the introduction of the gold standard assured foreign participation in the development of Russian industry.

The basic elements of a backward economy were, on the whole, the same in Russia of the nineties and in Germany of the fifties. But quantitatively the differences were formidable. The scarcity of capital in Russia was such that no banking system could conceivably succeed in attracting sufficient funds to finance a large-scale industrialization; the standards of honesty in business were so disastrously low, the general distrust of the public so great, that no bank could have hoped to attract even such small capital funds as were available, and no

bank could have successfully engaged in long-term credit policies in an economy where fraudulent bankruptcy had been almost elevated to the rank of a general business practice. Supply of capital for the needs of industrialization required the compulsory machinery of the government, which, through its taxation policies, succeeded in directing incomes from consumption to investment. There is no doubt that the government as an *agens movens* of industrialization discharged its role in a far less than perfectly efficient manner. Incompetence and corruption of bureaucracy were great. The amount of waste that accompanied the process was formidable. But, when all is said and done, the great success of the policies pursued under Vyshegradski and Witte is undeniable. Not only in their origins but also in their effects, the policies pursued by the Russian government in the nineties resembled closely those of the banks in Central Europe. The Russian state did not evince any interest in "light industry." Its whole attention was centered on output of basic industrial materials and on machinery production; like the banks in Germany, the Russian bureaucracy was primarily interested in large-scale enterprises and in amalgamations and coordinated policies among the industrial enterprises which it favored or had helped to create. Clearly, a good deal of the government's interest in industrialization was predicated upon its military policies. But these policies only reinforced and accentuated the basic tendencies of industrialization in conditions of economic backwardness.

Perhaps nothing serves to emphasize more these basic uniformities in the situation and the dependence of actual institutional instruments used on the degree of backwardness of the country than a comparison of policies pursued within the two halves of the Austro-Hungarian monarchy, that is to say, within one and the same political body. The Austrian part of the monarchy was backward in relation to, say, Germany, but it was at all times much more advanced than its Hungarian counterpart. Accordingly, in Austria proper the banks could successfully devote themselves to the promotion of industrial activities. But across the Leitha Mountains, in Hungary, the activities of the banks proved altogether inadequate, and around the turn of the century the Hungarian government embarked upon vigorous policies of industrialization. Originally, the government showed a considerable

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interest in developing the textile industry of the region. And it is instructive to watch how, under the pressure of what the French like to call the "logic of things," the basic uniformities asserted themselves and how the generous government subsidies were more and more deflected from textile industries to promotion of heavy industries.

THE GRADATIONS OF BACKWARDNESS

To return to the basic German-Russian paradigm: what has been said in the foregoing does not exhaust the pattern of parallels. The question remains as to the effects of successful industrializations, that is to say, of the gradual diminution of backwardness.

At the turn of the century, if not somewhat earlier, changes became apparent in the relationship between German banks and German industry. As the former industrial infants had grown to strong manhood, the original undisputed ascendancy of the banks over industrial enterprises could no longer be maintained. This process of liberation of industry from the decades of tutelage expressed itself in a variety of ways. Increasingly, industrial enterprises transformed connection with a single bank into cooperation with several banks. As the former industrial protectorates became economically sovereign, they embarked upon the policy of changing alliances with regard to the banks. Many an industrial giant, such as the electrical engineering industry, which could not have developed without the aid and entrepreneurial daring of the banks, began to establish its own banks. The conditions of capital scarcity to which the German banks owed their historical position were no longer present. Germany had become a developed industrial country. But the specific features engendered by a process of industrialization in conditions of backwardness were to remain, and so was the close relation between banks and industry, even though the master-servant relation gave way to cooperation among equals and sometimes was even reversed.

In Russia the magnificent period of industrial development of the nineties was cut short by the 1900 depression and the following years of war and civil strife. But, when Russia emerged from the revolutionary years 1905-1906 and again achieved a high rate of industrial growth in the years 1907-1914, the character of the industrialization processes had changed greatly. Railroad construction by

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evolutional pattern.

the government continued but on a much smaller scale both absolutely and even more so relatively to the increased industrial output. Certain increases in military expenditures that took place could not begin to compensate for the reduced significance of railroad-building. The conclusion is inescapable that, in that last period of industrialization under a pre-revolutionary government, the significance of the state was very greatly reduced.

At the same time, the traditional pattern of Russian economic development happily failed to work itself out. The retrenchment of government activities led not to stagnation but to a continuation of industrial growth. Russian industry had reached a stage where it could throw away the crutches of government support and begin to walk independently — and, yet, very much less independently than industry in contemporaneous Germany, for at least to some extent the role of the retreating government was taken over by the banks.

A great transformation had taken place with regard to the banks during the fifty years that had elapsed since the emancipation. Commercial banks had been founded. Since it was the government that had fulfilled the function of industrial banks, the Russian banks, precisely because of the backwardness of the country, were organized as “deposit banks,” thus resembling very much the type of banking in England. But, as industrial development proceeded apace and as capital accumulation increased, the standards of business behavior were growingly Westernized. The paralyzing atmosphere of distrust began to vanish, and the foundation was laid for the emergence of a different type of bank. Gradually, the Moscow deposit banks were overshadowed by the development of the St. Petersburg banks that were conducted upon principles that were characteristic not of English but of German banking. In short, after the economic backwardness of Russia had been reduced by state-sponsored industrialization processes, use of a different instrument of industrialization, suitable to the new “stage of backwardness,” became applicable.

IDEOLOGIES OF DELAYED INDUSTRIALIZATIONS

Before drawing some general conclusions, a last differential aspect of industrialization in circumstances of economic backwardness

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character of industrial developments and its institutional vehicles were related to conditions and degrees of backwardness. A few words remain to be said on the ideological climate within which such industrialization proceeded.

Again we may revert to the instructive story of French industrialization under Napoleon III. A large proportion of the men who reached positions of economic and financial influence upon Napoleon's advent to power were not isolated individuals. They belonged to a rather well-defined group. They were not Bonapartists but Saint-Simonian socialists. The fact that a man like Isaac Pereire, who contributed so much, perhaps more than any other single person, to the spread of the modern capitalist system in France should have been — and should have remained to the end of his days — an ardent admirer of Saint-Simonian doctrines is on the face of it surprising. It becomes much less so if a few pertinent relationships are considered.

It could be argued that Saint-Simon was in reality far removed from being a socialist; that in his vision of an industrial society he hardly distinguished between laborers and employers; and that he considered the appropriate political form for his society of the future some kind of corporate state in which the “leaders of industry” would exercise major political functions. Yet arguments of that sort would hardly explain much. Saint-Simon had a profound interest in what he used to call the “most numerous and most suffering classes”; more importantly, Saint-Simonian doctrines, as expanded and redefined by the followers of the master (particularly by Bazard), incorporated into the system a good many socialist ideas, including abolition of inheritance and establishment of a system of planned economy designed to direct and to develop the economy of the country. And it was this interpretation of the doctrines which the Pereires accepted.

It is more relevant to point to the stress laid by Saint-Simon and his followers upon industrialization and the great task they had assigned to banks as an instrument of organization and development of the economy. This, no doubt, greatly appealed to the creators of the *Crédit Mobilier*, who liked to think of their institution as of a “bank to a higher power” and of themselves as “missionaries” rather than bankers. That Saint-Simon's stress upon the role to be played by

altogether "unutopian" — insight into the problems of that development is as true as the fact that Saint-Simonian ideas most decisively influenced the course of economic events inside and outside France. But the question remains: why was the socialist garment draped around an essentially capitalist idea? And why was it the socialist form that was so readily accepted by the greatest capitalist entrepreneurs France ever possessed?

It would seem that the answer must again be given in terms of basic conditions of backwardness. Saint-Simon, the friend of J. B. Say, was never averse to ideas of *laissez-faire* policies. Chevalier, the co-author of the Franco-English treaty of commerce of 1860 that ushered in the great period of European free trade, had been an ardent Saint-Simonian. And yet under French conditions a *laissez-faire* ideology was altogether inadequate as a spiritual vehicle of an industrialization program.

To break through the barriers of stagnation in a backward country, to ignite the imaginations of men, and to place their energies in the service of economic development, a stronger medicine is needed than the promise of better allocation of resources or even of the lower price of bread. Under such conditions even the businessman, even the classical daring and innovating entrepreneur, needs a more powerful stimulus than the prospect of high profits. What is needed to remove the mountains of routine and prejudice is faith — faith, in the words of Saint-Simon, that the golden age lies not behind but ahead of mankind. It was not for nothing that Saint-Simon devoted his last years to the formulation of a new creed, the New Christianity, and suffered Auguste Comte to break with him over this "betrayal of true science." What sufficed in England did not suffice in France.

Shortly before his death, Saint-Simon urged Rouget de Lisle, the aged author of the "Marseillaise," to compose a new anthem, an "Industrial Marseillaise." Rouget de Lisle complied. In the new hymn the man who once had called upon "enfants de la patrie" to wage ruthless war upon the tyrants and their mercenary cohorts addresses himself to "enfants de l'industrie" — the "true nobles" — who would assure the "happiness of all" by spreading industrial arts and by submitting the world to the peaceful "laws of industry."

Ricardo is not known to have inspired anyone to change "God

Save the King" into "God Save Industry." No one would want to detract from the force of John Bright's passionate eloquence, but in an advanced country rational arguments in favor of industrialization policies need not be supplemented by a quasi-religious fervor. Buckle was not far wrong when in a famous passage of his *History* he presented the conversion of public opinion in England to free trade as achieved by the force of incontrovertible logic. In a backward country the great and sudden industrialization effort calls for a New Deal in emotions. Those carrying out the great transformation as well as those on whom it imposes burdens must feel, in the words of Matthew Arnold, that

. . . Clearing a stage
Scattering the past about
Comes the new age.

Capitalist industrialization under the auspices of socialist ideologies may be, after all, less surprising a phenomenon than would appear at first sight.

Similarly, Friedrich List's industrialization theories may be largely conceived as an attempt, by a man whose personal ties to Saint-Simonians had been very strong, to translate the inspirational message of Saint-Simonism into a language that would be accepted in the German environment, where the lack of both a preceding political revolution and an early national unification rendered nationalist sentiment a much more suitable ideology of industrialization.

After what has been just said it will perhaps not seem astonishing that, in the Russian industrialization of the 1890s, orthodox Marxism can be said to have performed a very similar function. Nothing reconciled the Russian intelligentsia more to the advent of capitalism in the country and to the destruction of its old faith in the mir and the ardel than a system of ideas which presented the capitalist industrialization of the country as the result of an iron law of historical development. It is this connection which largely explains the power wielded by Marxist thought in Russia when it extended to men like Struve and in some sense even Milyukov, whose Weltschmerz was altogether alien to the ideas of Marxian socialism. In conditions of Russian "absolute" backwardness, again, a much more powerful

ideology was required to grease the intellectual and emotional wheels of industrialization than either in France or in Germany. The institutional gradations of backwardness seem to find their counterpart in men's thinking about backwardness and the way in which it can be abolished.

CONCLUSIONS

The story of European industrialization in the nineteenth century would seem to yield a few points of view which may be helpful for appreciation of present-day problems.

1. If the spurtlike character of the past century's industrialization on the European continent is conceived of as the result of the specific preindustrial situations in backward countries and if it is understood that pressures for high-speed industrializations are inherent in those situations, it should become easier to appreciate the oft-expressed desires in this direction by the governments of those countries. Slogans like "Factories quick!" which played such a large part in the discussions of the pertinent portions of the International Trade Organization charter, may then appear less unreasonable.

2. Similarly, the tendencies in backward countries to concentrate much of their efforts on introduction of the most modern and expensive technology, their stress on large-scale plants, and their interest in developing investment-goods industries need not necessarily be regarded as flowing mainly from a quest for prestige and from economic megalomania.

3. What makes it so difficult for an advanced country to appraise properly the industrialization policies of its less fortunate brethren is the fact that, in every instance of industrialization, imitation of the evolution in advanced countries appears in combination with different, indigenously determined elements. If it is not always easy for advanced countries to accept the former, it is even more difficult for them to acquiesce in the latter. This is particularly true of the institutional instruments used in carrying out industrial developments and even more so of ideologies which accompany it. What can be derived from a historical review is a strong sense for the significance of the native elements in the industrialization of backward countries.

A journey through the last century may, by destroying what

Bertrand Russell once called the "dogmatism of the untraveled," help in formulating a broader and more enlightened view of the pertinent problems and in replacing the absolute notions of what is "right" and what is "wrong" by a more flexible and relativistic approach.

It is, of course, not suggested here that current policies vis-à-vis backward areas should be formulated on the basis of the general experience of the past century without taking into account, in each individual instance, the degree of endowment with natural resources, the climatic disabilities, the strength of institutional obstacles to industrialization, the pattern of foreign trade, and other pertinent factors. But what is even more important is the fact that, useful as the "lessons" of the nineteenth century may be, they cannot properly be applied without understanding the climate of the present century, which in so many ways has added new and momentous aspects to the problems concerned.

Since the present problem of industrialization of backward areas largely concerns non-European countries, there is the question of the effects of their specific preindustrial cultural development upon their industrialization potentialities. Anthropological research of such cultural patterns has tended to come to rather pessimistic conclusions in this respect. But perhaps such conclusions are unduly lacking in dynamic perspective. At any rate, they do not deal with the individual factors involved in terms of their specific changeabilities. At the same time, past Russian experience does show how quickly in the last decades of the past century a pattern of life that had been so strongly opposed to industrial values, that tended to consider any nonagricultural economic activity as unnatural and sinful, began to give way to very different attitudes. In particular, the rapid emergence of native entrepreneurs with peasant-serf backgrounds should give pause to those who stress so greatly the disabling lack of entrepreneurial qualities in backward civilizations. Yet there are other problems.

In certain extensive backward areas the very fact that industrial development has been so long delayed has created, along with unprecedented opportunities for technological progress, great obstacles to industrialization. Industrial progress is arduous and expensive; medical progress is cheaper and easier of accomplishment. To the ex-

tent that the latter has preceded the former by a considerable span of time and has resulted in formidable overpopulation, industrial revolutions may be defeated by Malthusian counterrevolutions.

Closely related to the preceding but enormously more momentous in its effects is the fact that great delays in industrialization tend to allow time for social tensions to develop and to assume sinister proportions. As a mild example, the case of Mexico may be cited, where the established banks have been reluctant to cooperate in industrialization activities that are sponsored by a government whose radical hue they distrust. But the real case in point overshadowing everything else in scope and importance is, of course, that of Soviet Russia.

If what has been said in the preceding pages has validity, Soviet industrialization undoubtedly contains all the basic elements that were common to the industrializations of backward countries in the nineteenth century. The stress on heavy industry and oversized plant is, as such, by no means peculiar to Soviet Russia. But what is true is that in Soviet Russia those common features of industrialization processes have been magnified and distorted out of all proportion.

The problem is as much a political as it is an economic one. The Soviet government can be properly described as a product of the country's economic backwardness. Had serfdom been abolished by Catherine the Great or at the time of the Decembrist uprising in 1825, the peasant discontent, the driving force and the earnest of success of the Russian Revolution, would never have assumed disastrous proportions, while the economic development of the country would have proceeded in a much more gradual fashion. If anything is a "grounded historical assumption," this would seem to be one: the delayed industrial revolution was responsible for a political revolution in the course of which the power fell into the hands of a dictatorial government to which in the long run the vast majority of the population was opposed. It is one thing for such a government to gain power in a moment of great crisis; it is another to maintain this power for a long period. Whatever the strength of the army and the ubiquitousness of the secret police which such a government may have at its disposal, it would be naive to believe that those instruments of physical oppression can suffice. Such a government can maintain itself in power only if it succeeds in making people believe that it performs

an important social function which could not be discharged in its absence.

Industrialization provided such a function for the Soviet government. All the basic factors in the situation of the country pressed in that direction. By reverting to a pattern of economic development that should have remained confined to a long-bygone age, by substituting collectivization for serfdom, and by pushing up the rate of investment to the maximum point within the limits of endurance of the population, the Soviet government did what no government relying on the consent of the governed could have done. That these policies, after having led through a period of violent struggles, have resulted in permanent day-to-day friction between the government and the population is undeniable. But, paradoxical as it may sound, these policies at the same time have secured some broad acquiescence on the part of the people. If all the forces of the population can be kept engaged in the processes of industrialization and if this industrialization can be justified by the promise of happiness and abundance for future generations and — much more importantly — by the menace of military aggression from beyond the borders, the dictatorial government will find its power broadly unchallenged. And the vindication of a threatening war is easily produced, as is shown by the history of the cold-war years. Economic backwardness, rapid industrialization, ruthless exercise of dictatorial power, and the danger of war have become inextricably intertwined in Soviet Russia.

This is not the place to elaborate this point further with regard to Soviet Russia. The problem at hand is not Soviet Russia but the problem of attitudes toward industrialization of backward countries. If the Soviet experience teaches anything, it is that it demonstrates *ad oculos* the formidable dangers inherent in our time in the existence of economic backwardness. There are no four-lane highways through the parts of industrial progress. The road may lead from backwardness to dictatorship and from dictatorship to war. In conditions of a "bipolar world" this sinister sequence is modified and aggrandized by deliberate imitation of Soviet policies by other backward countries and by their voluntary or involuntary incorporation in the Soviet orbit.

Thus, conclusions can be drawn from the historical experience of both centuries. The paramount lesson of the twentieth century is

that the problems of backward nations are not exclusively their own. They are just as much problems of the advanced countries. It is not only Russia but the whole world that pays the price for the failure to emancipate the Russian peasants and to embark upon industrialization policies at an early time. Advanced countries cannot afford to ignore economic backwardness. But the lesson of the nineteenth century is that the policies toward the backward countries are unlikely to be successful if they ignore the basic peculiarities of economic backwardness. Only by frankly recognizing their existence and strength, and by attempting to develop fully rather than to stifle what Keynes once called the "possibilities of things," can the experience of the nineteenth century be used to avert the threat presented by its successor.

2

*Reflections on the Concept of "Prerequisites"
of Modern Industrialization*

THE concept of historical prerequisites of modern industrialization is a rather curious one. Certain major obstacles to industrialization *must* be removed and certain things propitious to it *must* be created before industrialization can begin. Both in its negative and its positive aspects, the concept seems to imply, if not the historical inevitability of industrialization, at least the notion that it must proceed in a certain manner; that is to say, through certain more or less discrete stages. Along with it goes the idea of the uniformity of industrial development in the sense that every industrialization necessarily must be based on the same set of preconditions. What is meant, of course, is not the common-sense notion that in order to start an industrial plant certain very concrete things are needed. The concept refers to long-run historical changes.

It would be easy to reject the concept out of hand as a classic example of historical determinism and to leave it at that. This, however, might be regrettable. To be sure, determinism, historical or other, is beyond the boundary line that circumscribes scientific endeavors. It is quite possible that complete knowledge of the world would reveal to us that every event has been inevitably preordained. It may not reveal that at all. How can we know what we would know if we knew? At the same time, however, we cannot approach historical reality except through a search of regularities and deviations from regularities, by conceiving events and sequences of events in terms of